THE INFLUENCE OF COVID-19 ON ONLINE SHOPPING BEHAVIOUR IN SOUTH AFRICA

Joseph Shati

NELSON MANDELA UNIVERSITY

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THE INFLUENCE OF COVID-19 ON ONLINE SHOPPING BEHAVIOUR IN SOUTH AFRICA

Joseph Shati

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Port Elizabeth

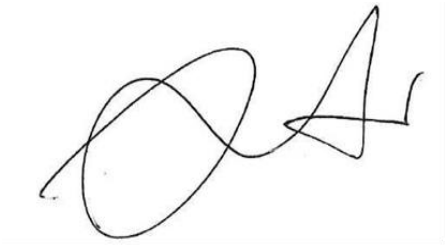
Declaration by candidate

I, **Joseph Shati,** hereby declare that:

This work has not been previously accepted in substance for any degree and is not being concurrently submitted in candidature for any degree.

This treatise is being submitted in partial fulfilment of the requirements for the degree of Masters in Business Administration.

This treatise is the result of my independent work and investigation, except otherwise stated. Other sources are acknowledged by complete referencing. A reference list is attached.



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Abstract

The traditional brick-and-mortar stores have had to endure competition in the recent past from the arrival of various shopping channels, particularly the online shopping. Despite the competition enhanced by a proliferation of technology, brick-and-mortar is still the preferred shopping channel. This is largely due to the shopping behaviour, which is generally stable and slow to change unless it is distorted by a catastrophic event. The advent of the corona virus pandemic has seen nations imposing restrictions on gatherings and encouraging moving to online platforms for both social and business interactions as a way to curb transmission of the deadly virus. This major life event has the potential to distort traditional shopping behaviour. Therefore, this study seeks to investigate whether the pandemic has had an influence on online shopping in South Africa.

The research aims to examine the different shopping channels and factors that lure customers to those channels paying particular attention to online shopping during the pandemic. Communication, technology, product variety, payment method, delivery, shopping behaviour, COVID-19 and demographics were identified during a literature review as independent factors that influence online shopping. A positivism paradigm, which informed the selection of a quantitative method, was adopted for this research in order to achieve the study's research objectives. An online questionnaire was designed to collect data and was distributed by the university's first-year MBA students. The collected data were analysed with the assistance of the university's statistician. The ethics approval for the study was obtained from the Nelson Mandela University's Ethics Committee, reference number H21-BES-BS-003.

The study draws from the Technology Acceptance Model, Theory of Planned Behaviour and Diffusion of Innovation theories to gain a better understanding on the acceptance of technologies' influence on online shopping. The study identified that the biographic variables, namely age, income, education, gender and employment status have an influence on online shopping. The relationship between the different independent factors and online shopping was tested using the Exploratory Factor Analysis, Pearson correlations and Chi^2 Tests. The factors Payment method, Shopping behaviour, Current impact of COVID-19, Acceptance of technologies and Product variety were found to have a significant influence on online shopping.

Based on the research findings, the study formulated recommendations for online businesses in South Africa. The research findings will allow businesses to promptly implement strategies that meet the consumers' needs and gain competitive advantage. Based on the findings, businesses are urged to improve security on payment methods, leverage technology to offer improved customer experience and primarily market to the 18-39 years employed cohort. These recommendations will assist businesses to retain these online shopping customers post the pandemic.

Keywords: Online shopping, shopping behaviour, adoption of technologies, COVID-19, Shopping and customer experience.

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List of Abbreviations

ANOVA – Analysis of Variance

EFA – Exploratory Factor Analysis

NMU – Nelson Mandela University

TAM – Technology Acceptance Model

TPB – Theory of Planned Behaviour

CHAPTER 1 : INTRODUCTION

1.1 Introduction and Background

Over the recent past, owing to the development of Internet and mobile devices, shopping patterns have transformed from the monopoly of the traditional brick-and-mortar store channel to an array of platforms (Kim, Libaque-Saenz & Cheol, 2019). The various platforms enabled consumers to shop through catalogues, websites, mobile applications and physical stores. Kim et al. (2019) add that the consumers sometimes combine the various platforms to their advantage throughout the shopping process, thus searching information online and making a purchase in store.

Kaufman-Scarboroug and Lindquist (2002) posit that some consumers enjoy the convenience offered by online platforms to investigate their future purchases and complete the purchase instore where they relish the physical contact with the product. This has led to retailers initiating multichannel strategies to attract multichannel consumers seeking to exploit benefits associated with multichannel use (McKinsey, 2019). Despite the rapid development of the various shopping platforms, brick-and-mortar is still the preferred purchasing platform (Kim et al., 2019).

The dominance of brick-and-mortar stores has been attributed to self-gratification and in-person judgement that is associated with instore shopping, lack of human interaction and fear of security posed by online shopping (Consumers Union of United States, 2004; Kaufman-Scarboroug & Lindquist, 2002; Kim et al., 2019). The authors also posit that consumers have maintained their instore loyalty to pursue happiness and sensuality despite the convenience offered by online shopping platforms. Brick-and-mortar stores' unique location next to other services provide consumers with an opportunity to accomplish more on a single trip increasing their efficiency influencing the consumers' channel choices (International Council of Shopping Centers, 2019).

Kim et al. (2019) postulate that the consumer behaviour in selecting a shopping channel or a combination of channels is driven by price consciousness, convenience and shopping enjoyment. The benefits consumers seek determine the channel through which consumers can exploit its benefits (McKinsey, 2019). Convenience, is the principal driver of online shopping (Kim et al., 2019), which has seen customers frustrated by distantly located crowded stores with limited shopping hours and out of

stock merchandise, moving to online platforms (Kaufman-Scarboroug & Lindquist, 2002). Customers who desired to conveniently fit shopping into their daily routine, access a broader product range, conduct comparative shopping and cut on travel costs gravitated towards online shopping (McKinsey, 2019; Olivier, 2016).

Retailers have also improved the online platforms to be user friendly and reduce risks of personal information fraud to promote migration to online shopping (Girard, Korgaonkar & Silverblatt, 2003). The Internet and the rapid mobile phone penetration have reduced ecommerce barriers but despite all these measures, the majority of consumers have steadily held on to traditional shopping in brick-and-mortar stores (Kim et al., 2019). Zaveri and Amin (2013) suggest that for other shopping channels to gain significant traction against in-store shopping there must be a shift in the consumers' behaviour.

Shopping habits are generally stable and slow to change unless distorted by a major life event (Yoon, 2020; Yuen, Wang, Ma & Li, 2020a). The corona virus pandemic has had a drastic impact on human behaviour, including people's shopping habits. The virus has obligated consumers to employ drastic measures such as social distancing and working from home. Social distancing in particular has led to spikes in online shopping, by both old and new users as consumers battle to avoid dense supermarkets (Hasanat et al., 2020; Yoon, 2020). With the swift spread of the corona virus, authorities prescribed social distancing to curb and minimise the virus transmission. The widely arranged social distancing measures rapidly increased social interactions in the cyber world, moving more interactions to online (Yan, 2020).

The fear of the virus engendered dread of populated areas, enforcing social distancing, which consequently boosted online shopping (Yuen et al., 2020). Online buying has emerged as a mainstream shopping platform being driven by social distancing, which has seen spikes in sales (Hasanat et al., 2020; Infiniti Research, 2020a; Yan, 2020; Yoon, 2020). Yoon (2020) based on research, posits working from home and eagerness to avoid densely populated areas as determinants of the sharp spike in online buying. Yoon (2020) elaborates that at least 62 per cent of the employees with the option of working from home are high earners and are more likely to use online shopping to avoid crowded shopping centres.

The pandemic has imposed the use of technology for business and social interactions, improving the use of online services abilities of many people, which according to Zaveri and Amin (2013), considerably improves the intention to shop online. Yoon (2020) concurs with Zaveri and Amin (2013), positing that as employees working from home grow comfortable with technology, they are swayed to online shopping. The authors further suggest that the availability of both software and hardware meant primarily for business and other social activities increased online buying.

Yan (2020) considers that due to the immense and almost instantaneous impact of the virus, most people became early adopters of online shopping. Businesses had to close doors to curb the virus' transmission however could not maintain this stance indefinitely as it posed an existential threat to most companies. Most traditional companies who had previously operated as exclusively brick-and-mortar shops, opted to move to online platforms to remain afloat. This coupled with the convenience of shopping online, the move by reputable brands to online reduced security risks and boosted online shopping (Infiniti Research, 2020a; Narayandas, Hebbar & Li, 2020; Zaveri & Amin, 2013).

The potential surge of online purchases according to Infiniti Research (2020), will see shops unable to promptly fulfil the unanticipated demands. The report also projects that consumers will lean towards less risk packaged and canned products. Consequently, due to the shift in the demand for certain products, information must be timeously conveyed to manufacturers and other parties in the distribution line. Online shopping changes the business models of companies and the agile companies, quick to adapt to the new way of doing business, will benefit from the first mover advantage (Narayandas et al., 2020).

The new business model demands collaboration of traditional stores with external partners such as delivery, software and payment companies to cater for the change in online shopping (Narayandas et al., 2020). Studies have further revealed that online customers infer quality from the brand, hence the need for businesses to build their brands and customer experience to lure online buyers (Zaveri & Amin, 2013). Infiniti Research (2020) suggests that customers are insisting on local produce, as a precautionary measure to avoid imported goods that may be virus carriers. This trend abetted with patriotism to revive local business may see a shift from globalisation,

something the distribution channel must be cognisant of, to remain relevant (Infiniti Research, 2020a; Yan, 2020).

Recent studies on online shopping focused on what companies could do to lure customers (Walker, 2011) by investigating factors that influence the move to online shopping (Ward, 2008). The researchers cited better software, improved website design, low costs of doing business online, improved customer experience and secure payment options as some of the reasons that will increase online shopping (Narayandas et al., 2020; Swiegers, 2018; Zaveri & Amin, 2013). Besides a few recent studies, research has yet to fully understand the drastic impact of the corona virus on the previously stable shopping habits (Yoon, 2020). Studies are yet to holistically determine the unprecedented effect of the pandemic on online shopping, caused by the forced albeit necessary social isolation (Yan, 2020). The virus is still rampaging the globe bar China, which was hit first and now is recovering hence most literature on the after effects of the pandemic is emanating from China (Narayandas et al., 2020). This presents a research gap in the study on the effects of the virus on online buying in South Africa. This background leads to the research problem identified for this study.

The structure of this chapter is depicted in Figure 1.1. The research problem statement stemming from the introduction is presented before detailing the research objectives and research questions the study aims to answer. The methodology, how the research intends to address the research questions follow, preceding limitations of the study, before a brief report on the ethical clearance obtained. The chapter concludes by summarising the treatise structure.

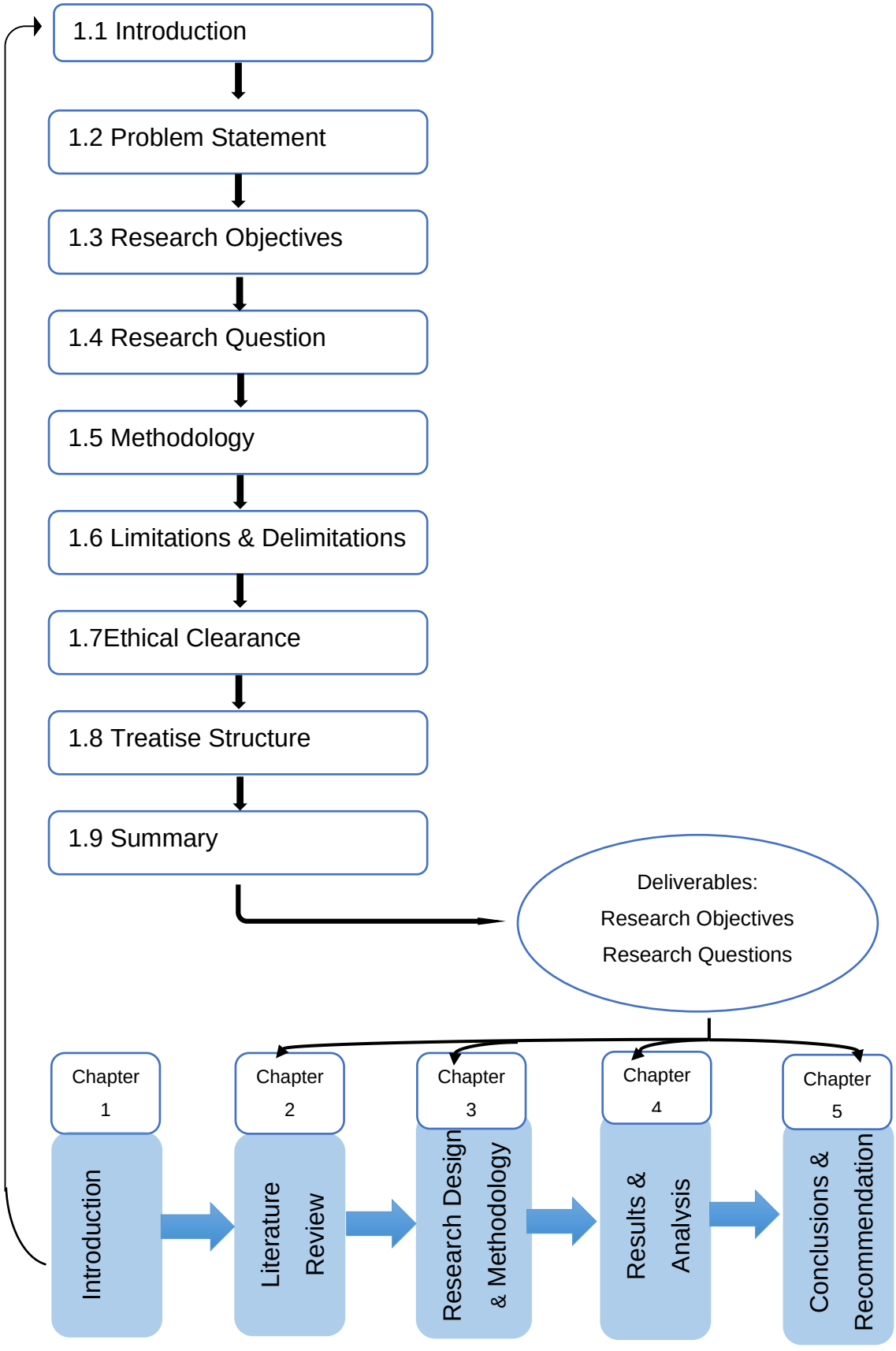


Figure 1.1: Chapter 1 Outline

1.2 Problem Statement

Shopping behaviour, on the account of rapid advancement of technology, has moved from the traditional monopoly of brick-and-mortar stores to various online platforms. This change in shopping behaviour has seen consumers gradually adopting other shopping platforms, including combining online shopping and physical stores. Consumers are attracted by the convenience and flexibility offered by online shopping, while enjoying the physical interaction offered by physical stores (Kaufman-Scarboroug & Lindquist, 2002).

The choice in selecting a shopping channel is influenced by convenience, price, enjoyment (Kim et al., 2019). Internet and mobile phone penetration, which reduced online shopping barriers played and still play a significant role in the choice of the shopping channel. Zaveri and Amin (2013), suggest that a momentous change from the stable traditional brick-and-mortar requires a shift in the consumers' behaviour. Yoon (2020) submits that a major life event can suddenly and significantly distort the generally slow changing shopping pattern.

The corona virus pandemic, a major life event, has seen the world rapidly moving online due, to imposed restrictions to curb the spread of the deadly virus (Yan, 2020). This has motivated the current study, which seeks to examine the influence of the pandemic on online shopping, particularly in South Africa.

Therefore, the research problem addressed in this study is:

The influence of COVID-19 on the online shopping habits of South African consumers has not been explored.

The following research objectives and research questions will address the research problem.

1.3 Research Objectives

Understanding whether the corona virus pandemic has influenced customers towards online shopping in the long run can inform businesses on adaptations that must be implemented to remain relevant and profitable.

Main research objective

The research seeks to determine whether the corona virus has had an influence on online shopping. Therefore, the following main objective was formulated:

i. **RO_M:** To investigate the influence of the corona virus pandemic on online shopping behaviour.

To fulfil the main objective of the research, the following secondary objectives of the study are framed:

i. **RO_1:** To investigate the various shopping channels and their drivers.
ii. **RO_2:** To understand the consumer's behaviour on adoption and continuance use of technologies.
iii. **RO_3:** To enhance the understanding of consumer behaviour on online shopping in response to the pandemic.
iv. **RO_4:** To examine the effects of the pandemic on long term online shopping.

1.4 Research Questions

The study formulated the following research questions predicated on the problem statement and research objectives:

RQ_M: How has the corona virus influenced South African consumers' online buying behaviour?

The main research question led to the following questions that will addressed by the study to answer the primary question:

RQ_1: What are the predominant shopping behaviours of South Africans?

RQ_2: How has technology contributed to the consumers' behaviour towards online shopping?

RQ_3: What research methodology will be used to study and reproduce this research in future?

RQ_4: Which factors should be in included in the proposed conceptual model?

RQ_5: What are the results from the empirical research study?

RQ_6: What managerial recommendations can be provided from the research results?

1.5 Research Methodology

The research methodology refers to the procedural framework within which the study is conducted (Amaratunga, Baldry, Sarshar, & Newton, 2002). It is the body of methods and principles on which the research is founded (Singh & Walwyn, 2017). It is primarily informed by the nature of the research problem. This section describes the research paradigm, research approach, academic theory, literature review, data collection and analysis as informed by the research problem and objectives.

1.5.1 Research Paradigm

Positivism, a paradigm based on rationalistic, empiricist (Mackenzie & Knipe, 2006) and reductionistic philosophy (Creswell, 2014) to determine effects or outcomes of a research (Collis & Hussey, 2014), will be the framework of this research study. Positivism is objective, allowing the researcher to discover and verify facts through measurements of phenomena independent of the researcher's bias (Krauss, 2005). Collis and Hussey (2014) further note that the positivism paradigm not only provides objective, but precise data with high reliability. Positivism through value-free observations and measurement further provides a framework to measure independent variables about an apprehensible reality to predict and control surroundings (Krauss, 2005; Mackenzie & Knipe, 2006). This paradigm allows collected data to be statistically analysed and the sample results to be generalised to the target population.

1.5.2 Research Approach

The research approach is defined by Collis and Hussey (2014), as the process of the research. The process is a broad plan and procedure for research encompassing assumptions, use of specific research methods, methods of data collection, analysis, interpretation and interaction with research stakeholders (Cassim, 2017; Creswell, 2014). An online survey will be used to collect primary data from the sample, which allows the data to be statistically analysed (Collis & Hussey, 2014).

The survey will consist of a self-administered questionnaire with structured questions so that all participants are asked the same questions. This approach is considered, to

collect quantitative data because it is a relatively reliable research tool, cost-effective, easy to administer, less time consuming (Collis & Hussey, 2014; Swiegers, 2018) and safe particularly in this COVID-19 pandemic. This is further rationalised by the understanding that online shoppers have access to and are acquainted with online platforms. Cassim (2017) notes that for a positivism study, which requires a large sample, an online survey is ideal as it can easily access a large population.

The online survey will investigate whether there is a shift to online shopping post corona virus, to address whether the corona virus is changing the buying habits towards online. The self-administered questionnaire will determine the online spending during the corona virus to respond whether the virus influences online offerings. The data collected are objective therefore, conclusions can be extrapolated with specific confidence (Cassim, 2017) and the results can be generalised to a population (Collis & Hussey, 2014).

1.5.3 Academic Theory

The pandemic has not only affected personal lives but also disrupted economies and social habits demanding the development of new and practical solutions. Some of these solutions that have played a role in maintaining business and social functioning are technology based and will have an influence on society beyond COVID-19 (Brem, Viardot & Nylund, 2021). Lockdowns and restricted movements, which confined people to their homes were some of the main strategies used to curb the spread of the virus consequently leading people to adopt new behaviours (Brem et al., 2021) and use of online technology (Sukendro et al., 2020). This has seen growth of online shoppers necessitating the need to investigate consumer acceptance of online shopping (Ha & Stoel, 2009).

The research, which seeks to gain a better understanding of the intention to adopt, and continuance use of online shopping, examines the change of behaviour and adoption of technology based on the theories of technology acceptance model (TAM), diffusion of innovation theory and the theory of planned behaviour (TPB). The insights offered by these theories will be used to explore the reasons people accept or reject technologies. Ha and Stoel (2009) consider that the pertinent attributes that increase consumer perceptions that online shopping is easy, useful, fun and safe will be handy

in informing business on how to entice customers to initiate their first transaction online and continue to frequently shop online.

The TAM theory, a robust and parsimonious framework for understanding the adoption of technology (Ha & Stoel, 2009), posits that people's attitude, intention and feeling towards adopting technology is predicated by the people's perceived usefulness and ease of use of the technology (Sukendro et al., 2020) and subsequent acceptance and use (Ha & Stoel, 2009). The theory provides a basis for tracking the impact of external variables on beliefs, attitudes and intentions (Legris, Ingham & Collerette, 2003).

Perceived usefulness is the extent to which a potential customer believes that adopting the technology will enhance the customer's performance, whereas perceived ease of use refers to the customer's belief that using the technology will be free of effort (Davis, Bagozzi & Warshaw, 1989; Ha & Stoel, 2009). The perceived usefulness and perceived ease of use influences the consumer's intention to engage in online shopping subsequently determining the shoppers' behaviour (Olivier, 2016). Additional constructs, such as usefulness, enjoyment, trust and performance are necessary to complement the TAM framework to adequately capture beliefs influencing consumers' attitude, which despite its robustness has shown inconsistent findings (Ha & Stoel, 2009).

The Diffusion of Innovations theory is a framework commonly used to evaluate the dissemination and implementation of technology based programmes (Bobitt, Carter, Kuhne & Bobitt, 2020) and explains the rate of adoption (Nel, 2013). The theory's constructs that will be examined, include relative advantage, compatibility, complexity, trialability, observability, image and voluntariness of use (Nel, 2013). These constructs inform the rate at which the innovation would be adopted. The theory in this research will consider technologies that have evolved as a result of the pandemic providing practical solutions (Brem et al., 2021).

Innovative solutions have been developed at unprecedented speed to assist society to deal with the effects of the pandemic (Palanica & Fossat, 2020). Technology has solved the effect of being confined by providing a solution for the population to interact, work, educate and shop from home which have seen the rapid adoption of technologies (Palanica & Fossat, 2020). The authors further postulate that during the

pandemic the pace of innovation was radical sidestepping usual administrative barriers.

The theory of Planned Behaviour proposes that a consumer's behaviour is determined by the consumer's behavioural intention, which is a function of attitude and subjective norm (Banerjee & Ho, 2020; Nel, 2013). It posits that behaviours can be predicted by intention, which is affected by perceived control, desirability, perceived prevailing norms and attitude (Ammar et al., 2020; Steinmetz, Knappstein, Ajzen, Schmidt & Kabst, 2016). The theory examines the extent of an individual's feelings towards the intention of performing a particular behaviour and the individual's beliefs about the expectations of others (Steinmetz et al., 2016).

Perceived behavioural control is also incorporated, which refers to the easiness or difficulty in performing the behaviour of interest (Adiyoso & Wilopo, 2021; Banerjee & Ho, 2020). The theory, which is flexible and relatively universal (Adiyoso & Wilopo, 2021; Steinmetz et al., 2016), using dimensions of relative advantage, complexity, compatibility, facilitating conditions and self-efficacy, better predicts behavioural intention (Nel, 2013). Ammar et al. (2020) suggest that the theory explains the control consumers perceive have over avoiding infection, importance in adopting preventative behaviours and prevailing norms such as online shopping.

1.5.4 Literature Review

The literature review identifies seminal work within the subject matter allowing the research to be grounded in peer reviewed literature (Cowhitt, Butler & Wilson, 2020) before building on the existing body of knowledge (Elsbach & Knippenberg, 2020). The review guides the research, covers the research questions and allows the research to identify gaps and deficiencies in existing literature that it can add to (Collis & Hussey, 2014). Reviewing of literature adds rigour and reliability to the study. The synthesis and analysis of peer reviewed literature also produces insights (Cowhitt et al., 2020) and perspectives (Elsbach & Knippenberg, 2020) about the influence of the pandemic on online shopping. The literature study will be conducted through coherently organising research related literature from various peer reviewed sources (Cowhitt et al., 2020) and critically analysing such literature (Collis & Hussey, 2014).

1.5.5 Sampling Design

The target population is the South African online shopping community of all ages, which is the body under consideration (Collis & Hussey, 2014; Mapande & Appiah, 2019) in this research. The number of South African residents from which the information will be obtained was estimated to be almost 19 million (Davis, 2019), the population is expected to have grown by the time the research is conducted. The target population is large, therefore a representative sample will be selected to represent the population. Collis and Hussey (2014) suggest a sample size of at least 384 complete responses for a study with a target population of more than one million, which according to Cassim (2017), reduces the sampling error.

The researcher could not obtain a list of the entire target population, but a sampling frame, which is proportionally representative of the target population's age, gender, socio-economic status and race will be used to gather data using the convenience sampling method (Collis & Hussey, 2014; Wegner, 2014). The sampling frame's representativeness of the population is critical in generalising the sample results to the population (Cassim, 2017; Collis & Hussey, 2014; Kalleberg, Marsden, Aldrich & Cassell, 1990)

The stratified sampling method will be used to determine the sample. The target population's identifiable strata in terms of age groups, gender, socio-economic status and race will be proportioned to ensure that the same proportions are reflected in the sample (Collis & Hussey, 2014). Kalleberg et al. (1990) as well as Collis and Hussey (2014) consider that a proportioned sample is representative of the investigated population, allowing the researcher with a certain confidence to apply the results to the entire population. The selected participants will also be requested to forward the questionnaire to other prospective respondents resulting in snowball sampling. Snowball sampling adds to the representativeness of the findings (Cassim, 2017).

1.5.6 Data Collection

A closed-ended questionnaire will be used to elicit reliable responses from the target population (Collis & Hussey, 2014). The use of an online questionnaire was chosen because it can be self-administered, which is less time consuming and relatively cheaper. The online option made sense considering that the study's population has

access to the Internet, which the population use to conduct online shopping. A software programme, QuestionPro will be used to administer the questionnaire to maintain participant's anonymity. Maintaining respondents' anonymity is imperative to reduce sampling error due to biased communication (Cassim, 2017).

An online closed-ended questionnaire can also quickly and easily access a large sample (Cassim, 2017) reaching the targeted sample size of 384 respondents. The online results can also be easily imported to statistics software for analysis. The researcher is cognisant of questionnaire fatigue and non-response bias (Collis & Hussey, 2014) and will send follow-up emails to gently remind the participants to complete the questionnaire as a way to counter the drawbacks. The researcher will also send out the questionnaire to more than 600 respondents in case there is a low-response rate. The questionnaire will be limited to participants that are literate in English.

The cross-sectional survey will have a brief background explaining the purpose of the study and the ethical considerations such as the anonymity of the respondents and approval by the university's ethical committee. Collis and Hussey (2014) suggest that a self-administered questionnaire must have precise instructions. This encourages participants to respond. The questionnaire will be operationalised from previous studies that pertain to the domain of the current study (Swiegers, 2018). The questions will be presented to move from the general to the specific online shopping topics. The questionnaire will start with a screening question and cover the demographics, such as occupation, age, education, income level and geographical location. The screening question will be presented in the form of dichotomous item to determine respondents' eligibility to participate in the study. The main body of the questionnaire will include a 5-point Likert scale, where 1 = Strongly Disagree and 5 = Strongly Agree.

Data Analysis

Primary data collected through the online questionnaires, will be statistically analysed using an appropriate statistical software such as SPSS. The researcher will present a report of respondents and non-respondents. This according to Creswell (2014), will determine the response bias. Descriptive statistics, which include measures of central tendency (mean, mode, median) and dispersion of data (standard deviation, range,

variance) are then used to summarise the collected data. Descriptive statistics describe the behaviour of a random variables in a sample (Wegner, 2014) and allow relationships or patterns to be determined (Collis & Hussey, 2014). The inferential data analysis will be used firstly to assess validity and reliability of the questionnaire.

Validity refers to the degree whereby the measuring instrument measures what it claims to measure (Collis & Hussey, 2014) or a reflection of the accuracy of data obtained from a sample (Cassim, 2017). Exploratory factor analysis (EFA) will be conducted to validate validity of the independent factors. Reliability refers to the consistency of the instrument (Collis & Hussey, 2014) and is improved by minimising sampling bias and sampling error (Cassim, 2017). Reliability in this research will be checked using Cronbach's alpha coefficients. Collis and Hussey (2014) suggest that for a reliable scale, the Cronbach's alpha should be at least 0.8, though Swiegers (2018) indicates that a 0.7 or higher value is satisfactory and acceptable.

Inferential statistics involves the use of statistical tests to investigate whether a statistically significant relationship exists between variables (Cassim, 2017). A 95% confidence level is the most commonly used confidence interval (Cassim, 2017; Collis & Hussey, 2014) and is set as the confidence level of this research. Appropriate statistical tests are then performed at the 95% confidence level. The *t*-test and Pearson's correlation, which determine whether there is a statistically significant difference in two means, establish the correlations between variables under study and to predict the outcome in the dependent variable respectively for parametric data will be used in this study (Cassim, 2017; Collis & Hussey, 2014). Inferential statistics will then be used to generalise findings beyond the sample groups in a study, to a larger population, as the probability of being incorrect will be known.

1.5.7 Reporting or Synthesis

Visual representations, such as graphs, tables, Figures and flow diagrams will be used to describe respondents' background information. Cassim (2017) posits that using visual representations makes it easier for the reader to process the results. Statistically significant differences amongst different data groups will be illustrated in tables or graphs. There will be a key or annotation below the graph or table, in which statistical tests were used, indicating which data groups show the significant differences and the

level of significance. The statistical significance testing report on assessments, as to whether the observed scores reflect a pattern other than chance (Creswell, 2014).

Supporting tests and information, such as p-values or F-values will also be reported (Cassim, 2017). Inferential statistics results will be used to estimate parameters. This is done to establish inferences about the hypotheses or research questions on the basis of the data collected and establish whether there is a pattern or a relationship found in the population from which the sample was drawn (Creswell, 2014). This will involve discussing theoretical and practical consequences of the results. The researcher will draw conclusions about the population at large from statistics of the sample. The results will focus on addressing whether the research questions were addressed. The possible implications and significance of results will be discussed to formulate recommendations and future research topics.

1.6 Limitations

This research will be conducted in English and online. The online platform was chosen because the research's study population conduct their business online, therefore, have access to online questionnaires. The online platform broke down the geographical barriers permitting the study to be conducted throughout the nation enhancing the study's validity. English was chosen because according to StatsSA (2019a), an overwhelming majority of South African online buyers conduct their business in English, therefore the language is representative of the study population's communication language. The use of online questionnaires, lacking interface interaction could cause loss of meaning because of the missing non-verbal cues (Hesse-Biber & Griffin, 2013). Amaratunga et al. (2002) mention a low response rate as one the questionnaire's shortcomings. Questionnaires also fail to capture the drive behind the findings (Cassim, 2017).

The cross-sectional research will focus on the corona virus' influence on online shopping during the pandemic. The research explores whether the corona virus pandemic has had an effect on online shopping in order to inform businesses on how to readjust to the changes if any. This cross-sectional nature of the study limits the application of the findings to the effects of the corona virus before the cure is found,

should a sustainable cure be discovered the findings may vary. The study therefore recommends that future longitudinal studies be conducted on the topic.

1.7 Ethical Clearance

The research will be conducted in adherence to the Nelson Mandela University (NMU) Policy on Research Ethics (Nelson Mandela University, 2010). This research was exempted from a full ethics clearance due to the insensitivity of the study. Ethics clearance was completed, submitted and approved. The approved ethical clearance form is attached as Annexure A, reference number H21-BES-BS-003.

1.8 Treatise Structure

The structure of the research will follow the plan as detailed in the research alignment plan:

Table 1-1: Research Alignment Plan

Title: The influence of the COVID-19 pandemic on online shopping behaviour in South Africa
Main Research Problem: With the advent of the corona virus pandemic, that has seen restrictive measures on foot-traffic to curb the spread of the virus, coupled with technological advances, there has not been an examination on how it has affected the population's behaviour towards online shopping.
Problem Statement: The influence of COVID-19 on online shopping habits has not been explored.
Research objective: To investigate the influence of the corona virus pandemic towards online shopping behaviour. **Secondary research objectives:** i. **RO_1:** To investigate the various shopping channels and their drivers. ii. **RO_2:** To understand the consumer's behaviour on adoption and continuance use of technologies. iii. **RO_3:** To enhance the understanding of consumer behaviour on online shopping in response to the pandemic. iv. **RO_4:** To examine the effects of the pandemic on long term online shopping.
Main Research Question (RQ_M): How has the corona virus influenced consumers' online shopping behaviour?

Research questions		Research objective	Chp	Deliverable
RQ_M	How has the corona virus influenced online shopping behaviour?	Investigate whether the corona virus pandemic had an influence on online shopping behaviour	2	• Brief history of online shopping and its growing rate pre-pandemic • Review literature on the increased online shopping behaviour because of COVID 19
RQ_1	What are the predominant shopping behaviours?	Examine the various shopping channels and their drivers	2	• Detail the various shopping channels used by consumers
RQ_2	How has technology contributed to consumers' behaviour towards online shopping?	Study the consumers' behaviour on adoption and continuance use of technologies	2	• Explore the reasons consumer adopt or reject technologies.
RQ_3	What research methodology will be used to study and reproduce this research in future?	Examine the research methodology and the rationale	3	• Determine a research theoretical framework for this study. • Report on the academic theory of the research • Detail the research approach, sampling design and data

				collection methods to be employed by the study.
RQ_4 **RQ_5**	Which factors should be in included in the proposed conceptual model? What are the results from the empirical research study?	Examine whether the pandemic has an influence on online shopping behaviour. Investigate the factors of the pandemic influencing online shopping	4	• Report from the results the influence of the pandemic towards online shopping and offerings. • Report of factors of the corona virus influencing online shopping.
RQ_6	What are recommendations on the effects of the pandemic on online shopping?	Frame recommendations to gain competitive advantage from the effects of the pandemic	5	• Establish the significance of understanding the • pandemic's influence on online shopping. • Formulate recommendations that could be adopted to be abreast with online shopping habits.

The treatise will be structured as follows:

Chapter 1 – Introduction

This chapter introduces the research, outlining the objectives set to answer the research questions. Premised on the research background, both the significance and limitations of this study are detailed. The chapter frames the theoretical basis of the research and set out the data collection and analysis methodology to be employed by

the study. The chapter concludes presenting the research's structure after outlining that the research is adherent to the university's ethical policies.

Chapter 2 – Literature Review

The literature review examines the various shopping channels available to South Africans and their drivers. The chapter then investigates the concept and drivers of online shopping before delving in factors of the pandemic that are influencing consumers to shift towards online shopping. As part of the study, the research also investigates whether the pandemic induced shift will have a lasting effect after the pandemic. This is explored by studying, using theoretical frameworks, change of consumers' behaviour towards technology. This chapter will provide an in-depth analysis of relevant literature, critiquing divergent and convergent views of various authors. The analysis of existing literature will be primarily based on peer-reviewed articles.

Chapter 3 – Research Design and Methodology

The chapter will examine specific research design and methodology used in this study and the rationale. Research paradigm, population, sampling design will also be discussed in this chapter and how they will be used to achieve the research objectives enabling the study to answer research questions. The chapter will comprehensively describe the data collection instrument and primary data to augment the research argument.

Chapter 4 – Results and Analysis

The statistical techniques employed to analyse collected data will be detailed in this chapter. The chapter will then present the results of the study. The validity and reliability of the results will be examined preceding presentation of the descriptive statistics. Inferential statistics will be used to explain the results linking up with the reviewed literature.

Chapter 5 – Findings, Conclusions and Recommendations

This chapter, which provides an overview of the research, will consist of integrated succinct findings of the research linking back to the research questions. Predicated on

the results and findings, the chapter will reflect on the problem statement before offering recommendations for future research.

1.9 Summary

Chapter 1 introduced the topic and laid out the background expanding on the potential causes and solutions. The chapter set out research questions stemming from the problem statement. Research objectives, both main and secondary, were developed to assist in answering the research questions. In order to achieve the research objectives, the research will employ a specific methodology, which was briefly outlined in this chapter. The methodology covered the research paradigm, approach, sampling design before discussing data collection methods. The data collection method looked at the instrument to be used to collect data, the analysis and reporting of collected data.

The study examined the possible research limitations and where practical, it proposed counter delimitation measures. The research adheres to the ethical requirements of the university and must be conducted as per the approved ethical clearance. The chapter concludes with a structure of the research.

The following chapter will conduct an in-depth literature study examining shopping in general, the concept of online shopping and the effect COVID-19 on online shopping. The chapter will investigate the independent factors that influence online shopping. The literature review chapter will provide a grounding for the treatise.

CHAPTER 2 : LITERATURE REVIEW

2.1 Introduction

The constant advancement of technology brought about various shopping channels pitting against the traditional and well established in-store shopping channel (Kim et al., 2019). This has seen consumers either completely moving out of physical stores or complementing the various shopping channels to exploit all the channels' benefits (Kaufman-Scarboroug & Lindquist, 2002). Consumers' behaviour, which informs the benefits the consumers seek, is the critical determinant in choosing the channel or combination of channels (Kim et al., 2019). The behaviour is informed by technology, which created new ways to reach and satisfy the consumers' needs (Swiegers, 2018).

The advent of COVID-19, a pandemic that forced most nations to impose lockdowns and restrictive measures to curb the spread of the virus shifted the consumers' behaviour. This prioritises the necessity to understand consumer behaviour particularly in adoption and continuance use of shopping technologies (Nel, 2013). The diffusion of innovations during the pandemic opened up new windows, which could also help to explain any shift of the consumers' behaviour (Dannenberg, Fuchs, Riedler & Wiedemann, 2020). Furthermore, considering that consumers are creatures of habit, who seldom shift from their preferred shopping channel (Handayani, Nurahmawati, Pinem & Azzahro, 2020), it is crucial to investigate whether the pandemic has led to consumers' behaviour change (Zaveri & Amin, 2013). It is imperative for retailers to note any change in consumers' behaviour and use it to their advantage to remain competitive (Swiegers, 2018).

This chapter will examine shopping in general, the concept of online shopping and its growing rate pre-pandemic before investigating the effect of the corona virus pandemic on online shopping in South Africa. The study will investigate the independent factors that drive online shopping and develop a conceptual model. It will review literature on the increased online shopping behaviour stemming from the effects of the COVID-19. Consumers' behaviour towards the adoption of technologies will be discussed. The chapter will focus on the factors and trends of the pandemic that affect online shopping. Further focal points will investigate the effects of the pandemic on drivers of online shopping. The chapter is structured to respond to research questions **RQ_M**,

RQ_1, and **RQ_2** allowing the research to achieve the research objectives **RO_1**, **RO_2**, **RO_3** and **O_4**. The research questions are paired with the corresponding objectives as follows:

- **RQ_1:** What are the predominant shopping behaviours of South Africans?

  RO_1: To investigate the various shopping channels and their drivers.

- **RQ_2:** How has technology contributed to the consumers' behaviour towards online shopping?

  RO_2: To understand the consumer's behaviour on adoption and continuance use of technologies.

- **RQ_M:** How has the corona virus influenced South African consumers' online buying behaviour?

  RO_3: To enhance the understanding of consumer behaviour on online shopping in response to the pandemic.

  RO_4: To examine the effects of the pandemic on long term online shopping.

The outline of the chapter is as depicted in Figure 2.1.

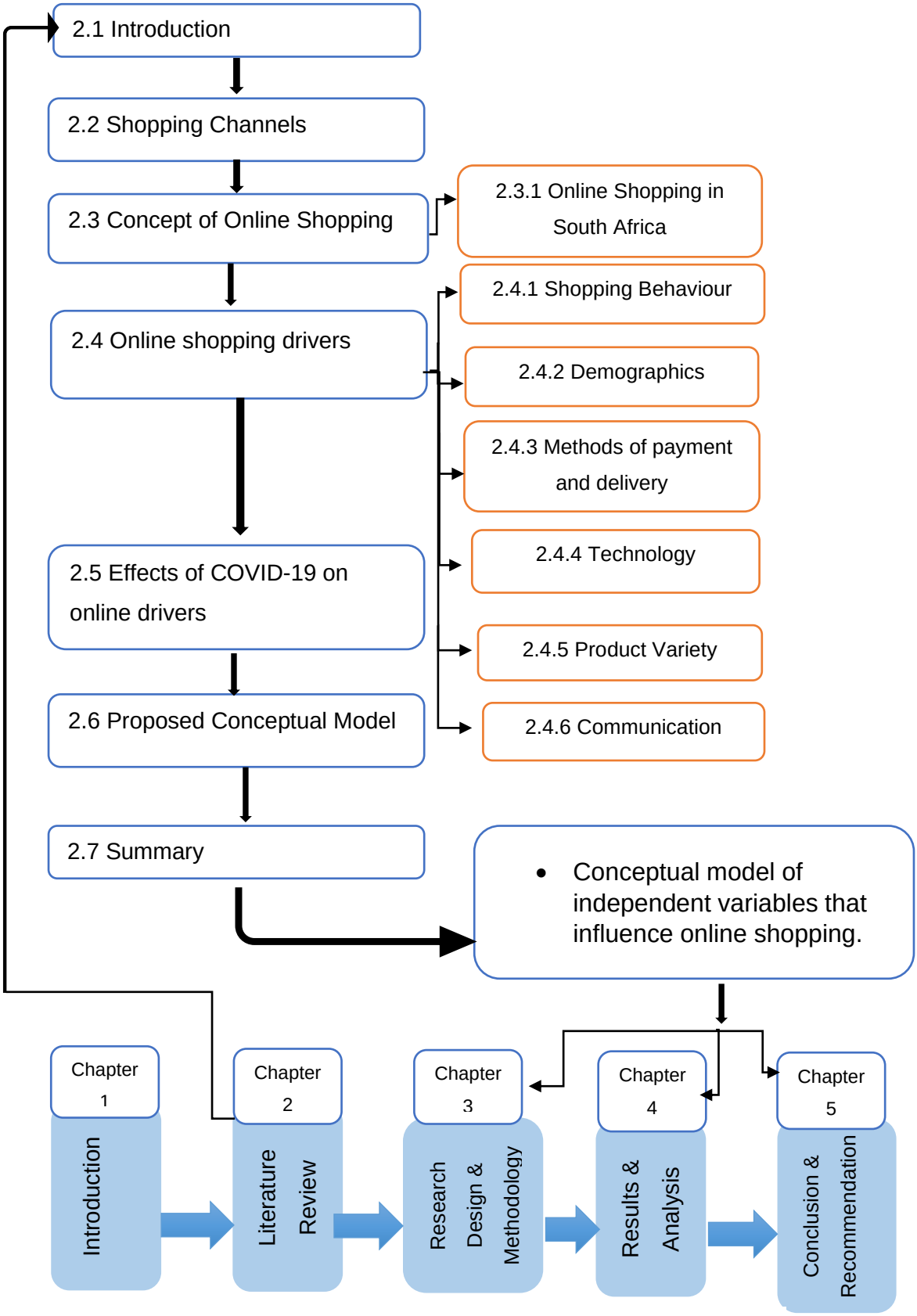


Figure 2.1: Chapter 2 Outline

2.2 Shopping Channels

Consumers have in the recent past enjoyed a variety of shopping channels enabled by the advent of technology (Kim et al., 2019). The rapid mushrooming of the various shopping channels is challenging the traditional stronghold of the brick-and-mortar stores. The plethora of shopping channels, such as catalogues, websites and mobile apps, are enhanced by the continuous advancement of technology (Kaufman-Scarboroug & Lindquist, 2002). Kim et al. (2019) and Girard et al. (2003) authoritatively state that despite the advancement of technology, an overwhelming majority of consumers still consider brick-and-mortar stores as the essential venue for shopping.

The physical store remains a significant channel with more than 50% of the market share (McKinsey, 2019). Traditional stores enjoy the majority of the market share owing partly to scepticism associated with the perceived risk of revealing personal information (Girard et al., 2003) and the inability to test run the products during online purchases (Olivier, 2016). Although most consumers make purchases in stores, most of them rely on online channels for ease of searching and comparing information (Kim et al., 2019) therefore, combining different shopping channels (Consumers Union of United States, 2004). Kaufman-Scarboroug and Lindquist (2002) termed this phenomenon multichannel shopping and suggested that technology has allowed consumers to move flawlessly from one channel to another gaining economic advantage by exploiting the benefits of each channel.

McKinsey (2019) opine that consumers jump between channels to structure the shopping experience according to their ease, immediacy and instant gratification needs. Technology, which continually reduces barriers to retailing, has made multichannel popular and acceptable (Olivier, 2016). Businesses, with the aid of innovative technology, have positioned themselves at the intersection of the physical and digital shopping to conveniently deliver (McKinsey, 2019). Retailers have also adopted the multichannel strategy adding new channels to their existing mix to appeal to a wider audience (Kim et al., 2019) and extend the point of sale (McKinsey, 2019).

2.3 Concept of Online Shopping

Online shopping is the transacting of goods or services over the Internet in exchange for value (Akram, 2018). Rudansky-Kloppers (2014) views online shopping as a platform that enables customers to search, select for products or services online, choose a delivery method and pay for them. Online shopping's adoption is dependent on the availability of information technologies infrastructure within the society (Swiegers, 2018). Products or services listed online are described either through text or picture or the combination of the two to enable customers to shop with minimum assistance.

The advent of the Internet enabled and disrupted many aspects of the consumers' life, particularly the search and purchase of products (Swiegers, 2018). The Internet conveniently allowed consumers to move to online shopping by providing flexible and personalised access (Nielsen, 2018; Vaitkevicius et al., 2019; Yahya & Sugiyanto, 2020). Companies recognised the Internet's potential and this sparked the establishment of online shopping platforms (Nielsen, 2018). The online platforms brought about hassle-free shopping with a global reach (Ali, 2020; Nielsen, 2020a). Retailers recognised that online shopping affords them the opportunity to lower the cost of doing business and expand their footprint (Zaveri & Amin, 2013). It is noteworthy, that though online shopping has made indelible strides, it is still in a nascent stage (Nielsen, 2018) with many people still unfamiliar with the concept, particularly in developing nations (Handayani et al., 2020).

Different business online models are used to conduct online shopping. Some retailers sell online but also have physical stores, these are complementary e-commerce sites (Dannenberg et al., 2020). Such retailers offer consumers an option to order online and use their network of physical stores to serve as a starting point for delivery to customers (Gunday et al., 2020). Other businesses are pure e-commerce, meaning they do not have any physical store; therefore, customers' purchases are shipped from a central warehouse to the delivery address or alternative pick-up point (Dannenberg et al., 2020; Gunday et al., 2020). The third category is termed combined e-commerce because products are offered by various providers over an online platform (Dannenberg et al., 2020). All three different online shopping models also differ

according to how goods are transported, ordered, payment method and the storage of goods before they are handed over to the consumer (Dannenberg et al., 2020).

2.3.1 South African Online Shopping

In the South African context, which exhibits traits of both a developed and a developing economy, online shopping has been characterised by early adoption by high-income earners and laggard adoption by the rest of the population, typical of a developing nation (Swiegers, 2018). Online shopping is increasing tremendously in South Africa but still lags behind Western and some Eastern countries (Rudansky-Kloppers, 2014). The high mobile penetration has significantly shifted consumers' buying behaviour towards online shopping in South Africa (Mapande & Appiah, 2019). The nation is economically dichotomous, with access to technology, a strong private sector and financial institutions, at the same time with a large percentage of the population still living below the poverty datum line (Swiegers, 2018).

This is attributed as the reason online shopping is still in its infancy despite having been around since 1996. Rudansky-Kloppers (2014) as well as Mapande and Appiah (2019), note that for those living above the poverty datum line, fear of online fraud is the main concern that deters them from online shopping. The authors add that, to a lower extent, consumers are deterred by the untraditional inability to physically try the product before it is shipped. Swiegers (2018) asserts that despite these obstacles, online shopping in South Africa is growing at a rapid rate aided by the continuous improvement of communications technology, online security and the graduation to economic activity of the generation Y cohort, which conducts most of its transactions online.

South African retailers view online shopping as an opportunity to reach broader markets and generate visibility in areas where the companies do not have physical stores (Mapande & Appiah, 2019). Online shopping also translates to reduced warehousing costs and shorter delivery times as businesses employ the just-in-time system, passing the savings to the consumer (Rudansky-Kloppers, 2014) resulting in higher customer satisfaction (Mapande & Appiah, 2019). The availability of technologies has also seen more companies shifting to online platforms as they can now provide online platforms that accommodate and offer customer experience to

various age groups of different gender with differing educational levels (Mapande & Appiah, 2019). South African companies are taking advantage of these technologies to ensure they expand their market share and retain their current clientele.

2.4 Online Shopping Factors

A number of independent factors have an influence on online shopping and its growth. These independent factors either boost or inhibit online shopping among consumers, hence the significance to further investigate their relationship with ecommerce. The research examines seven such independent factors.

2.4.1 Shopping Behaviour

Selecting a channel from the available options is driven by the consumers' behaviour, which can be divided into either hedonic or utilitarian motives (Kim, Libaque-Saenz & Cheol, 2019). Consumers driven by the utilitarian motives desire to complete shopping in an efficient way that prioritises saving monetary resources, effort and time. Girard et al. (2003) suggest that such consumers are inclined to at least use convenient online channels to cost effectively acquire current information on prices and product offerings before making a purchase. Contrarily, the hedonic motivated consumers consider entertainment as a primary prerequisite of choosing a channel (Kim et al., 2019). The chosen channel must stimulate happiness, enjoyment and sensuality in the consumer. Girard et al. (2003) theorise that consumers who wish to enjoy shopping are more likely to go to a shopping mall rather than buying online. Both hedonic and utilitarian motives, which influence consumer behaviour, can be summed up into price consciousness, convenience, shopping enjoyment and impulse buying (Kim et al., 2019).

Kaufman-Scarboroug and Lindquist (2002) posit that these motives, which communicate benefits consumers wish to obtain, classify consumers as either traditional, multichannel or online shoppers. The classification, though, is becoming increasingly blurred with consumers either complementing or switching between shopping channels (McKinsey, 2019) and retailers also beginning to integrate their digital and physical channels (Gitter, Raymond, Robinson & Wilkie, 2020).

A study of shoppers' profiles, characterise multichannel shoppers as a cohort who typically live in urban areas where there are plenty of cross-channel options and prefer in-store pick-up at their convenience to avoid waiting for the delivery (McKinsey, 2019). Multichannel consumers enjoy in-store experiences and convenience afforded by online platforms. The report also states that online shoppers additionally consider time efficiency and out-of-hours availability. Swiegers (2018) adds that online shoppers are generally early adopters of innovation, impulsive and risk takers. Olivier (2016) suggests that saving time, broader product range and comparative shopping persuade consumers to shift to online shopping. Online shoppers' behaviour is stimulated by the instant availability of online stores to fulfil urges when they occur.

McKinsey (2019) notes that there is a notable difference between rural and suburban residents, in the use of multichannel. In rural areas, where the majority of South Africans reside, an overwhelming number of the population depend largely on physical stores. Technologies have been used to advance adoption of multichannel and online shopping, offering frictionless and secure payments allaying possible fraud concerns (McKinsey, 2019). Despite the technology interventions, the majority of consumers have held on to traditional shopping (Kim et al., 2019) particularly in emerging economies like South Africa, which prompted Zaveri and Amin (2013) as well as Yoon (2020), to suggest that a drastic shift from in-store shopping can only be effectively driven by consumers' behavioural change.

People undergo behavioural changes following a major event that disrupts their social lives and threatens their existence (Yuen et al., 2020). The corona virus, such a cataclysmic event, disrupted people's social lives creating a shift in the society that hastily brought about behavioural shift resulting in change in consumer behaviour (Zwanka & Buff, 2020). Yoon (2020) concurs with the assertation, adding that the rapidly growing number of people working from home and the less dense shopping policy, which the pandemic triggered have added or at least accelerated the consumer behaviour shift to survive the corona virus pandemic. Nations around the globe, including South Africa, were obliged to promulgate measures to enhance social distancing to curb the spread of this deadly novel virus (Hasanat et al., 2020; Pham, Do Thi & Ha Le, 2020). Social distancing and lockdowns drastically altered the

consumers' decision-making process, which has seen spikes in online shopping as consumers avoid dense market places (Yoon, 2020).

Yahya and Sugiyanto (2020), as well as Handayani, Nurahmawati, Pinem and Azzahro, (2020), posit that online shopping's ability to cut through distribution channels reducing transaction costs compared to traditional shopping, reels in price-conscious consumers. Recent studies done on online shopping have indicated that, besides Internet connectivity, products' price and average income of the population were the main drivers of online shopping (Yahya & Sugiyanto, 2020). This is in contrast to Zaveri and Amin (2013) who suggest that the primary driver of online shopping is the changing lifestyles of Internet users searching for exciting customer experiences. Akram, (2018), posit that consumers who enjoy online shopping beyond its service tend to become loyal online shoppers.

The enjoyment emanates from the interactive nature of online shopping and the lack of external intervention in deciding. Ali (2020) also suggests that as shopping behaviour has changed as consumers gain experience and knowledge of using online shopping platforms, it also lowers their scepticism. Retailers abetted the behaviour, taking advantage of flexibility afforded by online shopping to demonstrate how real customers use the companies' product to lower the scepticism (Lee Yohn, 2020). This has seen a rapid online shopping growth (Karadeniz & Kocamaz, 2020).

Shopping behaviour has been identified as a driver with a positive influence on online shopping. The independent shopping behaviour relationship with the dependent factor, online shopping is depicted in Figure 2.2.

Figure 2.2: Shopping behaviour's influence towards online shopping.

2.4.2 Demographics (gender, education, age, experience)

The convenience afforded by online shopping was and still is the underlying motive driving customers to adopt online shopping reaching previously blue water markets (Asiedu & Dube, 2020). This was made possible by the city dwellers' demand for

simpler and quicker ways to perform regular shopping, retail transformation, which invested heavily in technology and online shopping infrastructure and the coming of age of millennials who are accustomed to digital platforms and early adopters of online shopping (Nielsen, 2018; Yahya & Sugiyanto, 2020).

The socio-demographics like location, gender and age play a role in shifting to online shopping. Therefore, households with high incomes, located in urban areas, with Internet access and headed by millennials are more likely to shop online (Yahya & Sugiyanto, 2020). In the South African context, online shopping has been characterised by early adoption by high-income earners and laggard adoption by the rest of the population typical of a developing nation (Swiegers, 2018).

The nation is economically dichotomous, with access to technology, a strong private sector, reputable financial institutions and at the same time with a large percentage of the population still living below the poverty datum line (Swiegers, 2018). This is attributed as the reason online shopping is still in its infancy despite having been around since 1996. This is further exacerbated by the low incomes and different socio-economics characterising typical online customer groups associated with rural and peripheral areas (Dannenberg et al., 2020; Sousa et al., 2020) where the majority of the population resides. Akram (2018) postulates online shopping is dependent on the population's demographics. The author states that gender, age, education and experience have a significant role in driving or inhibiting online shopping.

Demographics as an independent factor has been recognised to have a positive relationship with the dependent factor, online shopping as illustrated in Figure 2.3.

Figure 2.3: Demographics' influence towards online shopping

2.4.3 Method of payments and delivery

Handayani et al. (2020) state that the consumers' comprehension of risks posed by online shopping is a factor in choosing an online delivery channel over traditional shopping. Thus, a variety of secure payment methods, favourable returning policies

and reasonably perceived delivery times argue for and attract consumers to online shopping. The convenience brought by the growth of portals offering home delivery has boosted online shopping's market share (Asiedu & Dube, 2020). Online shopping has been thwarted by the last mile problem, thus the low willingness of consumers to pay an additional fee for online delivery and the uneconomical part of it that businesses cannot bear the cost, leaving consumers opting for instore purchases, which do not carry a delivery fee (Dannenberg et al., 2020; Sousa, Horta, Ribeiro & Rabinovich, 2020). In peripheral areas, online shopping came with comparatively high logistic costs, which implied that businesses resorted to offering service cost-effectively only in urban or concentrated areas to enjoy economies of scale (Dannenberg et al., 2020; Sousa et al., 2020).

Rudansky-Kloppers (2014), as well as Mapande and Appiah (2019), note that for those living above the poverty datum line, fear of online fraud is the main concern that deters them from online shopping, hence the need to improve the security of payment methods. The primary inhibitor of online shopping is the privacy and security concern over online transactions (Akram, 2018; Rudansky-Kloppers, 2014). Online security involves payment and private information security and the businesses' credibility. If not adequately addressed it turns away potential customers (Vaitkevicius et al., 2019). Dannenberg, Fuchs, Riedler and Wiedemann (2020) suggest that the constant improvement of technology in terms of secure payment has contributed to the growth of e-commerce. This includes the rapid emergence of various secure digital payment methods and mobile apps (Mahajan, 2020).

Payment methods and delivery have an influence on online shopping. As the security and options of payment methods improve so does online shopping. The availability and convenience of delivery improves online shopping. The proposed positive relationship between payment methods and delivery, the independent factors and online shopping are depicted in Figure 2.4.

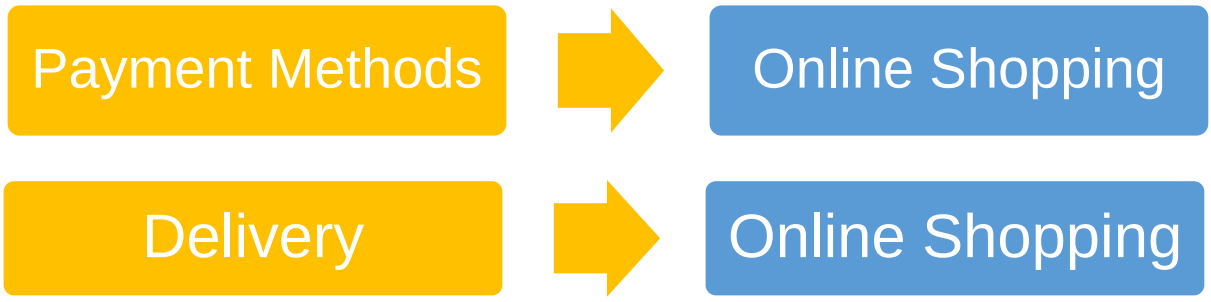


Figure 2.4: Payment methods and delivery's influence towards online shopping.

2.4.4 Technology

Since the establishment of online shopping, the global online sales have grown to over 10% of the total retail sales and set to continue to grow to about 17.5% in 2021 (Nielsen, 2018) offering an alternative for businesses to increase their revenue. It is projected that consumers making online purchases will continue to grow yearly as Internet penetration constantly improves. This will be good for online shopping, which is in a fierce battle to wrestle the market monopoly from brick-and-mortar (Lee Yohn, 2020).

The availability of technologies has also seen more companies shifting to online platforms as they can now provide online platforms that accommodate and offer customer experience to various age groups of different gender with differing educational levels (Mapande & Appiah, 2019). South African companies are taking advantage of these technologies to ensure they expand their market share and retain their current clientele. It is noteworthy that though technologies are expanding, digitisation has not reached all households particularly in rural areas; therefore, the lack of infrastructure and digital competency in these areas has halted the expansion of online shopping (Dannenberg et al., 2020; Sousa et al., 2020). Despite the lack of other infrastructure, the high mobile penetration has significantly shifted consumers' buying behaviour towards online shopping in South Africa (Mapande & Appiah, 2019).

Online shopping by nature is dependent on technologies, therefore technologies have a direct positive influence on online shopping as depicted in Figure 2.5.

Figure 2.5: Technology's influence on online shopping

2.4.5 Product variety

Benefits offered to consumers by online shopping over traditional commerce include convenience, variety of products and greater control over the buying experience (Akram, 2018; Rudansky-Kloppers, 2014). These benefits enhance the chances of consumers to engage in online shopping becoming co-creators of information (Swiegers, 2018). The convenience brought by the growth of online portals providing multi-category products, also boosted online shopping's market share (Asiedu & Dube, 2020).

Dannenberg et al. (2020) also suggest that the growing list of items that can be transacted online have contributed to the growth of e-commerce. Online shopping is also fuelled by the product variety, which offers customers choices and comparisons, with less constraints of space or location (Akram, 2018). Vaitkevicius et al. (2019) further state that product assortment is critical in retaining existing customers and offering an enjoyable shopping experience. Past studies have shown that consumers who find online shopping enjoyable, aside from its performance, will become loyal online shoppers (Akram, 2018). While these factors attract new customers, Ali (2020) argues that to retain online shoppers the product variety must meet the customers' expectations. This relationship is depicted in Figure 2.6.

Figure 2.6: Product variety's influence on online shopping

2.4.6 Communication

The interactive nature of online shopping, a shift from traditional shopping, which allows consumers to customise their shopping has contributed to online shopping growth (Zaveri & Amin, 2013). This continuous online shopping growth is fuelled by

high Internet penetration (Pham et al., 2020; Vaitkevicius et al., 2019) and the significant number of people who have gained confidence to purchase products online (Zaczkiewicz, 2020). Businesses benefit from online shopping by eliminating overhead costs of operating a physical store and costs of promoting products, since the businesses will use an almost zero-cost consumer to consumer communication (Zhang & Tsai, 2017).

Businesses have also constantly improved websites and other online platforms to ensure that consumers conveniently conduct their shopping simultaneously forming pleasant customer experience (Akram, 2018; Vaitkevicius et al., 2019) and using these platforms to reach millions of potential customers. Online shopping allows companies to cheaply customise the platforms to the local market (Mahajan, 2020). The customised websites provide information needed by consumers, detailed description and pictures of the product or service to enhance the customer experience.

The facilitating conditions, thus the ability to search and customise products or services, offer consumers control over transactions, which Akram (2018) posits gives consumers a favourable attitude towards online shopping. Businesses have also implemented other measures to boost their reputation and reliability, which has seen a surge in online shopping (Vaitkevicius et al., 2019). Part of bolstering their reputation involves advertising using phrases such as ‘best-selling’ and ‘hot products’ to stimulate consumers online shopping (Zhang & Tsai, 2017).

The online platforms became interactive when they started to provide community pages either on their websites or social media where consumers can exchange service reviews as a way to build trust and persuade more consumers to shift to online shopping (Akram, 2018; Zhang & Tsai, 2017). This dispelled the fear of misleading information, which was a barrier to online shopping (Dannenberg et al., 2020; Zhang & Tsai, 2017). Websites and applications provide convenience, a crucial factor in the growth of online shopping, allowing customers to purchase at anytime, anywhere, expediently compare prices and offer easy but secure payment systems. Thwarted communication, particularly in developing nations, due to language and literacy can be a major obstacle to e-commerce (Mahajan, 2020).

Swiegers (2018) asserts that despite these language and computer literacy inhibitors, online shopping in South Africa is growing at a rapid rate aided by the continuous improvement of communications technology, online security and the graduation to economic activity of the generation Y cohort, who conduct most of their transactions online. The presence of reputable and familiar brands online has also helped to communicate reliability and calm sceptic consumers thereby attracting more and more consumers to shop online (Zaveri & Amin, 2013) as consumers gravitated towards these brands that they are familiar with and associate these brands with quality products or reliable services (Zhang & Tsai, 2017).

The interactive nature of online platforms has influenced consumers to shift to online shopping. Figure 2.7 depicts the positive relationship of communication towards online shopping.

Figure 2.7: Communication's influence on online shopping.

2.5 Effect of COVID-19 on online shopping drivers

This section examines the effect of the pandemic on online shopping. It explores the relationship of COVID-19 and online shopping by examining the influence the novel virus had on drivers of online shopping. The section investigates the effects of COVID-19 on six factors that drive online shopping.

2.5.1 Technology

The earlier phase of the lockdowns saw agile businesses promptly moving to provide easy access to consumers through mobile or website online shopping platforms to sustain their businesses (Ali, 2020), connecting with a large number of people who had adopted new habits (McKinsey, 2020). The restrictive lockdowns and social isolating measures disrupted and forced businesses to reassess their strategies to reach some of their loyal brick-and-mortar consumers in the digital space (Nielsen, 2020a).

Businesses aggressively expanded their digitisation strategies strengthening their competitive position in the market (Narayandas et al., 2020). This has seen companies expanding their multi-channel distribution systems and investing in online shopping infrastructure, which include the expansion of the workforce, improving delivery quality and payment security (Dannenberg et al., 2020). COVID-19 accelerated the technological investments of businesses despite the pandemic inducing financial constraints (Jacobides & Reeves, 2020). The measures to curb the spread of the virus rapidly moved both business and social interactions to online media (Dannenberg et al., 2020; Nielsen, 2020b; Yan, 2020), which considerably improved the use of online services (Ali, 2020), accelerating diffusion of technologies amongst ordinary people enhancing the intention to shop online (Lee Yohn, 2020; Zaveri & Amin, 2013).

The pandemic pushed the diffusion of technology and in the process changed societal shopping behaviour (Dannenberg et al., 2020). The diffusion of technology implied that online shopping could move into a new phase of growth, attracting new customer segments such as the rural and peripheral areas population (Dannenberg et al., 2020). Innovation brought about by improving technology has the potential to continue expanding online shopping through improved ordering, payment and delivery systems (Dannenberg et al., 2020).

Online shopping, rescued businesses already suffering from the significant drop in spending due to COVID-19, affording the businesses an opportunity to trade during the pandemic even though some of their physical stores were closed (Andersen et al., 2020). The pandemic was also an opportunity used to launch online ordering platforms that connected various businesses with online markets to ensure that businesses could trade during lockdowns (Dannenberg et al., 2020). Even small businesses that were previously not online speedily moved to different, less sophisticated online platforms (Koch et al., 2020). Businesses invested in real-time inventory, predictive analytics and co-creation functions to create an unforgettable online shopping experience attracting consumers (Lee Yohn, 2020).

The online shopping experience was social, interactive and immersive, which reeled in consumers. Companies ensured that their online stores provided an enjoyable shopping experience adapted to the demands of the crisis (Koch et al., 2020). Customer experience and satisfaction have a significant effect on retaining online

shopping consumers post the pandemic (Fabius et al., 2020). Jacobides and Reeves (2020) add that customer experience can be enhanced by using technology, offering a quality online service. Lee Yohn (2020) suggests that as part of quality online service, retailers offer a price-sensitive and seamless e-commerce experience as part of minimising online shopping hurdles to retain gained customers.

A seamless online shopping experience involves having mobile-responsive sites, offering integrated services and delivering a consistent digital experience, without which the retailers risk losing customers (Lee Yohn, 2020). Savvy businesses must consider offering a seamless digital experience to replace the longing to wander in store (McKinsey, 2020). Fabius et al. (2020) suggest that companies that want to continue doing well should embrace technology to build trust with consumers through excellent shopping experiences. Retailers that adopted technology and forged partnerships, making their online shopping experience stand out, were likely to win loyal customers (McKinsey, 2020).

As part of shifting to online shopping, businesses which have embraced the change, pivoted their offerings to suit the new consumer demands (Nielsen, 2020a). This was achieved through Artificial Intelligence (AI)-enabled answers to customers in real time and apps that track usage of products to recommend new ones (Lee Yohn, 2020; McKinsey, 2020). The online platforms made use of curators and permitted consumers to try products virtually to add an entertainment aspect to shopping (Koch et al., 2020). This superior customer experience ascertains that consumers continue shopping online even when normality returns (Chang & Meyerhoefer, 2020; Huang et al., 2020).

The companies that will be competitive when normality returns, adopted technology during the pandemic moving to or improving their online platforms to boost their sales and market share (McKinsey & Company, 2020). Technology used across the supply chain to transform the businesses to be tech-enabled, ensured that the businesses could operate under the pandemic's constraints meeting the customers' needs during the lockdowns (Huang et al., 2020). Digitisation also provided companies scope to expand into other markets where stores could not physically reach (Jacobides & Reeves, 2020).

Technology assisted companies to plan their supply chain, based on algorithms that considered seasons, historic sales and promotions, making companies resilient and flexible to quick shifts in demands (Hao et al., 2020; McKinsey & Company, 2020) as experienced during the pandemic. It also ensured that retailers interacted with customers to keep their products in the evoked set. Using technology to personalise the businesses' offerings won over new and old customers expanding the businesses' reach (McKinsey, 2020).

2.5.2 Shopping behaviour

The corona virus pandemic forced nations to implement drastic measures such as lockdowns, social distancing and restrictive physical access to certain products to curb the spread of the virus (Hasanat et al., 2020; Koch, Frommeyer & Schewe, 2020; Pham et al., 2020). As part of social distancing to curb the spread of the deadly virus, non-essential employees were instructed to work from home, travel restrictions were imposed, some businesses had to close and previously dense shopping centres became restrictive on the number of people allowed at a given time (Yan, 2020; Yoon, 2020). Ali (2020) postulates that these restrictive policies, though critical for the society's health, significantly reduced spending directing large amounts of funds to personal protective equipment and essential items bought online. The periods of lockdowns or self-isolation were long enough that they changed the way consumers behave (Fabius, Kohli, Veranen & Timelin, 2020). The preventive measures put in place brought about a shift in societal attitudes accelerating a structural move to online shopping (Jacobides & Reeves, 2020).

The pandemic drastically shifted previously stable shopping habits (McKinsey & Company, 2020; Yoon, 2020; Yuen et al., 2020a) obliging some consumers to hastily move to online shopping to access various shops (Handayani et al., 2020; Hao, Wang & Zhou, 2020) resulting in online shopping becoming the shopping mainstream (Chang & Meyerhoefer, 2020; Nielsen, 2020b; Yan, 2020). Online shopping exploded because of this new type of demand, which saw most consumers digitising (Dannenberg et al., 2020; Gunday et al., 2020). The imposed restrictive lockdowns lasted enough to significantly and permanently change the traditional demand and supply habits (Jacobides & Reeves, 2020; Dannenberg et al., 2020). Karadeniz and Kocamaz (2020) further suggest that online shopping particularly during lockdowns,

when consumers had time on their hands, was also fuelled by impulsive tendencies and hedonic pursuits to feel happy.

The hedonic shopping experiences, thus the entertainment aspect of online shopping, motivated consumers to engage in online shopping (Zhang & Tsai, 2017). This is also supported by a recent study, which observed that individuals practising social distancing show higher hedonic motivation to engage in online shopping (Koch et al., 2020). The authors also reason that consumers were motivated by their reference social groups into online shopping.

The COVID-19 pandemic has upended the shopping behaviour, which has seen most people migrating their lives to laptops and mobile devices (McKinsey, 2020). The shift was abetted by companies' quick response to the changing consumer demands to maintain or gain competitive advantage further (Koch et al., 2020).The move to online is also enhanced by the ability, stemming from the pandemic's restrictive lockdowns, to transact agency interactions, which previously required in person trips (Zwanka & Buff, 2020). This involved the spikes in online shopping on medication and entertainment (Fabius et al., 2020).

The COVID-19 driven online shopping behaviour will be ingrained in consumers and likely to shape how businesses engage with consumers avoiding physical touchpoints (Nielsen, 2020b). Lee Yohn (2020), based on data collected by McKinsey, concurs with Nielsen (2020b) that consumers are likely to maintain online shopping behaviours adopted amid the lockdown and advise that businesses must reimagine their business models to suit the new behaviours. McKinsey and Company (2020) further add that this new behaviour stems from the corona virus induced preference to stay home and shop online despite most markets being back open.

Based on studies done in Europe, more than 50% of consumers intend to continue with online shopping, asserting that the pandemic induced online shopping is long-term (Gunday et al., 2020). Dannenberg et al. (2020) add that the pandemic and the preventative measures have allowed online shopping to expand broadly on the market and its protected area, with minimum competition, giving the online shopping a better chance to retain its new acquired market share after the pandemic.

Dannenberg et al. (2020) also postulate that there are other indirect consumers' behaviour, which suggest that the surge in online shopping is going to be sustained post the pandemic. The authors consider the greater use of the Internet, higher level of willingness to buy online, rapid introduction of technologies in online businesses, strategic capacity building by businesses, establishment of reliable supply systems and entry to previous physical stores as indicators that online shopping growth is permanent. Koch et al.(2020) agree that the pandemic has transformed the long-term shopping pattern towards online platforms. This is supported by the research conducted by Huang, Kuijpers, Li, Sha and Xia (2020), which showed that most customers are still reluctant to return to physical stores despite shops being open. Chang and Meyerhoefer (2020) also agree that the pandemic induced increase in online shopping will be maintained after the pandemic, based on their research in Taiwan, which is a phase ahead in recovering from the effects of the virus. Gunday et al. (2020) also attest to this, stating that most of new online shoppers enjoy the experience and will continue to use it post the pandemic. Yong-sub (2020) adds that the shift of behaviour is likely to be permanent based on the shift experienced in South Korea before the pandemic, which noted that once consumers try online shopping they are hooked forever. With consumers prioritising their physical safety, they will minimise going out for some time to come, enhancing online shopping and permanently etching it in consumers' minds (McKinsey & Company, 2020).

Zwanka and Buff's (2020) propose that most consumers have downgraded, citing observation of post-pandemics such as the Great Depression and Hurricanes that saw spending reduced with consumers favouring less expensive brands and environmentally conscious products, which online shopping provides. Ali (2020), as well as Zwanka and Buff (2020), based on their previous experiences post a pandemic or catastrophic event, expect consumers to be price-sensitive post COVID-19. Gunday et al. (2020) observed that most consumers had traded down due to price pressure. Successful retailers will be those that offer multiple online price points to cater for various customers (Fabius et al., 2020) as consumers' behaviour will change shifting more towards online shopping to minimise the risk of contracting the virus.

During these restrictive lockdowns, when people were confined to their homes, people changed where they shop with price being the main driver (Gunday et al., 2020; Huang

et al., 2020; McKinsey, 2020), switching brands, providing an opportunity for e-retailers that offered price-conscious products and seamless online shopping experience to gain loyal customers (McKinsey & Company, 2020).

Businesses that will emerge stronger from the pandemic are those that have developed a systematic understanding of changing habits and use the new habits' potential ramifications to identify products that will grow or contract (Jacobides & Reeves, 2020). Identifying products that have exploded in online platforms allows businesses to shape the market. Therefore, shifting to online platforms must be informed by market research investigating behaviour change towards online shopping through data sources such as credit card spending (Infiniti Research, 2020b; Jacobides & Reeves, 2020; Koch et al., 2020) to interpret or predict the customers' behaviour pattern (Evan & Rivera, 2020).

This pandemic has caused a change in customer behaviour that has not been investigated before almost making market research mandatory due to unusable preCOVID-19 data (Evan & Rivera, 2020). This allows businesses to analyse and understand customer buying behaviour and spending patterns giving the business competitive advantage (Infiniti Research, 2020b; Koch et al., 2020). Detailed knowledge of customers' motivations driving them to shift to online shopping will ensure that companies adopt a business model that will stay ahead of the trends (Evan & Rivera, 2020; Fabius et al., 2020) and maintain its competitiveness even after the pandemic (Koch et al., 2020).

The efficient collection of data will inform marketers who their customer is (Evan & Rivera, 2020) and where to reach consumers to raise awareness of their brand since many consumers are switching brands (Fabius et al., 2020). Market research can also be complimented by strategic rival mapping and identifying patterns that emerged from China where the outbreak and recovery started (Jacobides & Reeves, 2020). This will inform retailers of consumer driven shifts, which are likely to persist after the pandemic and those induced through compliance suggesting a possibility of rebound to tradition after the pandemic (Jacobides & Reeves, 2020).

2.5.3 Communication

Dannenberg et al. (2020) and Koch et al. (2020), partly attribute the online shopping surge to sensation media that reported the pandemic akin to a horror scenario portraying escaping to digitisation as the only shopping alternative. The media sensation led to consumers flocking to online platforms as if it was the only remaining platform open to supply the consumers' needs and assist in supporting the economy (Chang & Meyerhoefer, 2020; Koch et al., 2020). The shift is also attributed to how online shopping has kept the socio-economic systems running during the pandemic, showing its worth and why more consumers should adopt it (Dannenberg et al., 2020). However, in developing nations like South Africa, online shopping faced obstacles such as limited technology and unreliability of telecommunications (Swiegers, 2018), which will play a role in the behavioural shift towards maintaining online shopping post the pandemic (McKinsey & Company, 2020).

2.5.4 Methods of payment and delivery

Consumers, especially the older population, sheltered at home swiftly accepted technology and dispelled fears regarding payment security and the invasion of privacy during the pandemic, shifting towards online shopping (Dannenberg et al., 2020; Fabius et al., 2020). This behaviour change, favouring online purchases, was aided by the convenience and prompt delivery of purchased goods (Nielsen, 2020a). Reduced delivery costs are abetting the move to local producers, increasing the number of customers moving to online platforms that connect local businesses (Dannenberg et al., 2020). The local platforms receiving most traffic are those of well-known brands, demonstrating care and concern for their staff, with limited supply chain challenges, enabling them to reliably deliver despite the surging demands during the pandemic (Gunday et al., 2020). The ability of online platforms to satisfactorily cope with consumers' delivery demands will ensure that consumers remain shopping online post the pandemic (Gunday et al., 2020).

Businesses should investigate seizing the opportunity brought about by the online shopping experience to gain loyal customers by offering dynamic pricing, promotions on essential products and enticers such as options of free but delayed deliveries to consumers whose spending power has been stifled by the pandemic (Nielsen, 2020b)

to increase the website traffic (Koch et al., 2020). These enticers encourage growth of online purchases (Nielsen, 2018). Early research has shown that online platforms' sales and profits have surged. This will incentivise other markets to move online, increasing online shopping (McKinsey & Company, 2020).

Businesses must be prepared to handle this surge by partnering with a logistics company. During the first phase of the pandemic, most companies were not prepared. They reached their capacity limits turning away at least 22% of potential new customers (Dannenberg et al., 2020), potentially losing those customers forever. In terms of partnerships, it is critical that businesses partner with an online platform provider that will provide the strategic capabilities and resources to deliver value online and competitive advantage (Jacobides & Reeves, 2020). These partners include logistics businesses that deliver purchased goods promptly and conveniently, while complying with the lockdown's guidelines (Lin, 2020; Yong-sub, 2020). Lin (2020) further adds that without addressing the logistic challenges, online shopping will plummet after the pandemic, something that should be avoided.

2.5.5 Product variety

Though the pandemic resulted in a surge in online shopping, it deterred consumption through its induced job losses, closing of certain businesses and the uncertainty of the financial outlook (Andersen, Hansen, Johannesen & Sheridan, 2020; McKinsey, 2020). These effects on consumers' incomes shifted spending behaviour towards essential items, which has seen online shopping of essential items skyrocketing (McKinsey & Company, 2020). The move to online is also enhanced by the ability to now transact agency interactions, which previously required in person trips (Zwanka & Buff, 2020). This has seen spikes in online shopping on products or services previously exclusive to brick-and-mortar stores, such as medication and entertainment (Fabius et al., 2020). The pandemic has also triggered an explosion in category expansion among online shoppers from the onset of the pandemic signalling the COVID-19 induced online shopping surge (Nielsen, 2020a).

Online shopping has also allowed retailers to expand their range of products, drawing customers exclusively to their online shopping platforms (McKinsey & Company, 2020). This has afforded previously niche businesses a platform to find potential new

markets (Jacobides & Reeves, 2020), suggesting that the switch has performed positively in many categories and that consumers will see no benefit from switching back to in store shopping, despite encountering a few obstacles. Industry experts have also suggested that consumers will be more inclined to shun products or services associated with detrimental environmental and social impact to diminish chances of any future pandemics (Koch et al., 2020).

2.5.6 Demographics

Working from home, which is saving companies' overhead costs, is mainly concentrated among high income workers stationed in high income geographies (Yoon, 2020), who Yahya and Sugiyanto, (2020), consider to be more likely to shop online, driving the surge in online shopping. Zwanka and Buff (2020) predict that working from home among high income earners will remain a permanent shift based on the desired productivity experienced by companies during the pandemic translating to a permanent shift towards online shopping. Nielsen (2020b) also attributes the surge of online shopping to unemployment and furloughing, which has significantly curtailed the consumers' spending power, which has seen consumers surf online, searching for prices and promotions to match their reduced spending ability without incurring travel costs.

Fabius et al. (2020) posit that online shopping will be sustained in areas with a well-developed delivery infrastructure and affluent population who were hardly impacted economically by the pandemic. The surge will also be maintained among the majority of urban dwellers and the millennials who have embraced online shopping to save time and shop at their convenience (Ali, 2020; McKinsey & Company, 2020). This is confirmed by a study commissioned by McKinsey (2020), which found that 37% of respondents, most millennials, intended to spend more online than pre-COVID-19 period in 2019.

Consumers who migrated to online shopping are mostly going for the value-oriented brands (Gunday et al., 2020; McKinsey & Company, 2020) and are cautious of the food sources, principally to avoid China imported food and partly to boost local suppliers, as the virus almost halted importation of products (Ali, 2020; Chang & Meyerhoefer; Hasanat et al., 2020; Infiniti Research, 2020b; Nielsen, 2020a).

Customers are shifting to value because the pandemic reduced their spending ability (Gunday et al., 2020). This is relatively consistent across countries, leaving consumers opting for affordable products (McKinsey & Company, 2020). This postulation will likely favour the inexpensive retailers' own brand products among customers whose income has been detrimentally affected by COVID-19 (McKinsey, 2020). The elderly consumers who previously resisted migrating to online platforms, were now forced to by the pandemic and are boosting online sales and profit (Narayandas et al., 2020).

The grip of the corona virus on society saw consumers rushing towards online shopping to curb transmission of the virus. The pandemic accelerated online shopping, which led to a positive relationship depicted in Figure 2.8.

Figure 2.8: COVID-19 influence on online shopping.

2.5.7 Acceptance of Technologies

The lockdown and restricted movements, measures employed to curb the spread of the deadly virus during the pandemic, confined most of the population indoors obliging consumers to adopt new behaviours (Brem et al., 2021), which relied heavily on the use of technology (Sukendro et al., 2020). The closure of most physical stores to cope with the virus' transmission resulted in consumers mainly resorting to online shopping (Pal & Vanijja, 2020).

The increase in online shopping requires a study of the adoption of technology to determine its attributes that influence consumers' attitudes towards online shopping (Ha & Stoel, 2009). The pertinent technology attributes that increase consumers' perceptions towards online shopping informs retailers on how to grow their market share (Ha & Stoel, 2009). Research designed to gain a better understanding of the adoption and continuance use of online shopping, will review consumer behaviour theories thus the technology acceptance model (TAM), the diffusion of innovation and the theory of planned behaviour (TPB) frameworks in the context of the effect of COVID-19 on online shopping.

The TAM, proposes that technology's perceived usefulness and perceived ease of use determine the consumers' attitude and intention to use that technology (Ha & Stoel, 2009; Nel, 2013). The framework, which addresses why users accept or reject technology, provides a basis for understanding external variables on intentions to adopt technology (Legris et al., 2003; Olivier, 2016). The perceived usefulness refers to the extent to which a prospective user believes technology will improve the user's performance, whereas perceived ease of use defines the degree to which a user believes using technology will be easy and effortless (Davis et al., 1989; Pal & Vanijja, 2020). The attitude towards adopting and continued use of online shopping stems from the positive influences on perceived usefulness and perceived ease of use of the technologies (Olivier, 2016).

Ha and Stoel (2009), as well as Nel (2013), based on previous studies, suggest trust to be an antecedent of ease of use, which acknowledges the importance of reliability and credibility of the technology to timely fulfil online purchases and alleviate security concerns. This is imperative considering that consumers' main deterrent of adopting Internet technologies is the fear of fraud (Nel, 2013; Olivier, 2016; Swiegers, 2018). This has seen companies, during the pandemic, investing in online shopping infrastructure, which included improving online security (Dannenberg et al., 2020) to enhance the adoption of technology.

The drastic shift to technology for work and social interactions induced by the pandemic (Yoon, 2020), dispelled the complexity in using innovative technology positively influencing perceived ease of use (Ha & Stoel, 2009). Websites provided valuable information, including COVID-19 live statistics, affording consumers adequate information, which was perceived as useful to make decisions (Olivier, 2016). The rapid expansion of delivery service during the pandemic and improved customer service had a positive influence on perceived usefulness of technology (Ha & Stoel, 2009).

Diffusion of Innovation Theory refers to the pace and the reason technology spreads across the population, thus the process during which innovation is communicated and adopted among social systems (Bobitt et al., 2020; Nel, 2013; Olivier, 2016). The key constructs of the theory are relative advantage, compatibility, complexity, trialability and observability (Nel, 2013; Olivier, 2016). Innovation that is perceived to be superior,

compatible with the users' needs, lesser complex, easy to trial and observe tend to be adopted more rapidly (Nel, 2013).

The pandemic obliged consumers to use technology more frequently for other activities (Yoon, 2020), increasing online shopping's compatibility, while reducing complexity, which allowed quicker adoption (Olivier, 2016). During the lockdowns, success stories of timely deliveries were observed by non-users, which motivated them to try the new technology (Brem et al., 2021). The technology improved during the pandemic allowing most businesses to move online, which consumers perceived to be advantageous (Nel, 2013), minimising the risk of exposure to the virus. Innovation during the pandemic was radical, bypassing usual administrative barriers, providing consumers a safe alternative to interact, socialise and shop, leading to the quicker adoption (Palanica & Fossat, 2020).

The TPB theory postulates that perceived behavioural control, the consumer's subjective belief of how difficult it would to perform a task, predicts an intention to perform certain behaviour (Olivier, 2016). Nel (2013) outlines the dimensions of perceived behavioural control, which are facilitating conditions, thus resources needed to make use of the innovation and self-efficacy and the user's confidence in making use of the innovation. This explains the high adoption of online shopping by high income households and the relatively educated part of the society (Yahya & Sugiyanto, 2020; Yoon, 2020). The consumer's attitude, informed by the subjective norm and perceived behavioural control, towards online shopping affect the intention to re-use the technology (Banerjee & Ho, 2020; Nel, 2013). Mass media and expert opinions on measures to curb the spread of the virus had an external influence on consumers' attitude, which led to more adoption of technology (Adiyoso & Wilopo, 2021). The theory also explains that the perceived control consumers had during the pandemic lead to adopting of preventative behaviours and prevailing norms, such as online shopping to minimise the risk of infection (Ammar et al., 2020).

Online shopping is dependent on the acceptance of technologies. The positive relationship of the acceptance of technologies and online shopping is illustrated in Figure 2.9.

Figure 2.9: Acceptance of technologies' influence on online shopping

2.6 Proposed conceptual model of factors influencing online shopping.

The independent factors examined to have an influence on online shopping together consist of the proposed conceptual model. The model will be used to evaluate the influence of the factors on online shopping. Figure 2.10 illustrates the proposed conceptual model of factors influencing online shopping.

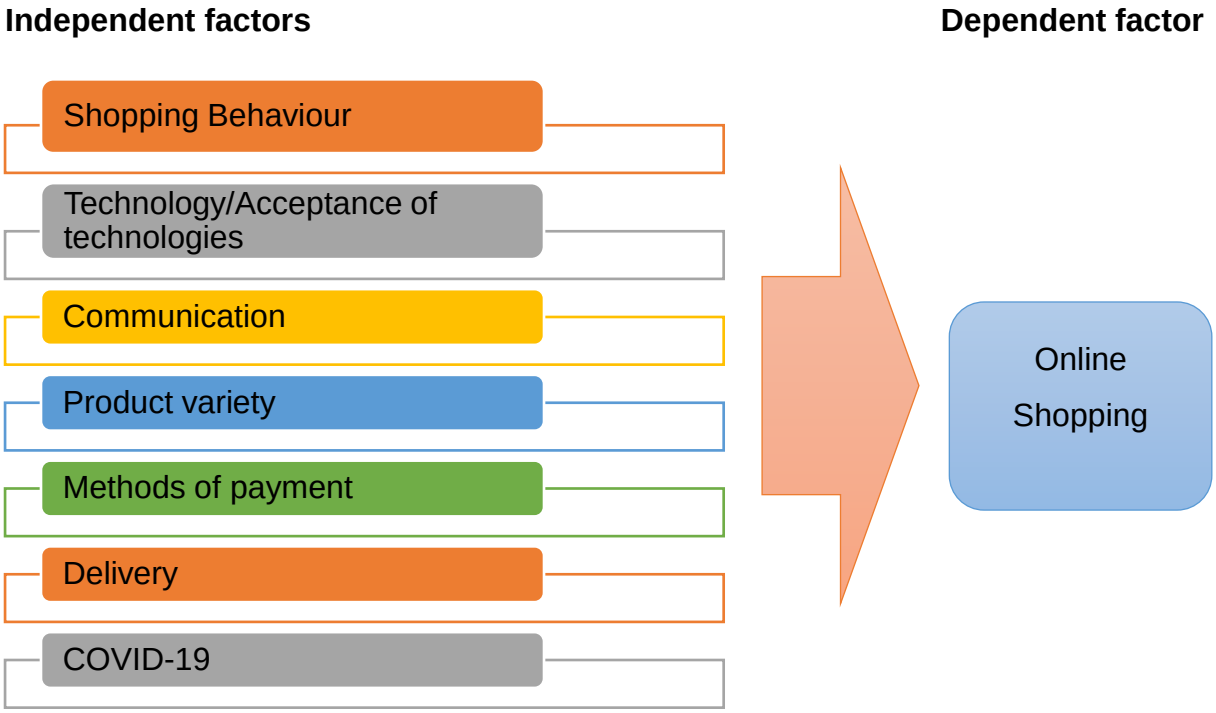


Figure 2.10: Proposed conceptual model.

2.7 Summary

Consumers can now choose from different shopping channels that have been made possible by the constant advancement of technology. These channels include online platforms and brick-and-mortar stores. Consumers choose a shopping channel based on their expected benefits, which has seen consumers moving to online shopping seeking the convenience that comes with that channel. Despite the availability of various shopping channels and a great leap in technology, consumers still

overwhelmingly prefer brick-and-mortar stores. Subject matter experts suggest it will only be significantly changed by events that will trigger consumers' behaviour change.

The authoritative voices also posit that the steady continuous growth of online shopping over the past decades is not only due to the consumers' shopping behaviour, but has also been abetted by communication, technology, product variety, methods of payment, delivery and demographics of the society. The development of various options of secure payment methods and the move to online by reputable brands have led to more customers moving to e-commerce. Some authors attribute the expansion of online shopping to the constant improvement of technology and growing list of items that can be transacted online. Some consumers cite the pleasant customer experience is what draws them to online shopping. The expansion of online shopping is dependent on the socio-demographics of the population.

A cataclysmic event such as the COVID-19 pandemic disrupts the social behaviour of human beings extending this disruption to the previously stable shopping habits. The corona virus pandemic forced nations to implement restrictive measures to curb transmission of the virus, which shifted the behaviour of the population towards online shopping. The measures rapidly moved both business and social transactions to online, accelerating diffusion of technologies among ordinary in the process enhancing online shopping. The restrictive policies during the lockdown changed their shopping behaviour, which saw most people working from home, eating out less and avoiding crowded marketplaces resulting in a surge in online shopping. A conceptual model of independent factors that influence online shopping was developed from the reviewed literature. The model depicts the various factors including COVID-19 that have an influence on online shopping.

The following chapter, Research Design and Methodology will discuss the research methodology. Chapter three will provide a framework of the study on how data will be systematically collected and analysed to achieve the research objectives. The chapter will detail steps to be followed in conducting this study.

CHAPTER 3 : RESEARCH DESIGN AND METHODOLOGY

3.1 Introduction

The previous chapter reviewed literature on the possible factors that influence online shopping. The factors were discussed with regard to how they possibly influence the population to shift towards online shopping. The literature review provided the factors, which culminated in a conceptual model. In order to meet the primary objective of the study, **RO$_M$**: *To investigate the influence of the corona virus pandemic on online shopping behaviour*, research design and methodology were developed. This chapter provides an overview of the adopted research design and methodology. The chapter follows the structure outlined in Figure 3.1.

The research methodology provides appropriate measures to conceptually define the constructs under investigation (Swiegers, 2018). The chapter provides a plan on how data will be systematically collected and analysed in order to achieve the research objectives. Research methodology draws the framework of the study, the applicability of the findings and the considerations of the research. The chapter sufficiently details the steps followed and offers justification of the research method adopted for this study. This gives other researchers adequate information to replicate the study.

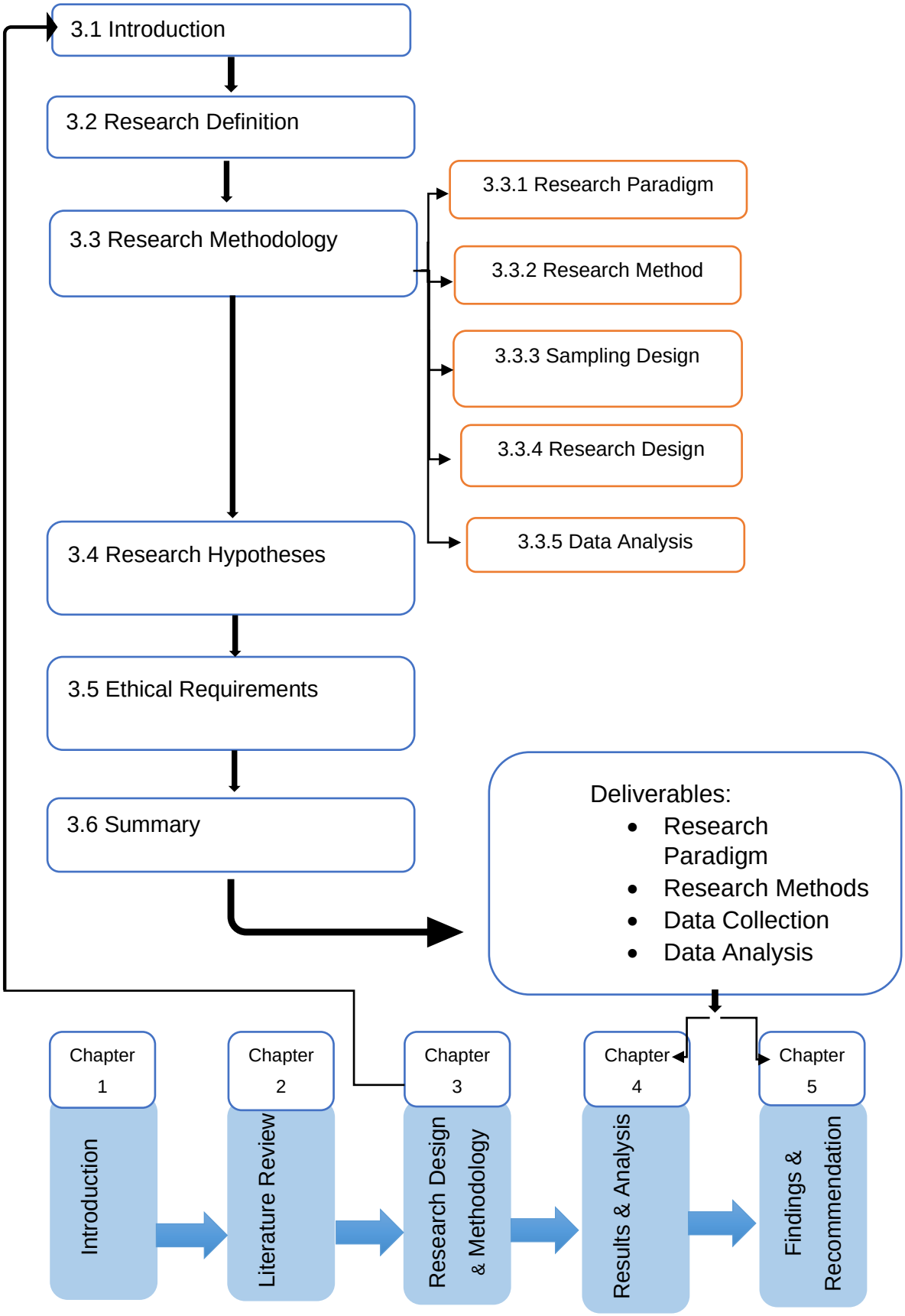


Figure 3.1: Chapter 3 Outline

3.2 Research Definition

Research is simply defined as how to attain knowledge through particular practices (Krauss, 2005). It can also mean a systematic investigation conforming to specific quality requirements (Singh & Walwyn, 2017), towards answering problematic questions (Bell, 2017) and increasing knowledge (Amaratunga, Baldry, Sarshar & Newton, 2002). Du Toit and Johann (2013), as well as Swanepoel (2007), consider research to be a collaborative human inquiry seeking to objectively study and gain a valid understanding of social reality. Research relies on data, experience, concepts, constructs, hypotheses and principles to draw conclusions, which can stand the test of validity and reliability (Amaratunga et al., 2002).

3.3 Research Methodology

The research methodology refers to the procedural framework within which the study is conducted (Amaratunga et al., 2002). It is the body of methods and principles on which the research is founded (Singh & Walwyn, 2017). It is primarily informed by the nature of the research problem.

3.3.1 Research Paradigm

A research paradigm is the underlying basis that is used to construct a scientific investigation. It is a collection of assumptions, propositions and concepts that guides the investigation (Krauss, 2005). Haigh and Withell (2020) consider a paradigm as an entity with properties that guide research design decisions. Makombe (2017) adds that a paradigm is a set of basic beliefs including assumptions on the nature of reality. The selection of a research paradigm is critical in academic research as it informs the researcher's ontological and epistemological assumptions, which lead to verifiable scientific knowledge (Sułkowski, Lenart-Gansiniec & Bilan, 2020). The paradigm guides the process of resolving research problems (Makombe, 2017). These frameworks are discussed below.

3.3.1.1 Interpretivism

Interpretivism is characterised by the belief that objective reality is a result of human social constructions grasping the reality through interpretive activity (Makombe, 2017). The paradigm seeks to understand and explain a phenomenon, rather than simply

investigating fundamental laws (Amaratunga et al., 2002). The interpretive paradigm assumes the point of view of an engaged researcher in understanding and interpreting reality (Sułkowski et al., 2020). Within this paradigm the researcher is immersed in the study to fully comprehend the phenomenon being studied. It uses a qualitative approach to inductively comprehend contextualised reality. Therefore, interpretivism is strongly associated with qualitative research (Collis & Hussey, 2014; Makombe, 2017). The interpretive discourse regards participants as co-creators in establishing reality grounded in local practices (Buchanan & Bryman, 2007). Interpretivism considers that problems in the social sciences cannot be divorced from value (Makombe, 2017).

3.3.1.2 Constructivism

Knowledge in this paradigm is established through the meanings attached to the phenomena being researched, whereby the researcher interacts with the subjects to collect data (Krauss, 2005). The paradigm is predicated on the concept that the truth is subjective and relative, because it assumes that the world is socially constructed (Swanepoel, 2007). Makombe (2017) concurs, asserting that constructivism broke away from ontological realism to relativism. In this paradigm researchers inductively develop a theory that ascribes meaning (Makombe, 2017).

3.3.1.3 Pragmatism

Pragmatism offers the researcher flexibility to mix methods from both positivism and interpretivism on the basis of usefulness to address the research questions (Collis & Hussey, 2014). Pragmatism accommodates mixed methods allowing researchers to use a mixed methods approach to address research questions that cannot be answered by either a qualitative or a quantitative method on its own (Makombe, 2017). This pluralist approach offsets the weaknesses of one paradigm through the strength of the other paradigm (Collis & Hussey, 2014). This paradigm has however been criticised due to the lack of a conceptual framework to hold together the empirical and normative approach it mixes (Makombe, 2017).

3.3.1.4 Criticalism

Criticalism accepts the presence of an objective social reality requiring continual reconstruction (Sułkowski et al., 2020). Criticalists assume that the researcher's experience and interpretation of reality is prejudiced by the researcher's assumptions, values and adopted theories (Haigh & Withell, 2020).The paradigm, which includes the participatory inquiry, is subjective-objective and self-reflexive (Makombe, 2017).

The knowledge is transitive, as when the study changes the researcher's understanding, the entity being studied remains unchanged (Haigh & Withell, 2020). Under this collaborative and experiential paradigm, the researcher is part of the study and participants can assist in question design and data collection. This enables the researcher to be immersed in the social mechanisms to discover camouflaged reality (Sułkowski et al., 2020). Makombe (2017) notes that the paradigm drives an action agenda that may transform the participants and the researcher. Criticalism is primarily used to address issues of inequality, oppression and empowerment.

3.3.1.5 Realism

Realism is a philosophical paradigm with elements of both positivism and constructivism. Realism concerns multiple perceptions about a single, independent reality and it is value cognisant; considerate of researcher's values (Krauss, 2005). It considers that the world is socially constructed and subjective; therefore, it looks at the totality of each situation (Amaratunga et al., 2002).

Realism postulates the existence of objective truth. The paradigm accepts that perceptions have a certain plasticity and that reality is a result of social conditioning, which cannot be understood independent of all involved in the research (Krauss, 2005). Research founded on realism discovers knowledge through a mixture of theoretical reasoning and experimentation, hence the reliance of this paradigm on mixed methods. It uses the mixed method to establish different views on the phenomena being investigated before inductively developing ideas (Amaratunga et al., 2002).

3.3.1.6 Positivism

The defining characteristic of the positivism paradigm is that it is essentially objectivist, thus the object of study is independent of the researcher (Collis & Hussey, 2014; Krauss, 2005). It implies a belief that sound methods can be employed to investigate and describe existing objective truth (Swanepoel, 2007). In positivism, knowledge is discovered, verified and examined through measurements, which disintegrate components of a studied phenomenon (Krauss, 2005).

The paradigm is centred on atomism, which is central to the concept of deducticism that generalises findings from a sample to a population (Amaratunga et al., 2002). It assumes that the research quantitively measures independent facts about a studied reality and that the data does not change because of the observation (Buchanan & Bryman, 2007). Therefore, positivism as an epistemological stance is largely associated with quantitative methods (Alasuutari, Bickman & Brannen, 2008; Makombe, 2017) testing hypothetical-deductive generalisations (Amaratunga et al., 2002).

The paradigm views the world as deterministic and mechanistic, operating under laws of cause and effect discernible by applying a scientific method, hence it is generally referred to as a scientific method (Makombe, 2017). Positivism advocates for identifying the problems and suggesting hypotheses before collecting data to verify or annul the hypotheses. It emphasises the clarity and precision to reach discoverable objective truth (Makombe, 2017).

Positivism, which believes in empiricism, uses deductive reasoning to evaluate postulated theories against reality (Krauss, 2005). It reduces the whole phenomena to the simplest elements that can be easily analysed (Amaratunga et al., 2002). Positivism is rightly criticised for its nomothetic disjunction, thus its objective to generalise findings is sometimes inapplicable to individual cases (Makombe, 2017). Krauss (2005) posits that positivism's purpose is to stick to what can be observed and measured without much interrogation of anything beyond that.

The nature of the research problem primarily mandated the use of the positivism paradigm. Positivism was adopted in this research because it allowed the research to reach wider coverage. Its ability to reach large samples meant that aggregated

statistics could be generalised over the population. The paradigm is economical and is suited for this time constrained study. Positivism is independent of the researcher translating to independent, value-free and objective evidence about the observed phenomena. The paradigm enabled the research to accurately study the shift towards online shopping, producing objective data. Positivism also allowed the researcher to construct and empirically test different hypotheses for association.

The paradigm's drawbacks in understanding the significance participants attach to online shopping were considered hence, as part of recommendations, the researcher suggests further studies on this topic be conducted under the interpretivism paradigm. Positivism is highly structured and it ignores other relevant findings, something the researcher will nullify by suggesting future studies on any other relevant findings. The atomism associated with positivism inhibits the research to capture complex phenomena using a single measure. The researcher opined that although the paradigm was limited, it allowed the study to identify areas that future research should focus on in depth.

3.3.2 Research Method

Research is conducted using either qualitative, quantitative or mixed method approaches. The qualitative and quantitative approaches represent different ends of a continuum with mixed methods residing in the middle of this continuum (Creswell, 2014). Qualitative and quantitative approaches differ in terms of data collection and analysis method although sometimes the difference can be a blur (Allwood, 2012). The methodology chosen is governed by what the research aims to achieve rather than a commitment to a certain paradigm (Krauss, 2005). Qualitative, quantitative and mixed methods are discussed in detail below.

3.3.2.1 Qualitative

Researchers adopting this approach choose to view the research in its context rather than limiting it, by focusing on one element of the reality. This allow questions to emerge and change as researchers become familiar with the content being studied (Krauss, 2005). It allows researchers to study the nature of the phenomenon (Allwood, 2012) and endeavours to see the participants' perspective as a means to comprehend the research (Headley & Plano Clark, 2020). Krauss (2005) theorises that qualitative

research is premised on the multiple realities concept, which values the fundamental assumption that all research is essentially biased because of the uniqueness of each individual involved in the research. Allwood (2012) concurs, postulating that due to the uniqueness of each researcher, qualitative research generally avoids generalising results to dissimilar places, times and categories of individuals. Therefore, qualitative approach's results are generally only applicable to the sample (Allwood, 2012), partly because of its use of small non-random samples. It is based on relativistic and constructivist ontology that postulates that no objective reality exists, rather multiple perceptions purposefully construct realities (Allwood, 2012). This is sometimes used to complement a quantitative method from the same setting.

The method allows the research to comprehend the human experience and behaviour from the respondents' perspective, to gain a deeper understanding of the situation of interest (Amaratunga et al., 2002; Krauss, 2005). It is subjective taking an interpretive approach (Allwood, 2012). Qualitative research is useful for generating contextualised understandings (Headley & Plano Clark, 2020) and it is also transformative with the ability to generate new meaning, which can transform perspectives (Krauss, 2005). This stems from the qualitative method's flexibility in data collection as the study proceeds. Amaratunga et al. (2002) add that qualitative method's holistic approach offers the potential to reveal complex reality.

3.3.2.2 Quantitative

Quantitative research approaches the measurement of research with the idea of developing a fixed set of instruments (Krauss, 2005), to measure social facts through testable theory (Amaratunga et al., 2002). Quantitative research is objective (Allwood, 2012) and deductive in nature (du Toit, Boshoff & Mariette, 2017). It seeks to investigate the origins, progress and justification of knowledge through observation (Amaratunga et al., 2002). The approach is suitable for the mathematical summarising of dependencies of analysed independent factors (Headley & Plano Clark, 2020). The researcher is detached and value free in quantitative research (Makombe, 2017). The results from a quantitative approach can be relatively generalised to the population (Allwood, 2012; du Toit et al., 2017) because the results are drawn from large, random and representative samples (Amaratunga et al., 2002). Headley and Plano Clark (2020) caution that the generalising of findings should be bound within similar

standardised and homogenised samples. Makombe (2017) suggests that since quantitative method is associated with positivism, it must also be guided by hypotheses.

The form of the research question, control over behavioural events and focus on contemporary events (Amaratunga et al., 2002), informed the decision to adopt the quantitative method. Makombe (2017) also posits that the chosen paradigm determines the method, therefore, having adopted the positivism paradigm, this research will use the quantitative method. The quantitative method allows comparison and replication of the research (Amaratunga et al., 2002), should another researcher attempt to conduct a similar study. It also measures the subject of online shopping objectively, independent of the researcher, enhancing the research's validity and reliability.

Amaratunga et al. (2002) theorise that the quantitative method generally reduces the study to the simplest elements, which facilitated the easy analysis of this study. The problem statement and research question seek to identify if the corona virus has had an influence on online shopping. In addressing these research questions, the study had to investigate the number of respondents that have migrated to online shopping and generalise the findings for South Africa. The quantitative method's deductive nature and generalisability made it an appropriate method for this research. It allows for a mathematical assessment to determine whether the corona virus had an influence on online shopping in South Africa. The method was also adopted based on previous similar studies that successfully used the method. There are shortcomings of a quantitative method such as the inability to account for other social phenomena and deeper underlying meanings (Amaratunga et al., 2002). The method has also been criticised for taking a snapshot of the subject under investigation. This challenge is noted and recommended further studies should be conducted in future expanding on the current study.

3.3.2.3 Mixed Method

The mixed approach is viewed as a spectrum between qualitative and quantitative methods allowing both methods to be complementary (du Toit et al., 2017). Due to this complementary part, sometimes the mixed method results in high quality research

(Makombe, 2017), stemming from robust results (Headley & Plano Clark, 2020). The effectiveness of the mixed method is premised on the fact that the weakness of either quantitative or qualitative research is compensated by the other method (Amaratunga et al., 2002). The method extracts strands of both a qualitative and quantitative nature from the research (Headley & Plano Clark, 2020), focusing on their relevant strengths. The quantitative part of the research confirms the representativeness of the sample for the qualitative part (Amaratunga et al., 2002). The mixed method bridges the gap between siloed research and reality, transcending past what can be achieved by either quantitative or qualitative methods independently (Headley & Plano Clark, 2020). It is useful in gaining insights and in making inferences.

3.3.3 Sampling Design

Sampling involves the use of appropriate sample composition and size (Hays, Wood, Dahl & Kirk-Jenkins, 2016) to potentially generate valid and credible data (Headley & Plano Clark, 2020). The sample must align with the purpose of the research and be representative of the intended population (Headley & Plano Clark, 2020). Sampling is employed in research as it is often tedious to include the entire target population (Cassim, 2017). A target population, according to Collis and Hussey (2014), is the group of people or objects under consideration. A representative sample, adequately reflecting the target population's heterogeneity must be used. The sampling frame, a representative group drawn from the target population, should mirror the target population profile (Cassim, 2017). The representativeness is influenced by whether the target population is infinite or finite, resource constraints and the desired accuracy of results (Cassim, 2017). The representativeness of the sample is also governed by the method of sampling. A random sample is representative of the population due to its unbiases in selecting the sample (Collis & Hussey, 2014).

A sample size of 673 was achieved, which is more than the 384 suggested by Collis and Hussey, (2014), to be a representative sample for a target population of over one million. The larger sample size selected for this research enhanced the representativeness of the sample, bettering the credibility of the findings. It also lowered the sampling error (Cassim, 2017), almost nullifying any outliers. However, determining the socio-economic status of the target population so as to mirror the

sample, was challenging. This was countered by sending out the online questionnaire to a larger portion of the target population to improve the generalisability of the results.

3.3.3.1 Convenience and Snowball Sampling

Sampling can be conducted through various probability and non-probability methods (Cassim, 2017). These methods include quota sampling, a non-probability method based on the characteristics of the target population such as the demographic profile. This method is tedious and usually applied to a reasonably small target population. Judgement sampling, another non-probability method, is based on the researcher's subjectivity, which tends to lead to bias. Systematic sampling, which entails dividing the target population by the required size and then taking subjects at regular interval (Collis & Hussey, 2014), can also be used to sample the target population. This method could not be used in this research as it is impossible to obtain a complete list of all online shoppers in South Africa.

The research adopted convenience sampling, a non-probability method in which participants are easily reachable to the researcher. The convenience sampling excludes part of the target population, which the researcher has no convenient access to. The method is the most convenient, relatively cheaper and less time consuming sampling method (Cassim, 2017). However, the method has the potential to be biased when selecting a sample that is not representative. After the researcher sent out the questionnaire with the assistance of Nelson Mandela University MBA Strategic Marketing students, participants were also requested to forward the questionnaire resulting in snowball sampling. This increased the representativeness of the findings.

3.3.4 Research Design

Research design is the logical plan involving the strategic decisions aiming to maximise the validity of findings (du Toit & Johann, 2013). Research design provides a measuring instrument, which the study will use (Makombe, 2017), including determining how data are collected and analysed. It seeks to guide the research on what data should be collected to answer the research questions. The research design is associated with the chosen research method (Makombe, 2017). Survey and experimental designs are associated with the quantitative method while ethnography and phenomenology are associated with the qualitative method. There are some

research designs such as case studies that can be used for both qualitative and quantitative methods (Makombe, 2017). This research adopted an online questionnaire that was captured on QuestionPro.

A single modal questionnaire was developed to answer the research questions. It was posted online attracting over 673 responses in approximately two weeks. The online platform enabled the location of online shoppers, who are the interest group of the research. This was an efficient and cost-effective method to collect such data (Hesse-Biber & Griffin, 2013). Data are loaded directly into analyses software package minimising human error and strengthening validity. The user friendly QuestionPro online mode was also used because of its higher response rate compared with traditional surveys (Hesse-Biber & Griffin, 2013). The research design also equalised the power dynamics due to the anonymity of both the researcher and participant (Hesse-Biber & Griffin, 2013).

Using an online measuring tool has its own drawbacks, such as the unrepresentativeness of the Internet population against the greater population, questioning the generalisability of such findings (Hesse-Biber & Griffin, 2013). Inaccessibility to the Internet can also be a shortcoming of an online measuring instrument, potentially excluding segments of the population. Since the research is primarily focused on online shopping, the target population has access to the Internet, therefore, the results can be generalised since the population is representative. Hesse-Biber and Griffin (2013) bemoan the inability to verify information submitted by participants leaving the research relying on the honesty of respondents. In this research, the anonymity part of the responses was amplified to encourage participants to be honesty with no incentive to fabricate information.

3.3.4.1 Data Collection

Data collection tools should be selected based on the potential to capture valid and credible data (Headley & Plano Clark, 2020). Under the quantitative method selected for this research, the questionnaire was chosen to collect primary data. Primary data are facts gathered directly by the researcher (Cassim, 2017), which include completed self-administered questionnaires. The benefits of primary data include the ability to control the data collection process and detect the errors (Cassim, 2017). On the other

hand, secondary data are relevant facts collected by other researchers that a researcher can use for the study. Secondary data are cheap and ideal for time constrained research. However, the data have to be critically evaluated, paying particular attention to the methodology used to collect such data (Cassim, 2017). The researcher collected primary data because the study had not been done in South Africa, leaving the researcher with minimum sources of secondary data. The primary data were collected online, which produced a more representative sample improving the generalisation of the research outcomes (Hesse-Biber & Griffin, 2013).

3.3.4.2 Questionnaire design

An online close-ended questionnaire hosted on QuestionPro, was used for this research because it was quicker to complete as a way to counter a low response rate associated with questionnaires (Cassim, 2017). A closed-question questionnaire was also chosen because of its easiness to analyse. It also meant that responses could be easily imported into both Microsoft Excel and SPSS for analysis (Collis & Hussey, 2014). Most of the statements were multiple category, short and specific statements to minimise the risk of different interpretations (Cassim, 2017). The statements were structured so that they would not lead respondents to make inferences but rather allow participants to respond independently. As suggested by Collis and Hussey (2014), each statement had unambiguous items relevant for the analysis. An online questionnaire was adopted as it can be completed in a shorter period (Cassim, 2017), which suited this time constrained research. This way of collecting data is also cheaper and participants remain anonymous, as QuestionPro does not ask participants' personal information in compliance with the institution's research ethics' policies. Structured statements operationalised from the reviewed literature were listed with the aim of soliciting reliable responses (Collis & Hussey, 2014), from online shoppers.

The designed questionnaire was adopted from previous studies, then was divided into three sections, with the first section focusing on demographics. The demographics section, which is short and easy, was chosen to be the first section to relax the respondent. A demographic section in the questionnaire asked the education, age, income, geographical location and gender of the participants to assess whether the behaviour to move towards online shopping was influenced by demographics. The

section also demonstrated a measure of internal validity and allowed sample representativeness to be assessed.

The demographic section was preceded by a brief introductory section informing the participants about the research aims and emphasising that participation was voluntary, anonymous and that participants could withdraw at any time. The next section of the questionnaire included chronologically arranged statements to reflect the steps that are potentially taken in making an online purchase. It asked the participants to indicate whether they used online shopping. Existing online shoppers were asked whether they have increased online shopping and if they will maintain online shopping past the pandemic. The last section of questionnaire comprised of statements related to whether the participants will maintain online shopping post the COVID-19 pandemic.

The use of online questionnaires, lacking interface interaction could cause loss of meaning because of the missing non-verbal cues (Hesse-Biber & Griffin, 2013). Amaratunga et al. (2002) mention a low response rate as one the questionnaire's shortcomings. Questionnaires also fail to capture the drive behind the findings (Cassim, 2017). In this research the questionnaire will not provide reasons behind why consumers are either shifting or not shifting to online shopping.

Collis and Hussey (2014) also mention non-response bias as another drawback of a questionnaire, which the research minimised by sending follow-up reminders. The data were collected from a diverse population, of which for some of the participants, English is not their first language; therefore, the impersonal nature of a questionnaire could have led to bias on how some participants interpreted the questions. The researcher also understands that the study was only conducted on participants with Internet access and who are English literate. This was compensated by the fact that the study's target population conduct shopping online in English, therefore an online questionnaire did not exclude members of the target population. The questionnaire used is attached as Annexure B.

3.3.5 Data Analysis

The analysis strategy determines the limits of data collection and research findings (Amaratunga et al., 2002). Quantitative data analysis focuses on statistical techniques such as the Chi-square, correlation and factor analysis. This starts by examining raw

data searching for trends before processing the data. Data analysis provides information on variables' relationship and strengths (Amaratunga et al., 2002). The completed questionnaires delivered both nominal and interval data.

The demographic section provided nominal data, thus discrete information without a quantifiable variance (Cassim, 2017). Interval data from the rest of the questionnaire produced more information based on the continuum of a 5-point Likert scale, where 1 = Strongly Disagree and 5 = Strongly Agree. The collected primary data were analysed using both descriptive and inferential statistics. The inferential statistics analysis was conducted using a statistical software, SPSS with the assistance of the university's statistician Dr Venter.

Descriptive statistics as the name suggests, describe and summarise collected data indicating both the mean and standard deviation (Cassim, 2017). The mean is a measure of central tendency while standard deviation measures the spread of data points from the mean (Cassim, 2017), thus the variability in participants' responses. The measures can be expressed in the form of graphs and charts making it easier to visually assess the data and identify trends (Collis & Hussey, 2014). Inferential statistics involve statistical tests investigating statistical relationships between factors (Cassim, 2017; Collis & Hussey, 2014). The analysis includes either parametric or non-parametric tests. Parametric tests can only be conducted on factors measured on a ratio or interval scale, normal distributed data and on independent factors (Collis & Hussey, 2014), while non-parametric does not rely on meeting the parametric assumptions (Cassim, 2017).

Inferential statistics also set out the level of confidence in a relationship between certain factors having a statistical significance. Cassim (2017) states that the most used confidence level is 95%, a relatively high level, implying there is only a small probability that the findings are incorrect. This is used to approve or disapprove hypotheses. Cassim (2017) asserts that inferential statistics can be used to generalise findings to a population.

The demographics of the sample were determined in terms of education, household income, geographical location and gender. Pie charts and bar graphs were constructed depicting this information pictorially easing the visually representation of

the data. Parametric inferential statistics were then performed, using the t-test and Pearson correlation. Hypotheses were also tested using these statistical tests. In addition, Exploratory Factor Analysis will be used in the analysis. All these tests are explained in the following section.

3.3.5.1 One Sample t-test and Inferential Ranking

The independent factors will be ranked based on a t-test, which tests the difference between two groups and Cohen's d for practical significance. The Cohen's d is the statistic used to determine the practical significance if the p-value is less than 0.05 (statistically significant) for an inferential statistics test based on sample mean values, such as the t-test and Scheffé test (Gravetter & Wallnau, 2009). The research will use Table 3-1 to interpret the practical significance of the independent factors on the influence on online shopping.

Table 3-1: Interpretation intervals for Cohen's d (Gravetter & Wallnau, 2009, p. 264)

Significance:	Interval
Not	$d < 0.20$
Small	$0.20 \leq d < 0.50$
Medium	$0.50 \leq d < 0.80$
Large	$d \geq .80$

The research will use the 95% confidence interval classification to inferentially rank factors based on whether the factor's responses were positive, neutral or negative. The interpretation of the 95% confidence interval classification will be based on Table 3-2.

Table 3-2: Classification Intervals

Category	Interval
Negative	< 2.60
Neutral	2.60 to 3.39
Positive	> 3.39

3.3.5.2 Correlations and Chi^2 Test

Correlation, which can be linear or non-linear, positive or negative measures the direction and strength of association between factors (Collis & Hussey, 2014). The correlation for this study will be measured using Pearson's correlation coefficient (r). The correlation coefficient (r) is statistically significant at the 0.05 level for n = 673 if |r| >= .082 and for n = 565 if |r| >= .076 to .076 and practically significant, regardless of the sample size, if |r| >= .300. Thus significant (both statistically and practically) if |r| >= .300 (Gravetter & Wallnau, 2009). The interpretation of the correlations coefficient for this research will follow those in Table 3-3.

Table 3-3: Correlation coefficient interpretation

Size of correlation	Interpretation
.90 to 1.00 (-.90 to -1.00)	Very high positive (negative) correlation
.70 to .90 (-.70 to - .90)	High positive (negative) correlation
.50 to .70 (-.50 to - .90)	Moderate positive (negative) correlation
.30 to .50 (-.30 to -.50)	Low positive (negative) correlation
.00 to .30 (-.00 to - .30)	Negligible correlation

The Chi^2 test measures the difference in frequencies between two groups based on the projected frequencies that define the null hypothesis against frequencies collected from a random sample (Collis & Hussey, 2014). The research will use the Cramér's V, which is a statistic used to determine the practical significance if the p-value is less than 0.05 (statistically significant) for an inferential statistics test based on sample frequencies such as the Chi^2 test (Gravetter & Wallnau, 2009). The interpretation of the Cramer's V for the research will be based on Table 3-4.

Table 3-4: Interpretation intervals for Cramér's V (Gravetter & Wallnau, 2009)

Significance	df* = 1	df* = 2	df* ≥ 3
Not	V < 0.10	V < 0.07	V < 0.06
Small	0.10 ≤ V < 0.30	0.07 ≤ V < 0.21	0.06 ≤ V < 0.17
Moderate	0.30 ≤ V < 0.50	0.21 ≤ V < 0.35	0.17 ≤ V < 0.29
Large	V ≥ 0.50	V ≥ 0.35	V ≥ 0.29
df* = Minimum (No. of rows, No. of columns) - 1			

3.3.5.3 Analysis of Variance

The analysis of variance (ANOVA) tests the results of the survey's significance and informs the rejection of the null hypothesis or acceptance of the alternate hypothesis (Collis & Hussey, 2014). It tests, whether for an independent factor, there are significant differences between the groups. Univariate ANOVA that compares means from two independent groups using the F-distribution (Wegner, 2014) will be used in this research.

3.3.5.4 Reliability and Validity

A quantitative research must provide a valid and reliable measuring instrument to ensure the accuracy of the results (Ibrahim, Hami & Abdulameer, 2020). Part of ensuring the reliability involves conducting a pilot test (Ibrahim et al., 2020) to minimise chances of respondents experiencing challenges in responding and curtailing possible data recording problems (Saunders, Lewis & Thornhill, 2009). Piloting a study also allows an assessment of the questions' validity and reliability based on the collected data. This research did not pilot the questionnaire because the measuring instrument was adapted from previous studies that conducted pilot testing, operationalising the questionnaire. The statistician did check the questionnaire for face validity.

Reliability is primarily concerned with repeatability under constant conditions (Amaratunga et al., 2002; Ibrahim et al., 2020), which is measured with the Cronbach's alpha coefficient (Saunders et al., 2009). The Cronbach's alpha coefficient ranges from 0 to 1, with the minimum accepted value for reliability ranging from .61 to .70 (Ibrahim et al., 2020). Reliability aims at minimising errors and biases in a research primarily in data collection. It can be improved through collecting data from a larger sample size (Cassim, 2017). The research's reliability will be analysed based on the Cronbach's alpha coefficient as shown in Table 3-5.

Table 3-5: Interpretation intervals for Cronbach's alpha coefficient

Indication	Cronbach's alpha
Excellent	0.80 +
Good	0.70 - 0.79
Fair	0.60 - 0.69
Poor	0.50 - 0.59
Unacceptable	< 0.50

On the other hand, validity verifies the measuring instrument's ability to measure what it is intended to measure (Amaratunga et al., 2002; Ibrahim et al., 2020). It focuses on the results' support of conclusions. Validity measure is considered under internal or external validity. Internal validity establishes theoretical territory corresponding to defined constructs and ensuring its consistency with other recognised constructs (Amaratunga et al., 2002). External validity measures the extent to which research findings can be generalised beyond the study settings (Amaratunga et al., 2002; Cassim, 2017; Collis & Hussey, 2014).

External validity of research can deteriorate owing to change of time. The questionnaire was systematically assessed based on existing literature and previous similar questionnaires to assert its validity. In this research, validity will be checked based on the Exploratory Factor Analysis (EFA). The EFA will be used to determine the nature and number of factors underlying certain questionnaire's questions (Hooper, 2012), identifying whether multiple dimensions exist in a set of items.

The analysis discovers patterns that can be reduced into fewer factors to enhance interpretability (Jadidoleslami, Saghatforoush & Zare Ravasan, 2021). It uncovers common factors and accounts for shared variance (Hooper, 2012). The EFA explores the underlying theoretical constructs and relationships between observed factors. Eigenvalues and the Scree Plot were used as the EFA techniques to determine which factors to retain in the analysis of the collected data. The number of factors to extract will be determined based on two guidelines: Eigenvalues and the scree plot values greater than 1.

3.4 Research Hypotheses

Collis and Hussey (2014) define a hypothesis as a proposition that can be statistically tested for a relationship against empirical evidence. Hypotheses are tested using the principle of falsifiability to prove or disprove its accuracy (Makombe, 2017). There are two types of hypotheses, thus the null and alternative hypotheses (Cassim, 2017). The null is the relationship that is to be confirmed while the alternative holds when the null cannot be proved (Wegner, 2014). Hypotheses are tested at a set confidence level, most commonly at 95% level of confidence (Cassim, 2017). The following hypotheses constructed for this research are based on reviewed literature:

H_1: Shopping behaviour has a positive influence on online shopping.

H_2: Technology or acceptance of technologies has a positive influence on online shopping.

H_3: Communication has a positive influence on online shopping.

H_4: Product variety has a positive influence on online shopping.

H_5: Methods of payment has a positive influence on online shopping.

H_6: Delivery has a positive influence on online shopping.

H_7: COVID-19 has a positive influence on online shopping.

The hypothesised model based on the constructed hypotheses is shown in Figure 3.2.

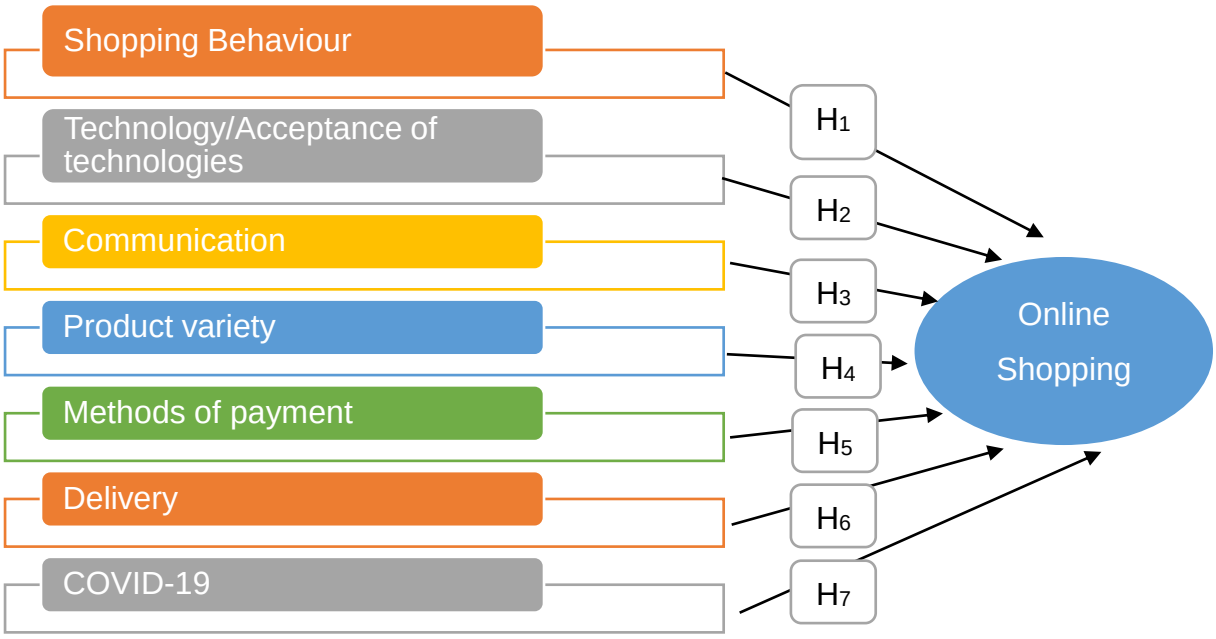


Figure 3.2: Proposed hypothesised Model.

3.5 Ethical Requirements

The ethical requirements mandate that the researcher justify the research approach before embarking on any scientific enquiry (Buchanan & Bryman, 2007), to ensure that the research is moral (Hays et al., 2016). The researcher is mandated to comply with legislation particularly on discrimination, privacy and data protection to avoid causing unwitting harm to participants. Complying with the law and the institution's ethical policies allows for careful handling of sensitive or controversial issues and respect of respondents' reluctancy to speak openly on such matters (Buchanan & Bryman, 2007).

Bell (2017) posits that the cardinal rule of research is that all participants enjoy ethical rights, thus the rights to confidentiality, be consulted and withhold consent. This emphasises the voluntariness of research participation (Hays et al., 2016). Makombe (2017) adds that besides participation in a study being voluntary, it must also allow respondents to terminate the study at any time without repercussions. Researchers have the responsibility to care for the environment, humans and animals they study (Bell, 2017). Further, research must not breach the principle of anonymity by disclosing the participants' identity.

The research was designed and conducted in compliance with the Nelson Mandela University's policy on research ethics. The approved ethical clearance form is attached as Annexure A, reference number H21-BES-BS-003.The online questionnaire, hosted on QuestionPro, was anonymous and confidential. Participants responded to the study questions voluntarily.

3.6 Summary

Chapter Three provided an overview of the research design and methodology used to examine the answer the research objectives. The chapter defined research as a systematic investigation towards addressing problematic questions and adding knowledge. It then examined the different paradigms that could be used in research before adopting positivism. This paradigm was adopted because of the nature of the research questions and its ability to produce objective findings. The researcher did note the paradigm's shortcomings and measures employed by the research to counter the drawbacks.

Positivism informed the use of the quantitative research method. The quantitative method adoption was justified by stating its advantages such as the generalisability of its findings. The chapter also discussed the sampling design, outlining how a representative sample was established for the research bettering the credibility of the findings. The representativeness was enhanced by the use of both convenience and snowball sampling. A questionnaire was chosen as the measuring instrument to collect primary data. The rationale behind the choice included the easiness to complete the close-ended questionnaire. The chapter also briefly discussed how data will be analysed using both descriptive and inferential statistics. The questionnaire gets tested for reliability and validity which affects the collected data. The research then outlined the various hypotheses that will be statistically tested. Chapter 3 concludes by emphasising the importance and how the study was conducted in accordance with the university's ethical policies on research.

Chapter Four, which follows discusses the collected and the analysed data with the aim of addressing the primary objective of the research. The chapter, based on the analysis results will respond to the research questions.

CHAPTER 4 : RESULTS AND ANALYSIS

4.1 Introduction

Chapter Three discussed the adopted research design and methodology to meet the primary objective of the study, **RO_M**: *To investigate the influence of the corona virus pandemic on online shopping behaviour.* The study aims to examine the influence of COVID-19 on online shopping in South Africa. This will inform agile businesses on relevant adaptations that must be implemented to remain profitable and gain competitive advantage. As part on investigating the influence of the pandemic on online shopping, Chapter Four examines the collected and analysed data, with the aim of addressing the primary objective of the research, **RO_M**: *To investigate the influence of the corona virus pandemic on online shopping behaviour.*

Chapter Four will investigate the independent factors' statistical significance on online shopping and formulate a revised conceptual model informed by the statistical analysis. Based on the analysis results, Chapter Four will respond to the research question **RQ_M:** *How has the corona virus influenced South African consumers' online buying behaviour?* through statistically examining the analysed data that address research objectives **RO_2:** *To understand the consumer's behaviour on adoption and continuance use of technologies,* **RO_3:** *To enhance the understanding of consumer behaviour on online shopping in response to the pandemic* and **RO_4:** *To examine the effects of the pandemic on long term online shopping.* The chapter follows the chapter structure outlined in Figure 4.1.

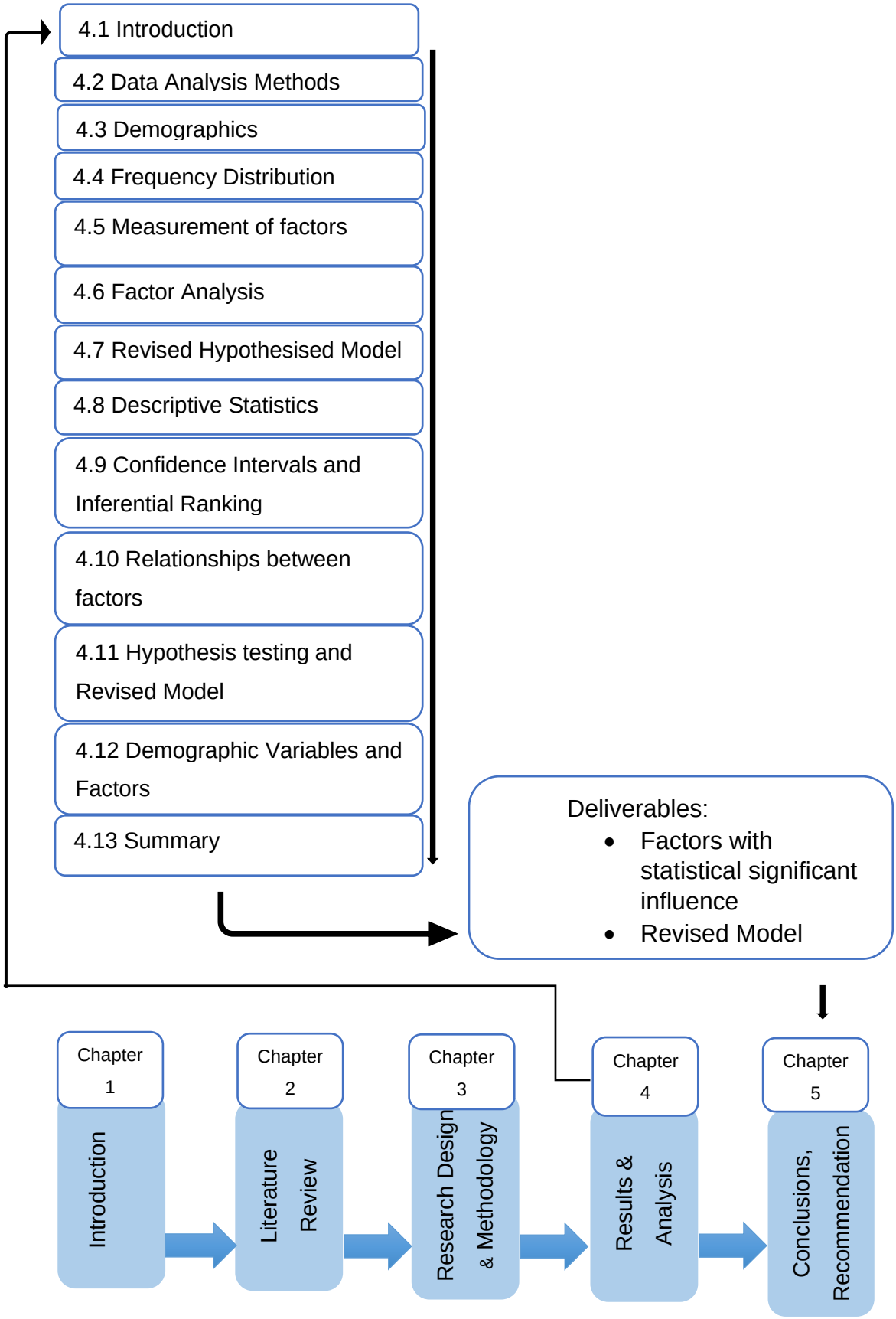


Figure 4.1: Chapter 4 Outline

4.2 Data Analysis and Interpretation

The study had a sample size of 673 respondents, a representative sample for a target population of over 1 million (Collis & Hussey, 2014). The online data collected were analysed into meaningful information with the assistance of the university's statistician, Dr Venter, using the statistical software STATISTICA. Descriptive statistics were used to explain the observed trends of the data before Exploratory Factor Analysis was conducted in this study, to determine the number of items significantly loading on a factor. Data were also analysed using the univariate analysis, which examined the independent factors individually. The detailed reporting and analysis of the results are discussed in the following sub-sections.

4.3 Demographics

The first section of the questionnaire collected demographic data from the respondents. The data describe the characteristics of the respondents and seek to highlight any substantial trends that will inform the research recommendations. The demographics of the respondents, in terms of age, gender, marital status, education as well as income are presented in the following sub-sections.

4.3.1 Gender

The majority of the respondents were female (63%, n= 424), while males make up 37% (n= 249) of the total sample as depicted in Table 4-1.

Table 4-1: Gender Distribution

Category	Frequency	Percentage (%)
Female	424	63.0%
Male	249	37.0%
Total	**673**	**100.0%**

The gender distribution probably stems from the fact that the sample was predominantly drawn from South Africa, a nation with over 51.4 % females (StatsSA, 2013). Smith (2008) also adds that females are generally more responsive to online surveys, explaining the sample's gender distribution.

4.3.2 Age

The respondents were asked to state their age range in the first section of the questionnaire. The research focused mainly on online shoppers, therefore those who are legally economically active, hence the minimum age was stipulated to be 18 years. Table 4-2 presents the results.

Table 4-2: Age Distribution

Age Range	Frequency	Percentage	Cumulative	
18-29	171	25.4%	171	25.4%
30-39	311	46.2%	482	71.6%
40-49	131	19.5%	613	91.1%
0-59	49	7.3%	662	98.4%
60 plus	11	1.6%	673	100.0%
Total	**673**	**100.0%**		

The tricenarians (30-39 years) form the bulk of the respondents, with the millennials (18-29) a distant second. The age distribution depicts the profile of online shoppers in South Africa (Rudansky-Kloppers, 2014), dominated by the tricenarians who are both economically active and technology savvy, the primary requisite of online shopping. The millennials, who are exposed to technology and tricenarians, who are economically active, constitute 71.6% (n=482) of the respondents.

4.3.3 Education level

The respondents provided their highest education qualification as presented in Figure 4.2.

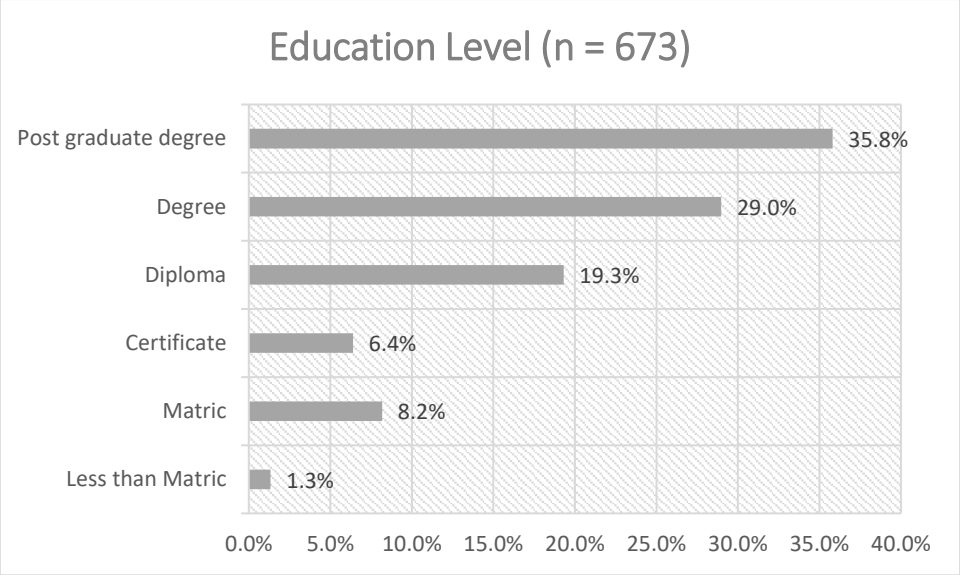


Figure 4.2: Education Level

The collected data show that an overwhelming 84.1% (n= 566) of all respondents have a tertiary qualification, which is significantly higher than the national average (Department of Higher Education and Training, 2018). This is probably because the questionnaire was primarily distributed by university students, who passed it to their peers. Additionally, the questionnaire was administered online, limiting it to respondents who have Internet access. The data though is representative of the online shoppers' education, as it requires some form of education and technological knowledge to conduct online shopping.

4.3.4 Income

The survey requested the respondents to provide their monthly income range. The income of the respondents, which is a factor influencing online shopping, is shown in Figure 4-3. At least 85% (n=573) of the respondents earn a monthly income of over R10 000, living above the poverty datum line which according to Mapande and Appiah, (2019) enhances their chances of shopping online.

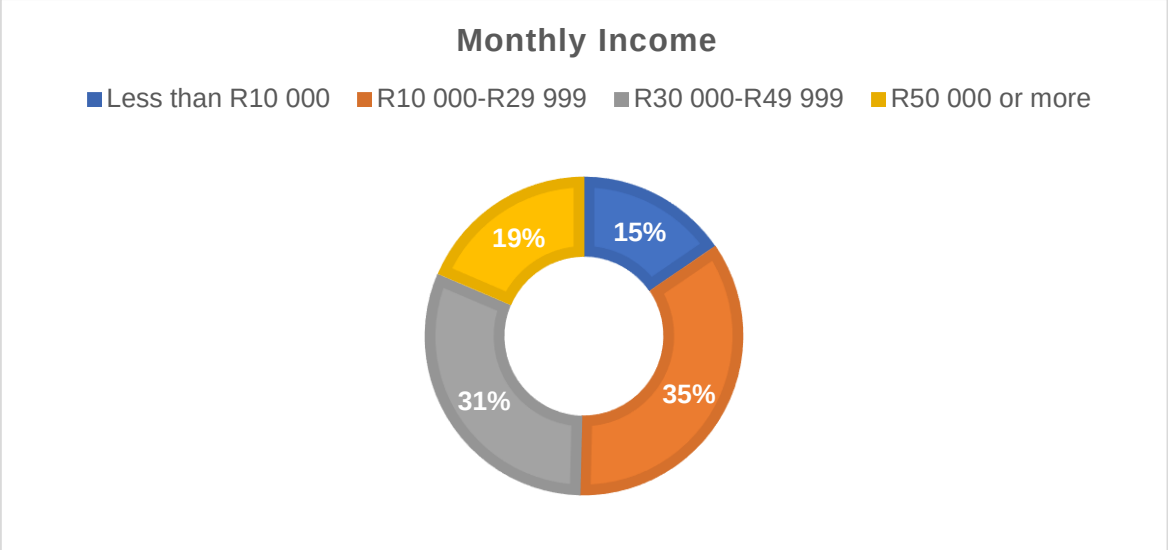


Figure 4.3: Monthly Income n=673

Those earning over R30 000 constitute 50% (n=334) of the respondents, concurring with Yahya and Sugiyanto (2020), as well as Swiegers (2018), who suggested that higher earners are early adopters of online shopping.

4.3.5 Employment Status

The respondents, as part of completing the questionnaire, stated their employment status. The employment status gave a representation of the respondent's economic status as it influences the respondents' disposable income to spend on online shopping. Table 4-3 shows the respondents' employment status.

Table 4-3: Employment Status

Employment Status	Frequency (n)	Percentage	Cumulative	
			n	%
Self employed	65	9.7%	65	9.7%
Employed	550	81.7%	615	91.4%
Without work	55	8.2%	670	99.6%
Retired	3	0.4%	**673**	**100.0%**
Total	**673**	**100.0%**		

Over 9 out of 10 of all the respondents were either self-employed or employed. This is representative of the online shoppers' profile, people that have means to earn an income. The employed or self-employed groups also dominantly shop online because

of its convenience and flexibility as a way to balance between working and shopping time (Nielsen, 2018).

4.4 Frequency Distribution

The second section of the questionnaire collected data on each of the investigated factors. The section commenced with a dichotomous 'screening' question, *'Do you shop online?'.* This enabled blanking off data of all respondents' who answered 'no'. Over 8 for every 10 respondents, as shown in Table 4-4, did shop online, a relatively high ratio but expected as the survey was administered online, the platform used by online shoppers.

Table 4-4: Shop Online? (n = 673)

Shop Online?	Frequency	Percentage
Yes	565	84.0%
No	108	16.0%
Total	**673**	**100.0%**

4.4.1 Shopping Online and Internet Access

The respondents, through the questionnaire, indicated that the majority (87%; n=489) shopped online at most once a month. This aligns with the respondents being paid monthly. The collected data also showed that almost all respondents (99.4%; n=669) have access to the Internet, which is representative of the target population, online shoppers' characteristics, as online shopping requires Internet access. Furthermore, the survey was conducted online, only accessible to respondents with access to Internet. A large number of respondents (99.4%; n= 669) access the Internet through their mobile devices, probably largely attributed to the rapid penetration of mobile technology in South Africa (Swiegers, 2018) and 85.6% (n=489) of the respondents use a phone to conduct online shopping. The data also showed, as presented in Figure 4.4, that most of the respondents spent over 3 hours on the Internet and 9 out of 10 respondents have access to Internet at home. Accessing the Internet at home allow respondents to spend much time on the Internet after working hours, explaining the hours spent on the Internet by the majority of the respondents.

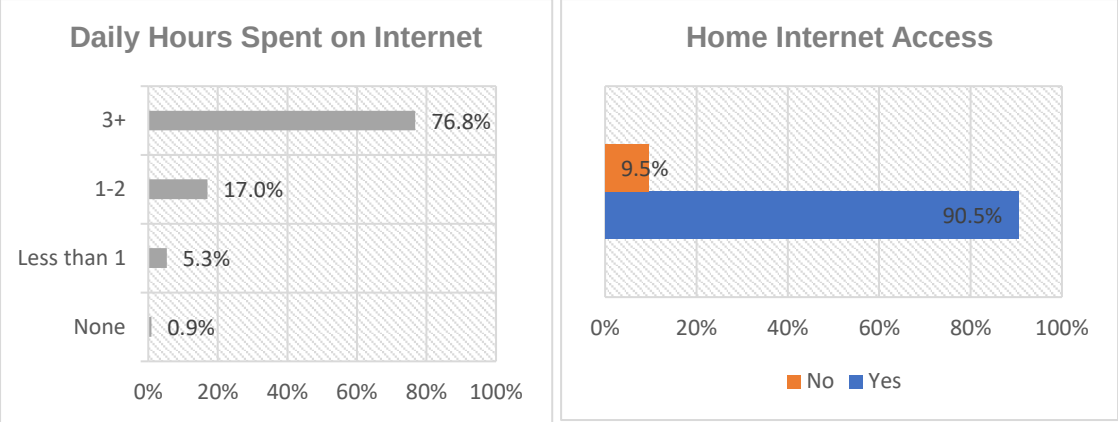


Figure 4.4: Time Spent on Internet and Home Internet Access (n = 673)

The respondents who have shopped online before also rated online shopping experience on a 1-10 scale, with 1 being bad and 10 representing excellent experience. Table 4.5 summarises the responses, showing the mean rating of 8.07 and standard deviation of 1.65. The trend indicates respondents generally satisfied with online shopping, something business have been improving to lure more customers from brick-and-mortar environments.

Table 4-5: Central Tendency and Dispersion: Online Shopping Rating (n=606)

Mean	S.D.	Minimum	Median	Maximum
8.07	1.65	1.00	8.00	10.00

4.4.2 Payment Method, Communication and Delivery

The payment method, communication and delivery, all have an influence on attracting consumers to online shopping, hence the questionnaire asked respondents their preferred payment method, mode of communication and delivery. The questionnaire had seven possible payment methods the respondents could select, however for reporting purposing the responses were combined into three main categories. The results indicated that almost half of the respondents prefer using credit/debit cards while 40% (n=268) opted for electronic funds transfer (EFT), with the remaining opting for cash as shown in Figure 4.5

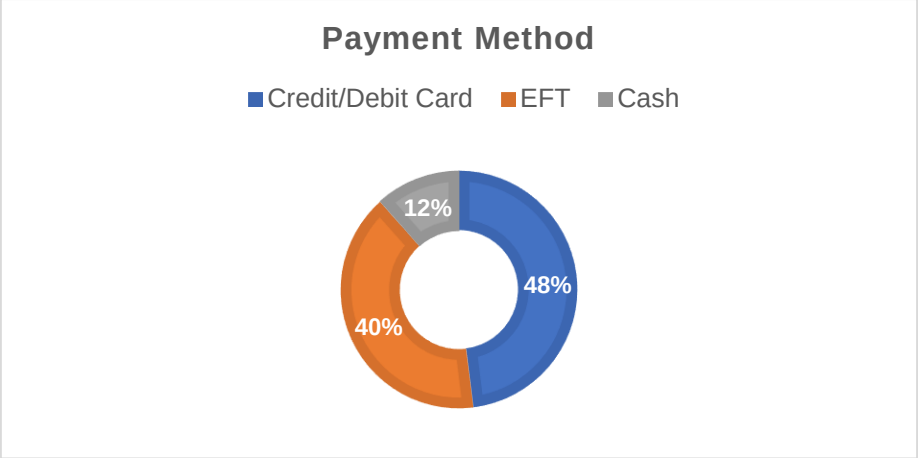


Figure 4.5: Payment Method (n = 673)

The number of cash payments indicate that about 12% (n=77) of online consumers still have concerns over the security of digital payment methods.

On the mode of communication, the majority of respondents (64%; n=431) preferred emails, while a surprisingly low number, 22% (n=148) considered instant messaging such as WhatsApp and Signal. The use of short messaging service (SMS) was favoured by just over 1 in 10 with the remaining either opting for no communication or print media as shown in Figure 4.6.

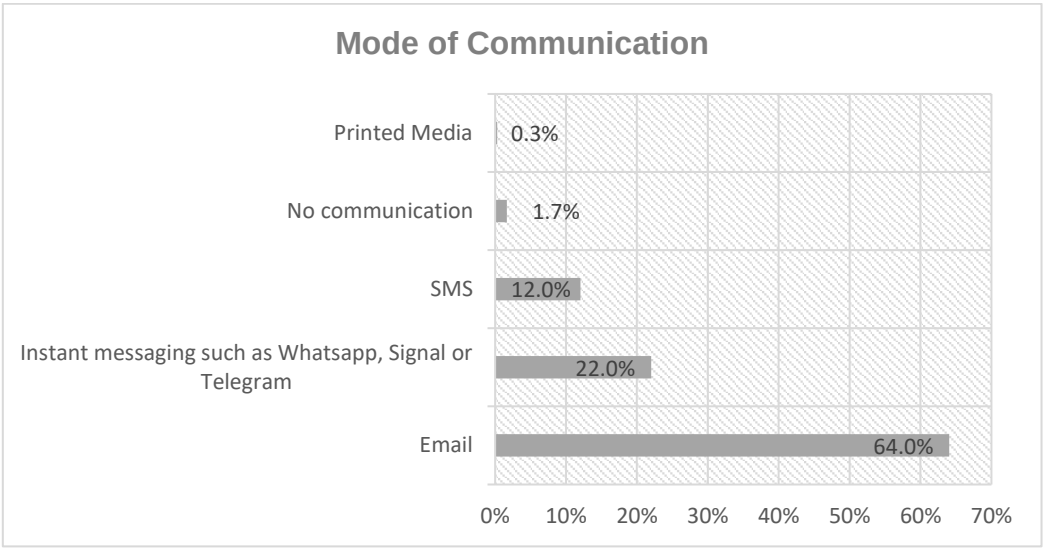


Figure 4.6: Mode of Communication (n=673)

Online shopping has become interactive and engages consumers on social media, hence it is surprising that instant messaging, an interactive platform, is only preferred by less than a quarter of all respondents. Respondents' favour of email probably stems from the trust associated with emails or as a way to avoid telemarketers.

The convenience offered by a variety of delivery options, boosts the online shopping attractiveness over instore purchases (Asiedu & Dube, 2020). However, delivery options can be costly, which may see online businesses losing competitive advantage to brick-and-mortar stores (Dannenberg et al., 2020), hence the question regarding the preferred method of delivery was asked to best inform the recommendations to be taken by businesses. The results indicated that almost 9 out of every 10 respondents want their goods to be delivered at home or workplace while the remaining respondents prefer collecting the purchases instore as shown in Figure 4.7. An overwhelming number of respondents, who prefer home delivery, seek to enjoy its convenience, saving on transport costs and travelling time. The rest of the respondents would rather collect their purchases allowing them to have physical contact before selecting the purchase.

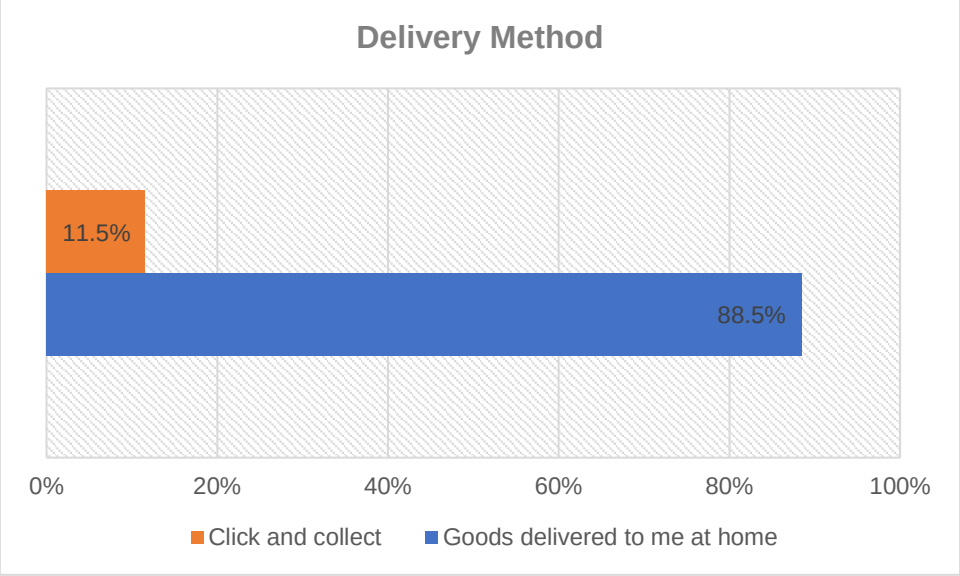


Figure 4.7: Delivery Method (n=616)

4.5 Measurement of Factors

The questionnaire also had a section that solicited responses on each of the factors proposed to have an influence on online shopping in South Africa. The frequency

distribution analysis was carried out on the following independent factors: Online shopping in general, Personal experience of online shopping, Shopping behaviour, Acceptance of technologies, COVID-19 and online shopping and Product variety. The questionnaire measured the factors using a five-point Likert scale, consisting of 'Strongly Disagree', 'Disagree', 'Neutral', 'Agree' and 'Strongly Agree'. The five-point Likert, for the purpose of reporting, was then reduced to 'Disagree', 'Neutral' and 'Agree' after amalgamating 'Strongly Disagree' and 'Disagree' into 'Disagree' and 'Strongly Agree' and 'Agree' into 'Agree'.

4.5.1 Online Shopping in General

On the proposed factors, the questionnaire had statements that measured online shopping in general. The responses to each of the statements about online shopping in general are shown in Table 4-6.

Table 4-6: Online Shopping in General (n = 673)

Item Code	Questionnaire Statement	Disagree		Neutral		Agree	
		n	%	n	%	n	%
OSG_01	Online shopping is safe	29	4%	260	39%	384	57%
OSG_02	Online shopping is easy	30	4%	128	19%	515	77%
OSG_03	Online shopping is cheaper than traditional shopping	138	21%	291	43%	244	36%
OSG_04	Online shopping takes less time	77	11%	112	17%	484	72%
OSG_05	Online shopping is comfortable	40	6%	126	19%	507	75%
OSG_06	Online shopping is convenient	19	3%	78	11%	576	86%
OSG_07	Online shopping provides greater possibilities of product selection than traditional shopping	86	13%	179	26%	408	61%
OSG_08	I trust online shopping	67	10%	260	39%	346	51%

Almost a similar number of respondents agree that online shopping is safe (57%; n=384) and that they trust online shopping (51%; n=346). Trusting online shopping primarily depends on its safety (Mapande & Appiah, 2019). On item Online shopping is easy, Online shopping takes less time, Online shopping is comfortable and Online shopping is convenient, at least 72% (n=484) of respondents agree on these items

related to convenience and flexibility offered by online shopping. The possibility of accessing multi-products on online shopping is supported by 61% (n = 408) of the respondents. At least 6 out of 10 respondents either disagree or are neutral on item Online shopping is cheaper than traditional shopping, related to price difference between online and traditional shopping.

4.5.2 Personal Experience of Online Shopping

The questionnaire's statements next measured the personal experience as a factor towards a shift to online shopping. Table 4-7 indicates that frequency distribution for each of the questionnaire's statements related to personal experience.

Table 4-7: Personal Experience of Online Shopping (n = 565)

Item Code	Questionnaire Statement	Disagree		Neutral		Agree	
		n	%	n	%	n	%
OSP_01	I enjoy shopping online	22	4%	91	16%	452	80%
OSP_02	I am an experienced online shopper	74	13%	135	24%	356	63%
OSP_03	I have had some bad experiences when shopping online	237	42%	80	14%	248	44%
OSP_04	Online shopping suits my lifestyle	34	6%	125	22%	406	72%
OSP_05	I buy things from all over the world online	225	40%	83	15%	257	45%

An overwhelming majority (80%; n=452) of the respondents enjoy shopping online. Enjoyment of online shopping will attract and retain hedonic motivated consumers (Kim et al., 2019). Only 44% (n = 248) of the respondents had a bad experience when shopping online, giving impetus to the need for businesses to improve online customer experience to retain these respondents. A shade over 7 in 10, consider online shopping to suit their lifestyle, while at least 4 in 10 do not buy from all over the world online. This provides a market for local businesses insulated from international competition.

4.5.3 Shopping Behaviour

The respondents, in this section of the questionnaire, answered questions related to the shopping behaviour as a factor towards shifting to online shopping. The responses' frequency distribution related to the shopping behaviour is presented in Table 4-8.

Table 4-8: Shopping Behaviour (n = 673)

Item Code	Questionnaire Statement	Disagree		Neutral		Agree	
		n	%	n	%	n	%
SB_01	I like to touch products before I purchase them	129	19%	223	33%	321	48%
SB_02	I like to try on products before I buy them	125	19%	185	27%	363	54%
SB_03	I like to taste products before I buy them	249	37%	229	34%	195	29%
SB_04	I like to smell products like perfume etc. before I buy them	95	14%	99	15%	479	71%
SB_05	Shopping is a social event for me	276	41%	181	27%	216	32%
SB_06	I like to interact with salespeople face to face when shopping	322	48%	183	27%	168	25%
SB_07	I prefer physical interaction when shopping for products	247	37%	221	33%	205	30%
SB_08	Instore displays influence my shopping	183	27%	186	28%	304	45%

Slightly over 8 out of 10 respondents either agree or are indifferent in preferring to being in contact with the products before purchasing them as noted by item I like to touch products before I purchase them and I like to try on products before I buy them. Lack of traditional physical contact stifles the growth of online shopping (Rudansky-Kloppers, 2014), which has seen businesses adopting technology to compensate and replace the physical contact (Mapande & Appiah, 2019). Item I prefer physical interaction when shopping for products has 30% (n = 205) of respondents stating that they prefer physical interaction when shopping for products. The low percentage may be due to the fear of contracting COVID-19 as this survey was done during the corona virus pandemic. At least 71% (n=479) of the respondents prefer to smell a product such as a perfume, while a meagre 29% (195) prefer to taste a product before

purchasing it. The high percentage of respondents agreeing (71%; n=479) with item I like to smell products like perfume etc. before I buy them compared to a low percentage agreeing (29%; n=195) with the item I like to taste products before I buy them demonstrates that the physical interaction with a product before purchasing it is influenced by the product type.

4.5.4 Acceptance of Internet Technologies

The questionnaire also measured the acceptance of technologies as a factor with an influence in shifting towards online shopping. The respondents' responses to the questions on acceptance of technologies are represented in a frequency distribution Table 4-9.

Table 4-9: Acceptance of Internet Technologies (n = 673)

Item Code	Questionnaire Statement	Disagree		Neutral		Agree	
		n	%	n	%	n	%
AIT_01	I am comfortable using Internet technologies	17	2%	85	13%	571	85%
AIT_02	I trust Internet technologies	50	7%	230	34%	393	59%
AIT_03	I trust online payments	97	14%	274	41%	302	45%
AIT_04	I trust that my personal information will not be compromised when using Internet technologies	202	30%	281	42%	190	28%
AIT_05	I trust online transactions	109	16%	291	43%	273	41%
AIT_06	I trust online purchasing	77	11%	276	41%	320	48%

The bulk of the respondents (85%; n=571) are comfortable with the use of Internet technologies probably due to the rapid proliferation of mobile technologies (Swiegers, 2018). Interestingly, despite the massive comfort in using Internet technologies, only 59% (n=393) and 45% (n=302) of the respondents trust the Internet and online payment, respectively. Furthermore, only just under 3 in 10 respondents believe that their personal information will not be compromised when using Internet technologies as demonstrated by item, I trust that my personal information will not be compromised when using Internet technologies. These low percentages are probably due to online

security and privacy concerns which then inhibit the growth of online shopping (Akram, 2018).

4.5.5 COVID-19 and Shopping

The Likert scale items in this section of the questionnaire included statements measuring the influence of COVID-19 in shifting towards online shopping. Table 4-10 shows the frequency distribution of the questionnaire statements related to COVID-19 and shopping.

Table 4-10: COVID-19 and Shopping (n = 673)

Item Code	Questionnaire Statement	Disagree		Neutral		Agree	
		n	%	n	%	n	%
C19_01	I bought online for the first time because of COVID-19	536	80%	52	7%	85	13%
C19_02	COVID-19 has made me consider online shopping	237	35%	127	19%	309	46%
C19_03	COVID-19 has made me switch to online shopping	316	47%	176	26%	181	27%
C19_04	The COVID-19 lockdown forced me to buy online	322	48%	126	19%	225	33%
C19_05	I prefer to buy online since COVID-19	244	36%	171	26%	258	38%
C19_06	I will continue to buy online post COVID-19	88	13%	127	19%	458	68%
C19_07	I trust online delivery services safety precautions for COVID-19	112	17%	238	35%	323	48%
C19_08	Buying online is a safer option because of COVID-19	75	11%	159	24%	439	65%
C19_09	In store experiences are risky with COVID-19	72	11%	155	23%	446	66%
C19_10	Physical stores pay attention to the COVID-19 health and safety measures	78	12%	245	36%	350	52%

A greater number of the study's participants (80%; n=536) disagreed that they first shopped online due to COVID-19 probably suggesting that these respondents were already online shoppers. A significant number of the respondents (68%; n=458) acknowledged that they will continue to buy online post the pandemic with almost 7 in 10 agreeing that instore shopping is risky and online shopping is safer in the wake of

COVID-19. The results align with the trend that consumers will likely maintain online shopping behaviour post the pandemic as suggested by Lee Yohn (2020).

4.5.6 Products bought Online.

In this section, the questionnaires asked respondents how often they purchase these products. The inexhaustive list painted a picture of the variety of products that consumers buy online. The rate at which the respondents buy the various products was categorised into ‘Never’, ‘Seldom’, ‘Regular’, ‘Often’ and ‘Very Often’. In this report the categories were reduced to ‘Seldom’ by combining ‘Never’ and ‘Seldom’, and ‘Often’ by combining ‘Regular’, ‘Often’ and ‘Very Often’. The combined results indicating the list of the various products is shown in Table 4-11.

Table 4-11: Products bought Online (n = 673)

Questionnaire Statement	Seldom		Regular and Often	
	n	%	n	%
Alcohol	620	92%	53	8%
Books	492	73%	181	27%
Clothing and other apparel	336	50%	337	50%
Cosmetics & Toiletries	464	69%	209	31%
Electrical goods & home appliances	391	58%	282	42%
Fast Food	259	38%	414	62%
Flowers	565	84%	108	16%
Fresh produce	587	87%	86	13%
Furniture	546	81%	127	19%
Groceries	520	77%	153	23%
Pharmaceutical products	557	83%	116	17%
Toys	512	76%	161	24%

The results indicate that most respondents (62%; n=414) regularly purchase fast food online, followed by clothing or other apparel at 50% (n=337). This is probably due to the universality of fast food that minimum physical contact is required in selecting the product while the easiness in returning clothing may explain the high preference. The availability of delivery options associated with both products, which offers convenience, also attracts consumers. On the other hand only just over 1 out of 10 respondents regularly purchase fresh produce online. This is probably because

consumers want to physically select their fresh products and the short-life span of fresh produce limits the delivery options.

4.6 Factor Analysis

Factor analysis, according to Hooper (2012), examines the correlations between respondents' responses while categorising the items into factors. It is considered a variable reduction procedure, where many items are summed into a few factors (Goldberg & Velicer, 2006). The identified factors have correlated items and typically have similar content. This research used exploratory factor analysis (EFA) to determine if factors exist in the collected data and reduce items into similar discrete factors.

4.6.1 Exploratory Factor Analysis

The EFA determined the nature and number of factors (Hooper, 2012), identifying whether multiple dimensions existed in a set of items. EFA tests whether the initial factors in the questionnaire measured the factor loadings. It uncovers common factors and accounts for shared variance (Hooper, 2012). The EFA explores the underlying theoretical constructs and relationships between observed factors. Eigenvalues and the Scree Plots were used as the EFA techniques to determine which factors to retain in the analysis of the collected data.

The number of factors to extract was determined using two guidelines: Eigenvalues greater than 1 and the scree plot. Factor loadings greater than or equal to .523 were deemed significant at the $\alpha = .05$ level for the sample size $n = 673$ in accordance with the recommendations by Hair et al. (2006). The EFA involves a number of iterations eliminating insignificant loading items until the Eigenvalues and the scree plot indicate the same number of factors.

4.6.1.1 Exploratory Factor Analysis – Online Shopping in General

The collected data on online shopping in general, were analysed using the exploratory factor analysis to identify the number of factors the items measured significantly load on. Using the Eigenvalue, the initial analysis of the items indicated that the items load on to two factors, depicted by the two items with an Eigenvalue greater than 1.0 as shown in Table 4-12. Factor 1 has an Eigenvalue of 3.489 while factor 2 has a value

of 1.058 with both factors accounting for a combined 56.8% of the total variance explained.

Table 4-12: EFA Eigenvalues - Online Shopping in General (n = 673)

Factor	Eigenvalue	Percentage Total Variance
1	3.486	43.6
2	1.058	13.2
3	0.853	10.7
4	0.753	9.4
5	0.617	7.7
6	0.511	6.4
7	0.418	5.2
8	0.303	3.8

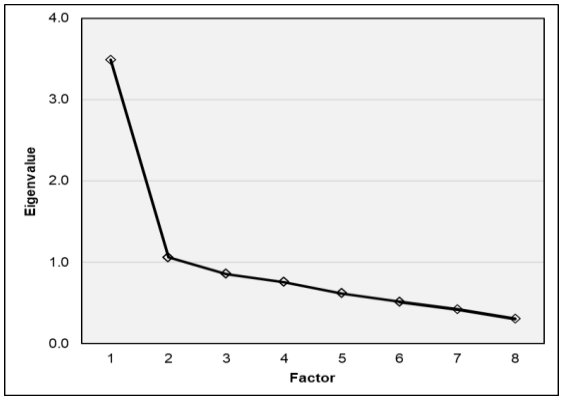


Figure 4.8: Online Shopping in General Scree Plot (1-factor model)

The scree plot indicated a 1-factor loading for online shopping in general factor as shown in Figure 4.8. With the two independent methods contradicting each other as the Eigenvalue identified two factors while the scree plot identified one factor, the analysis was rerun with both a 1-factor model and 2-factor model.

The 1-factor model analysis indicated that all the eight items met the minimum significant loading of .30 and explains 43.6% of the variance for online shopping in general as shown in Table 4-13.

Table 4-13: EFA Loadings (1 Factor Model) - Online Shopping in General (n = 673; Minimum significant loading = .300)

Item	Factor 1
OSG_05 Online shopping is comfortable	**.802**
OSG_06 Online shopping is convenient	**.735**
OSG_08 I trust online shopping	**.734**
OSG_02 Online shopping is easy	**.700**
OSG_01 Online shopping is safe	**.599**
OSG_04 Online shopping takes less time	**.598**
OSG_07 Online shopping provides greater possibilities of product selection than traditional shopping	**.585**
OSG_03 Online shopping is cheaper than traditional shopping	**.465**
Total % of Variance Explained = 43.6%	

On the 2-factor model analysis, as shown in Table 4-14, the results indicated that of the eight items, three items significantly loaded onto one factor, another three significantly loaded on the second factor and remaining two items cross loaded on both factors. The 2-factor model accounts for 56.8% of the variance for online shopping in general, which better explains the variance compared to the 1-factor model.

Table 4-14: EFA Loadings (2 Factor Model) - Online Shopping in General (n = 673; Minimum significant loading = .300)

Item	Factor 1	Factor 2
OSG_01 Online shopping is safe	**.858**	-.042
OSG_08 I trust online shopping	**.781**	.239
OSG_02 Online shopping is easy	**.597**	**.385**
OSG_03 Online shopping is cheaper than traditional shopping	-.035	**.720**
OSG_07 Online shopping provides greater possibilities of product selection than traditional shopping	.180	**.666**
OSG_04 Online shopping takes less time	.225	**.635**
OSG_05 Online shopping is comfortable	**.562**	**.573**
OSG_06 Online shopping is convenient	**.505**	**.536**
Explained variance	2.36	2.19
% of Total variance	29.5%	27.3%
Total % of Variance Explained = 56.8%		

The cross-loading on the 2-factor analysis is suboptimal; therefore, the 1-factor solution is optimal by omitting any items below the minimum significant loading. The EFA was rerun using the 1-factor model after eliminating an item with factor loading less than .523, the minimum significant loading. The eliminated item was OSG_03 *Online shopping is cheaper than traditional shopping,* probably because it does not measure online shopping behaviour unlike the other seven items. The Eigenvalues of the remaining items, analysed using the 1-factor model, are shown in Table 4-15, while the scree plot is shown in Figure 4-9. The Eigenvalue of 3.322 explains 47.5% of the variance of online shopping general while the scree plot depicts that there is only one factor above one.

Table 4-15: (EFA) Eigenvalues - Online Shopping in General (n = 673)

Factor	Eigenvalue	Percentage Total Variance
1	3.322	47.5
2	0.981	14.0
3	0.765	10.9
4	0.655	9.4
5	0.540	7.7
6	0.427	6.1
7	0.309	4.4

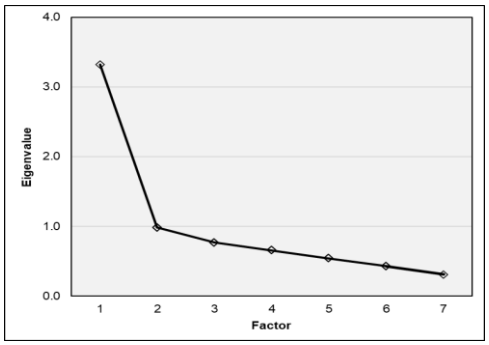


Figure 4.9: Online Shopping in General Scree Plot (2-factor model)

The seven loaded items for a 1-factor model after elimination of item OSG_03, are indicated in Table 4-16. All seven items met the minimum significant loading of .523 and explain 47.5% of the variance of online shopping in general.

Table 4-16: EFA Loadings (1 Factor Model) - Online Shopping in General (n = 673; Minimum significant loading = .300)

Item	Factor 1
OSG_05 Online shopping is comfortable	**.806**
OSG_06 Online shopping is convenient	**.754**
OSG_08 I trust online shopping	**.746**
OSG_02 Online shopping is easy	**.707**
OSG_01 Online shopping is safe	**.619**
OSG_04 Online shopping takes less time	**.580**
OSG_07 Online shopping provides greater possibilities of product selection than traditional shopping	**.574**
Total % of Variance Explained = 47.5%	

4.6.1.2 Exploratory Factor Analysis – Personal Experience of Online Shopping

The initial analysis had two factors identified by the Eigenvalues with values greater than 1.0 while the scree plot indicated one factor. The factor 1 had an Eigen value of 2.440 and factor 2 had a value of 1.051 with both factors explaining a combined 68.9% of the total variance for personal experience. The scree plot indicated that there was only 1 factor above 1.0 contrary to the Eigenvalues. After eliminating OSP_03 *I have had some bad experiences when shopping online,* a non-significant loading item probably because it was a negative statement, a 1-factor model analysis was done. The Eigenvalues shown in Table 4-17 indicated that only factor 1 is greater than 1.0.

The scree plot depicted in Figure 4.10 indicated that only one factor was greater than 1. Both the scree plot and Eigenvalues stated that there was only 1 factor greater than 1. The Eigenvalue of 2.235 for the remaining four items (Online shopping is safe, Online shopping is easy, Online shopping takes less time and Online shopping is comfortable) explains 60.9% of variance for the personal experience.

Table 4-17: EFA Eigenvalues - Personal Experience of Online Shopping (n = 673)

Factor	Eigenvalue	Percentage Total Variance
1	2.435	60.9
2	0.769	19.2
3	0.469	11.7
4	0.326	8.2

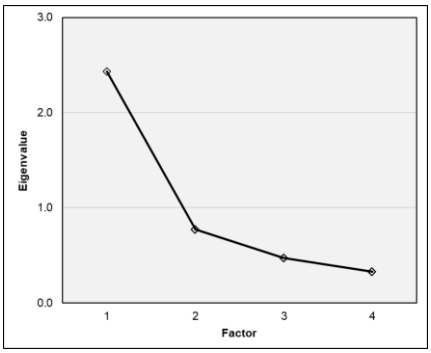


Figure 4.10: Personal Experience of Online Shopping

All the four items loaded for a 1-factor model met the minimum significant loading of .523 and explained 60.9% of the total variance for personal experience. The results of the 1-factor model analysis are shown in Table 4-18.

Table 4-18: EFA Loadings (1 Factor Model) - Personal Experience of Online Shopping (n = 673; Minimum significant loading = .300)

Item	Factor 1
OSP_01 I enjoy shopping online	**.853**
OSP_02 I am an experienced online shopper	**.833**
OSP_04 Online shopping suits my lifestyle	**.817**
OSP_05 I buy things from all over the world online	**.588**
Total % of Variance Explained = 60.9%	

4.6.1.3 Exploratory Factor Analysis – Shopping Behaviour

The EFA indicated two factors by the Eigenvalue and two factors by the scree plot greater than 1 as shown in Table 4-19 and Figure 4.11, respectively. Factor 1 has Eigenvalue of 3.415, while Factor 2 has a value of 1.098 with a combined 64.5% of the variance for shopping behaviour.

Table 4-19: EFA Eigenvalues – Shopping Behaviour (n = 673)

Factor	Eigenvalue	Percentage Total Variance
1	3.415	48.8
2	1.098	15.7
3	0.754	10.8
4	0.596	8.5
5	0.555	7.9
6	0.335	4.8
7	0.247	3.5

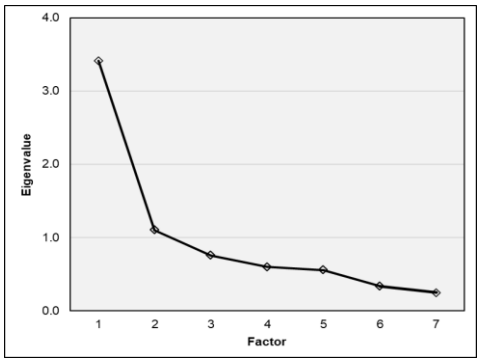


Figure 4.11: Shopping Behaviour Scree Plot

The 2-factor model was optimal with Factor 1 interaction with products and Factor 2 interaction with people. The model accounted for a total of 64.5% variance in the two factors. Items SB_02, SB_01, SB_04, and SB_03 relate to Factor 1 *Interaction with products*. The remaining items SB_06, SB_07, and SB_05 relate to Factor 2 *Interaction with people.* All the items, as shown in Table 4-20, have significant loading above .523 the minimum significant loading.

Table 4-20: EFA Loadings (2 Factor Model) - Shopping Behaviour (n = 673; Minimum significant loading = .300)

Item	Factor 1	Factor 2
SB_02 I like to try on products before I buy them	**.804**	.232
SB_01 I like to touch products before I purchase them	**.749**	**.342**
SB_04 I like to smell products like perfume etc. before I buy them	**.730**	.059
SB_03 I like to taste products before I buy them	**.702**	.237
SB_06 I like to interact with salespeople face to face when shopping	.236	**.837**
SB_07 I prefer physical interaction when shopping for products	**.390**	**.777**
SB_05 Shopping is a social event for me	-.011	**.733**
Explained variance	2.44	2.07
% of Total variance	34.9%	29.6%
Total % of Variance Explained = 64.5%		

4.6.1.4 Exploratory Factor Analysis – Acceptance of Internet Technologies

The EFA had two factors identified by the Eigenvalues with values greater than 1.0, while the scree plot indicated one factor. Factor 1 and Factor 2 had an Eigenvalues of 3.538 and 1.015, respectively. Both Factor 1 and Factor 2 explained a combined total variance of 75.9% for acceptance of Internet technologies. The scree plot indicated there was only 1 factor contrary to the Eigenvalues. After eliminating AIT_01 *I am comfortable using Internet technologies* as it may be interpreted as ease of online transactions, a 1-factor analysis was rerun. The Eigenvalues results shown in Table 4-21 indicates that only factor 1 is greater than 1.0. The scree plot in Figure 4.12 shows that only one factor is greater than 1. The Eigenvalue of 3.293 explains 65.9% of the variance for acceptance of Internet technologies.

Table 4-21: EFA Eigenvalues - Acceptance of Internet Technologies (n = 673)

Factor	Eigenvalue	Percentage Total Variance
1	3.293	65.9
2	0.648	13.0
3	0.527	10.5
4	0.315	6.3
5	0.217	4.3

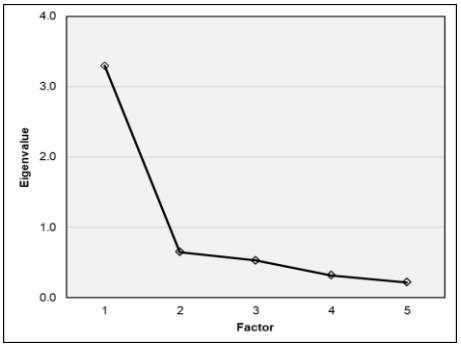


Figure 4.12: Acceptance of Internet Technologies

The remaining five items loaded for a 1-factor model met the minimum significant loading of .523 and account for 65.9% of the variance for acceptance of Internet technologies. Table 4-22 shows the results of the five items.

Table 4-22: EFA Loadings (1 Factor Model) - Acceptance of Internet Technologies (n = 673; Minimum significant loading = .300)

Item	Factor 1
AIT_05 I trust online transactions	**.890**
AIT_03 I trust online payments	**.880**
AIT_06 I trust online purchasing	**.852**
AIT_04 I trust that my personal information will not be compromised when using Internet technologies	**.708**
AIT_02 I trust Internet technologies	**.707**
Total % of Variance Explained = 65.9%	

4.6.1.5 Exploratory Factor Analysis – COVID-19 and Shopping

The initial EFA yielded two factors indicated by both the Eigenvalues and scree plot. The Eigenvalues for Factor 1 and Factor 2 of 4.181 and 1.896 respectively, combined to account for 60.8% of the variance for COVID-19 and shopping. An item C19_10 *Physical stores pay attention to the COVID-19 health and safety measures* was eliminated as it was non-significant and it appeared insufficiently related to other items. The omitted item does not represent a separate facet of the construct; therefore, its omission will not compromise content validity. The rerun EFA had two factors indicated by both the Eigenvalues and the scree plot (Figure 4-13). The 2-factor solution was considered optimal with Factor 1 relating to initial impact of COVID-19 on shopping with an Eigenvalue of 4.163 while Factor 2 which relates to the current impact of COVID-19 had an Eigenvalue of 1.836. Both Factor 1 and Factor 2 combined, as shown in Table 4-23, explain 66.7% of the variance for COVID-19 and shopping.

Table 4-23: EFA Eigenvalues - Covid-19 & Shopping (n = 673)

Factor	Eigenvalue	Percentage Total Variance
1	4.163	46.3
2	1.836	20.4
3	0.665	7.4
4	0.640	7.1
5	0.418	4.6
6	0.402	4.5
7	0.352	3.9
8	0.313	3.5
9	0.210	2.3

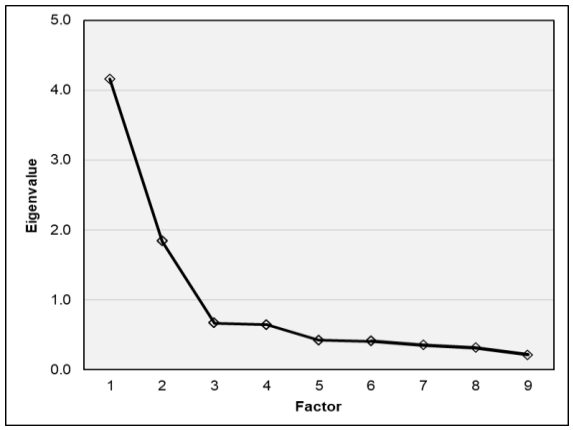


Figure 4.13: COVID-19 and Shopping Scree Plot

The nine items loaded for a 1-factor model, all except of item C19_01, that met the minimum significant loading of .523 and accounted for 46.3% of the variance for COVID-19 and shopping as shown in Table 4-24.

Table 4-24: EFA Loadings (1 Factor Model) - Covid-19 & Shopping (n = 673; Minimum significant loading = .300)

Item	Factor 1
C19_05 I prefer to buy online since COVID-19	**.822**
C19_03 COVID-19 has made me switch to online shopping	**.805**
C19_04 The COVID-19 lockdown forced me to buy online	**.760**
C19_02 COVID-19 has made me consider online shopping	**.720**
C19_07 I trust online delivery services safety precautions for COVID-19	**.674**
C19_08 Buying online is a safer option because of COVID-19	**.656**
C19_09 In store experiences are risky with COVID-19	**.591**
C19_06 I will continue to buy online post COVID-19	**.561**
C19_01 I bought online for the first time because of COVID-19	**.442**
Total % of Variance Explained = 46.3%	

The 2-factor model was considered to be optimal with all items meeting the minimum significant loading of .523 and explaining a combined 66.7% of the total variance for COVID-19 and shopping. Factor 1 relates to initial impact of COVID-19 on shopping

while Factor 2 which relates to the current impact of COVID-19. Items C19_03, C19_02, C19_04, C19_05 and C19_01 relates to Factor 1 *Initial impact of COVID-19 on shopping*. The remaining items C19_08, C19_07, C19_06 and C19_09 relate to Factor 2 *Current impact of COVID-19*. The final 2-factor loadings of the EFA on COVID-19 and shopping are illustrated in Table 4-25.

Table 4-25: EFA Loadings (2 Factor Model) - Covid-19 & Shopping (n = 673; Minimum significant loading = .300)

Item	Factor 1	Factor 2
C19_03 COVID-19 has made me switch to online shopping	**.890**	.187
C19_02 COVID-19 has made me consider online shopping	**.829**	.127
C19_04 The COVID-19 lockdown forced me to buy online	**.803**	.222
C19_05 I prefer to buy online since COVID-19	**.705**	**.437**
C19_01 I bought online for the first time because of COVID-19	**.700**	-.153
C19_08 Buying online is a safer option because of COVID-19	.171	**.823**
C19_07 I trust online delivery services safety precautions for COVID-19	.196	**.821**
C19_06 I will continue to buy online post COVID-19	.078	**.787**
C19_09 In store experiences are risky with COVID-19	.185	**.704**
Explained variance	3.22	2.78
Percentage of total variance	35.8%	30.9%
Total % of Variance Explained = 66.7%		

4.6.1.6 Exploratory Factor Analysis – Products Bought Online

The EFA shows two factors by the Eigenvalues and one factor by the scree plot illustrated in Table 4-26 and Figure 4.14, respectively. Factor 1 and Factor 2 has Eigenvalues of 4.106 and 1.345 respectively with a combined 45.4% of the variance for products bought online.

Table 4-26: EFA Eigenvalues – Products Bought Online (n = 673)

Factor	Eigenvalue	Percentage Total Variance
1	4.106	34.2
2	1.345	11.2
3	0.991	8.3
4	0.909	7.6
5	0.840	7.0
6	0.757	6.3
7	0.656	5.5
8	0.628	5.2
9	0.553	4.6
10	0.499	4.2
11	0.428	3.6
12	0.287	2.4

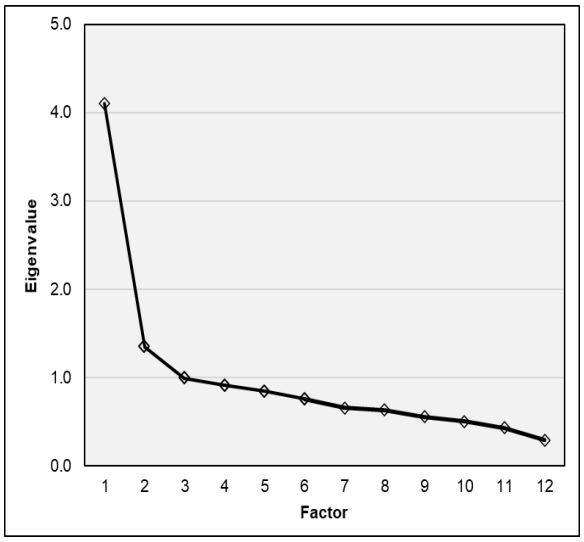


Figure 4.14: Products Bought Online Scree Plot

The 1-factor model presented in Table 4-27 obtained 34.2% of total variance explained. Of the 12 items loaded, three did not meet the minimum significant loading of .523, thus item PBO_02, PBO_03 and PBO_07 were removed.

Table 4-27: EFA Loadings (1 Factor Model) - Products Bought Online (n = 673; Minimum significant loading = .300)

Item	Factor 1
PBO_10 Groceries	**.716**
PBO_08 Fresh produce	**.690**
PBO_11 Pharmaceutical products	**.654**
PBO_04 Cosmetics & Toiletries	**.633**
PBO_12 Toys	**.587**
PBO_05 Electrical goods & home appliances	**.577**
PBO_06 Fast Food	**.557**
PBO_09 Furniture	**.545**
PBO_07 Flowers	**.541**
PBO_03 Clothing and other apparel	**.514**
PBO_02 Books	**.505**
PBO_01 Alcohol	**.438**
Total % of Variance Explained = 34.2%	

The EFA loadings for a 2-factor model, as presented in Table 4-28, accounted for 45.4% total variance explained. Items PBO_10, PBO_08, PBO_11, PBO_04, and PBO_01 relate to Factor 1, while items PBO_09, PBO_05, PBO_03, PBO_12 and PBO_02 relate to Factor 2. The remaining items PBO_07 and PBO_06 cross load on both Factor 1 and Factor 2. The cross-loading of items in the 2-factor model and the factors' lack of face validity meant that the 1-factor solution was optimal.

Table 4-28: EFA Loadings (2 Factor Model) - Products Bought Online (n = 673; Minimum significant loading = .300)

Item	Factor 1	Factor 2
PBO_10 Groceries	**.858**	.094
PBO_08 Fresh produce	**.825**	.095
PBO_11 Pharmaceutical products	**.690**	.197
PBO_04 Cosmetics & Toiletries	**.560**	**.317**
PBO_01 Alcohol	**.458**	.137
PBO_07 Flowers	**.428**	**.332**
PBO_06 Fast Food	**.426**	**.358**
PBO_09 Furniture	.075	**.755**
PBO_05 Electrical goods & home appliances	.191	**.667**
PBO_03 Clothing and other apparel	.119	**.654**
PBO_12 Toys	.275	**.584**
PBO_02 Books	.198	**.548**
Explained variance	2.95	2.50
% of Total variance	24.6%	20.8%
Total % of Variance Explained = 45.4%		

4.6.2 Reliability

Reliability refers to the consistency of the instrument (Collis & Hussey, 2014) and is measured based on the Cronbach's alpha coefficient is detailed in Section 3.3.5.5 and Table 3-5. The reliability of each factor was analysed and the measurement instrument was relatively reliable with 8 of 10 factors scoring either excellent or good. The two remaining factors scored fair and poor as shown in Table 4-29.

Table 4-29: Cronbach's alpha coefficients for the factors (n = 673)

Factors	n	Alpha	Reliability
Online Shopping in General	673	0.80	Excellent
Personal Experience of Online Shopping	565	0.76	Good
Interaction with products	673	0.79	Good
Interaction with people	673	0.74	Good
Shopping Behaviour	673	0.67	Fair
Acceptance of Internet Technologies	673	0.86	Excellent
Initial impact of Covid-19 on shopping	673	0.86	Excellent
Current impact of Covid-19 on shopping	673	0.82	Excellent
Covid-19 & Shopping	673	0.56	Poor
Products Bought Online	673	0.82	Excellent

4.7 Revised Hypothesised Model

The initial hypothesised model depicted in Figure 3.2 was adjusted after the exploratory factor analysis was conducted on the factors. The results based on the analysis showed that both Shopping behaviour and COVID-19 and shopping factors each measured two separate factors. Shopping behaviour was split into Interaction with products and Interaction with products while COVID-19 and shopping were split into Initial impact of COVID-19 on shopping and Current impact of COVID-19 on shopping. The average score results of Interactions with people and Interactions with products are reported in this study as Shopping behaviour. The results reported as COVID-19 and shopping are based on the average scores of the Initial impact of COVID-19 on shopping and Current impact of COVID-19 on shopping. The revised hypotheses based on the splits discussed above is shown in Figure 4.15.

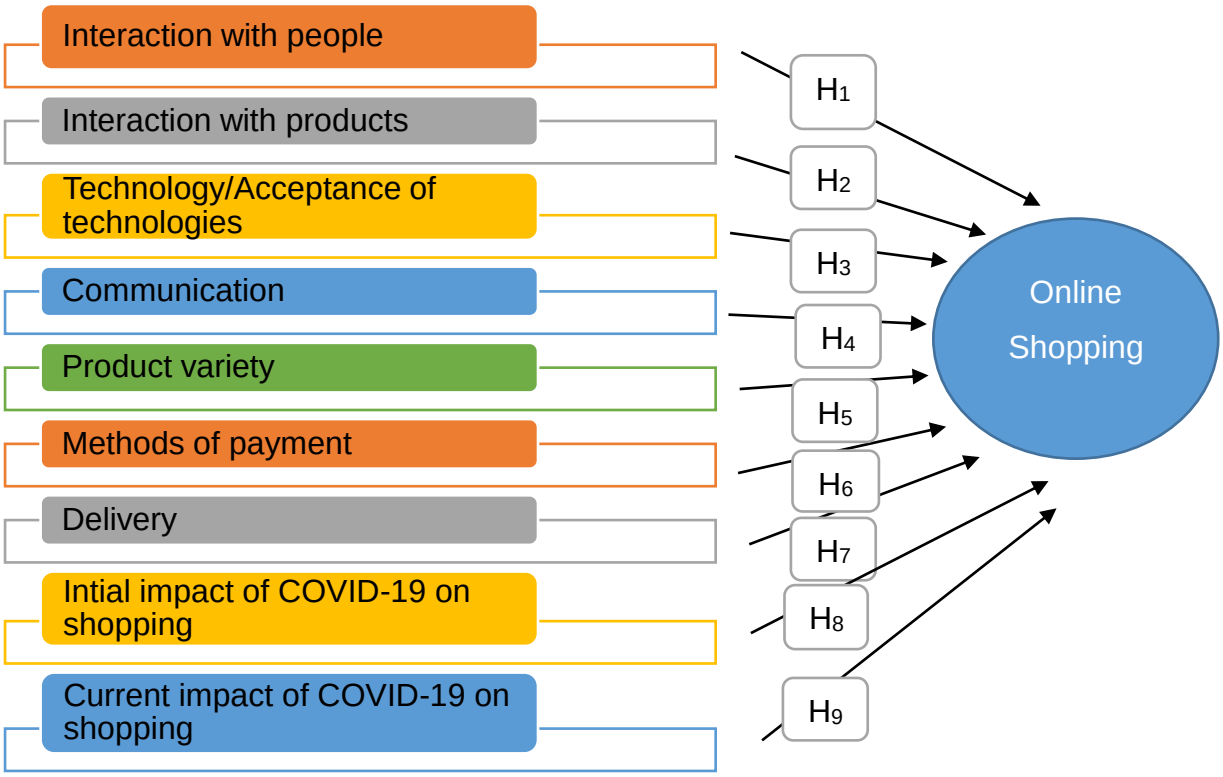


Figure 4.15: Revised Hypotheses

Based on the exploratory factor analysis some questions were either eliminated or reversed. Table 4-30 shows the changes made.

Table 4-30: Summary of changes to questions related to factors.

Factors	Question	Changes
Online shopping in General	Online shopping is cheaper than traditional shopping	Omitted – does not measure online shopping
Personal Experience of Online Shopping	I have had some bad experiences when shopping online	Reversed - negative statement
Shopping Behaviour	Instore displays influence my shopping	Omitted – insufficiently related to other items
Covid-19 & Shopping	Physical stores pay attention to the COVID-19 health and safety measures	Omitted – insufficiently related to other items

4.8 Descriptive Statistics for the Factors

Descriptive statistics are used in this study to describe and summarise collected data indicating both the measure of central tendency and the spread of data points from the mean. It measures the variability in participants' responses. The descriptive statistics first indicate the responses to each factor in terms of how positive or negative it was before presenting the central tendency and standard deviation.

The responses to each factor, based on the 5-point Likert scale, by the respondents categorised from 'very negative' to 'very positive' are illustrated in Table 4-31.

Table 4-31: Frequency Distributions: Factors

Factors	Very Negative 1.00 to 1.79		Negative 1.80 to 2.59		Neutral 2.60 to 3.40		Positive 3.41 to 4.20		Very Positive 4.21 to 5.00	
Online Shopping in General	3	0.4%	9	1.3%	133	19.8%	401	59.6%	127	18.9%
Personal Experience of Online Shopping	8	1.4%	41	7.3%	135	23.9%	235	41.6%	146	25.8%
Interaction with products	12	1.8%	103	15.3%	203	30.2%	262	38.9%	93	13.8%
Interaction with people	86	12.8%	163	24.2%	274	40.7%	111	16.5%	39	5.8%
Shopping Behaviour	21	3.1%	139	20.7%	292	43.4%	179	26.6%	42	6.2%
Acceptance of Internet Technologies	7	1.0%	72	10.7%	316	47.0%	242	36.0%	36	5.3%
Initial impact of Covid-19 on shopping	95	14.1%	191	28.4%	245	36.4%	110	16.3%	32	4.8%
Current impact of Covid-19 on shopping	23	3.4%	49	7.3%	128	19.0%	334	49.6%	139	20.7%
Covid-19 & Shopping	31	4.6%	97	14.4%	287	42.6%	222	33.0%	36	5.3%
Products Bought Online	265	39.4%	291	43.2%	95	14.1%	20	3.0%	2	0.3%

Online shopping in general had the highest positive responses with a combined 78.5% (n = 528), because the study indicated that most of the respondents had shopped online prior to the advent of COVID-19. This is also supported a relatively substantial 42% combined negative responses to the initial impact of COVID-19 on shifting to online shopping. Products bought online had the most negative responses over 8 out 10 responses negative. This was probably due to the limited variety of products that

respondents could choose from. The responses to the current impact of COVID-19 on shopping were 70.3% positive while the interaction with people factor only generated a combined 21.1% positive responses. The acceptance of Internet technologies had the highest neutral responses of 47% demonstrating the varying opinions on technology and lingering mistrust issues by online shoppers.

The descriptive statistics also provided the mean, standard deviation, minimum numeric value, maximum numeric value, median, the first and third quartile. The statistics are indicated in Table 4-32.

Table 4-32: Central Tendency and Dispersion: Factors

Factors	n	Mean	S.D.	Min	Quartile 1	Median	Quartile 3	Max
Online Shopping in General	673	3.77	0.57	1.00	3.43	3.86	4.14	5.00
Personal Experience of Online Shopping	565	3.67	0.73	1.00	3.25	3.75	4.25	5.00
Interaction with products	673	3.40	0.78	1.00	3.00	3.50	4.00	5.00
Interaction with people	673	2.81	0.90	1.00	2.33	2.67	3.33	5.00
Shopping Behaviour	673	3.11	0.73	1.00	2.63	3.09	3.59	5.00
Acceptance of Internet Technologies	673	3.32	0.69	1.00	3.00	3.20	3.80	5.00
Initial impact of Covid-19 on shopping	673	2.72	0.97	1.00	2.00	2.80	3.40	5.00
Current impact of Covid-19 on shopping	673	3.61	0.80	1.00	3.25	3.75	4.00	5.00
Covid-19 & Shopping	673	3.17	0.74	1.00	2.75	3.20	3.68	5.00
Products Bought Online	673	2.01	0.66	1.00	1.50	1.92	2.42	4.33

Online shopping in general has the highest mean ($\mu = 3.77$), lowest standard deviation ($\sigma = 0.57$) and like all other factors bar products bought online has a range of 5. The median of 3.86 is slightly greater than the mean translating to data distribution negatively skewed but the low standard deviation signifies a relatively low deviation from the mean. The initial impact of COVID-19 on shopping has the highest standard

deviation σ = 0.97, indicating the widespread respondents' opinion on the factor. The products bought online scored the lowest mean μ = 2.01, lowest quartile of 1.50, lowest median of 1.92 and the lowest maximum numeric value of 4.33 because of the limited options. In general, the factors' standard deviations were all below 1.0, a sign that the responses do not differ significantly among the respondents. The coefficient of variance, which is the ratio of standard deviation to mean, ranges from 15% to 33% indicating that the results are relatively similar to slightly out of the average responses.

4.9 Confidence Intervals and Inferential Ranking

The study conducted confidence intervals and inferential ranking as part of inferential statistics. The results illustrated in Table 4-33, indicate the descriptive statistics, 95% confidence level classification and inferential ranking.

The factors are ranked based on the classification intervals and were interpreted as indicated in Table 3-2. Online shopping in general factor with a low 95% classification intervals of 3.73 and a high value of 3.82, according to Table 3-2, is categorised as positive. The factor is ranked first indicating that it was perceived to be the most important by the respondents. Personal experience of online shopping and current impactor of COVID-19 on shopping factors are both positive and ranked second. Acceptance of Internet technologies, COVID-19 shopping, shopping behaviour, interaction with people and initial impact of COVID-19 factors are all neutral, evidence of respondents' varying opinions on the factors. The products bought online factor has a negative rating and is ranked last of all the factors.

Table 4-33: 95% Confidence Intervals Classification and Inferential Ranking

Factors	Descriptive Statistics			95% CI Classification			Inferential Ranking	
	n	Mean	S.D.	Low	High	Category	Rank	Signif. Group
Online Shopping in General	673	3.77	0.57	3.73	3.82	Positive	1	1
Personal Experience of Online Shopping	565	3.67	0.73	3.61	3.73	Positive	2	2
Current impact of Covid-19 on shopping	673	3.61	0.80	3.55	3.67	Positive	2	2
Interaction with products	673	3.40	0.78	3.34	3.45	Neutral to Positive	4	3
Acceptance of Internet Technologies	673	3.32	0.69	3.27	3.37	Neutral	4	3
Covid-19 & Shopping	673	3.17	0.74	3.11	3.22	Neutral	6	4
Shopping Behaviour	673	3.11	0.73	3.05	3.16	Neutral	6	4
Interaction with people	673	2.81	0.90	2.74	2.88	Neutral	8	5
Initial impact of Covid-19 on shopping	673	2.72	0.97	2.65	2.79	Neutral	8	5
Products Bought Online	673	2.01	0.66	1.96	2.06	Negative	10	6

The Cohen's d, as indicated in Table 3-1, was used to measure practical significance in the one-sample *t*-tests while the p-value less than .0005 indicating statistical significance. The results are shown in Table 4-34.

The factors compared that showed strong statistically significances ($p < .0005$) are 'Online Shopping in General & Personal Experience of Online Shopping', 'Personal Experience of Online Shopping & Interaction with products', 'Interaction with products & Covid-19 & Shopping', 'Covid-19 and Shopping & Interaction with people', and 'Interaction with people & Products Bought Online'. All the variables compared that showed strong statistical significance had Cohen's d value greater than .20 but less than .63 indicating small to medium practical significance. The remaining compared variables with Cohen's d less than .20 were all deemed not significant; therefore, have no practical significance.

Table 4-34: Inferential Ranking Statistics - Factors

Variables Compared	n	Difference		Inference				Significance	
		Mean	S.D	t-value	d.f.	p-value	Cohen's d	Statistical	Practical
Online Shopping in General & Personal Experience of Online Shopping	565	0.20	0.66	7.12	564	<.0005	0.30	Yes	Yes
Personal Experience of Online Shopping & Covid-19 & Interaction with people	565	-0.07	0.84	2.01	564	n/a	0.08	n/a	Not
Personal Experience of Online Shopping & Interaction with products	565	0.34	1.18	6.88	564	<.0005	0.29	Yes	Yes
Interaction with products & Acceptance of Internet Technologies	673	0.08	1.15	1.71	672	n/a	0.07	n/a	Not
Interaction with products & Covid-19 & Shopping	673	0.23	1.08	5.50	672	<.0005	0.21	Yes	Yes
Covid-19 & Shopping & Shopping Behaviour	673	0.06	1.07	1.50	672	n/a	0.06	n/a	Not
Covid-19 & Shopping & Interaction with people	673	0.36	1.21	7.63	672	<.0005	0.29	Yes	Yes
Interaction with people & Initial impact of Covid-19 on shopping	673	0.09	1.28	1.84	672	n/a	0.07	n/a	Not
Interaction with people & Products Bought Online	673	0.80	1.27	16.39	672	<.0005	0.63	Yes	Yes

4.10 Relationships between Factors

The relationships between factors were further examined by conducting further inferential statistics. The research conducted the correlations and Chi^2 tests to further explore the relationships between the factors. The results of the tests are discussed in this section of the study.

4.10.1 Correlations

Correlations measure the strength and directions of statistical association between factors. It is a good estimator of how a change in one factor impacts on the other factor (Wegner, 2014). In this research, correlation coefficient r is statistically significant at the 0.05 level for n = 673 if |r| >= .082 and for n = 565 if |r| >= .076 to .076 and practically significant, regardless of the sample size, if |r| >= .300 (Gravetter & Wallnau, 2009, p. 534). Thus significant (both statistically and practically) if |r| >= .300.

The results of the correlations are shown in Table 4-35, with the Pearson's r-values for the correlations that are significant (both statistically and practically) in red and those statistically but not practically significant are bold black.

Shopping Behaviour and *Interaction with People* have the strongest positive direct correlations among the compared factors with a r-value of .887. The value implies a strong direct statistical association between the factors that suggests that as the shopping behaviour is improved, there will be a strong improvement in interaction with people. The *COVID-19 and Shopping* factor also have a strong positive relationship with *Initial Impact of Covid-19 on Shopping* factor, demonstrating how COVID-19 and shopping have a strong impact on online shopping. On the other hand, *Personal Experience of Online Shopping* and *COVID-19 and Shopping* factors have extremely low to no association indicated by a r-value of .001. It can be inferred that there is neither statistical nor practical significance between the two factors.

The Pearson correlation analysis importantly expresses association of all factors against online shopping in general. There is a low to medium positive correlation both statistically and practically between *Online Shopping in General* and *Personal Experience of Online Shopping, Acceptance of Internet Technologies, Covid-19 & Interaction with people, Covid-19 & Shopping, Products Bought Online* with all factors

having a r > .300, ranging from r = .310 to .525. *Interaction with products, Interaction with people, and Shopping Behaviour*, all have a low negative correlation both statistically and practically with *Online Shopping in General,* indicating a weak inverse association. *Initial Impact of Covid-19* has low statistical positive correlation with *Online Shopping in General,* which is not practical evidenced by the r-value of .114.

Table 4-35: Pearson Product Moment Correlations - Factors

	Online Shopping in General	Personal Experience of Online Shopping	Interaction with products	Interaction with people	Shopping Behaviour
Online Shopping in General	-	***.478***	***-.308***	***-.345***	***-.377***
Personal Experience of Online Shopping	***.478***	-	**-.239**	**-.236**	**-.274**
Interaction with products	***-.308***	**-.239**	-	***.506***	***.848***
Interaction with people	***-.345***	**-.236**	***.506***	-	***.887***
Shopping Behaviour	***-.377***	**-.274**	***.848***	***.887***	-
Acceptance of Internet Technologies	***.525***	***.345***	**-.235**	**-.254**	**-.282**
Initial impact of Covid-19 on shopping	**.114**	-.009	**.130**	.062	**.108**
Current impact of Covid-19 on shopping	***.435***	***.327***	**-.158**	**-.249**	**-.238**
Covid-19 & Shopping	***.310***	**.164**	-.001	**-.095**	-.059
Products Bought Online	***.437***	***.439***	**-.266**	***-.319***	***-.339***
	Acceptance of Internet Technologies	Initial impact of Covid-19	Current impact of Covid-19	Covid-19 & Shopping	Products Bought Online
Online Shopping in General	***.525***	**.114**	***.435***	***.310***	***.437***
Personal Experience of Online Shopping	***.345***	-.009	***.327***	**.164**	***.439***
Interaction with products	**-.235**	**.130**	**-.158**	-.001	**-.266**
Interaction with people	**-.254**	.062	**-.249**	**-.095**	***-.319***
Shopping Behaviour	**-.282**	**.108**	**-.238**	-.059	***-.339***
Acceptance of Internet Technologies	-	**.083**	***.377***	**.258**	***.317***
Initial impact of Covid-19 on shopping	**.083**	-	***.393***	***.867***	**.174**
Current impact of Covid-19 on shopping	***.377***	***.393***	-	***.799***	***.384***
Covid-19 & Shopping	**.258**	***.867***	***.799***	-	***.322***
Products Bought Online	***.317***	**.174**	***.384***	***.322***	-

4.10.2 Chi² Tests

The Chi² test measures the association between two groups (Collis & Hussey, 2014), and in this analysis with d.f = 4, α = 0.05 then there is no association if $x^2 \leq 9.49$. The Cramer's V which indicates practical significance was added to the Chi² test as discussed in section 3.3.5.3 and Table 3-4. The results of both the Chi² test and Cramer's V values are indicated in Table 4-36

Table 4-36: Chi² Summary Table (Significant outcomes - Cramer's V's)

				Variable				Variable
Effect	**n**	**Chi²**	**p (d.f = 4)**	**Online Shopping in General**	**n**	**Chi²**	**p (d.f = 4)**	**Personal Experience of Online Shopping**
Interaction with products	673	66.12	<.0005	0.22 Medium	565	34.74	<.0005	0.18 Small
Interaction with people	673	61.33	<.0005	0.21 Medium	565	31.39	<.0005	0.17 Small
Shopping Behaviour	673	74.44	<.0005	0.24 Medium	565	51.16	<.0005	0.21 Medium
Acceptance of Internet Technologies	673	127.82	<.0005	0.31 Medium	565	36.91	<.0005	0.18 Small
Initial impact of Covid-19 on shopping	673	13.45	.009	0.10 Small	565	7.55	0.109	
Current impact of Covid-19 on shopping	673	146.82	<.0005	0.33 Medium	565	70.91	<.0005	0.25 Medium
Covid-19 & Shopping	673	50.57	<.0005	0.19 Small	565	22.26	<.0005	0.14 Small
Products Bought Online	673	122.39	<.0005	0.30 Medium	565	87.31	<.0005	0.28 Medium

Current impact of COVID-19 on shopping has the strongest relationship to *Online Shopping in General,* which is statistically significant (p < .0005) as indicated by the Chi² statistic of 146.82 and Cramer's V of .33. This means the factors have a medium practical significance. Acceptance of Internet technologies has a medium relationship with *Online Shopping in General* demonstrated by the Cramer's V of .31 and Chi² statistic of 127.82. On the contrary, *Initial Impact of Covid-19* factor has a low statistically significant (p = .009) association with *Online Shopping in General* indicated by a low Chi² value of 13.45 and Cramer's value of .10. All the other factors have a small to medium statistically significant relationship with *Online Shopping in General*.

Products bought online factor, which has a medium statistically significant association with *Personal Experience of Online Shopping,* has the strongest relationship of all the factors with Chi^2 value of 87.31 and Cramer's V of 0.28. Shopping behaviour has a medium relationship with *Personal Experience of Online Shopping* demonstrated by the Chi^2 value of 51.16 and Cramer's V of .21. On the other hand, *Initial Impact of Covid-19* factor has no significant association (p = .109) with *Personal Experience of Online Shopping* shown by the Chi^2 value of 7.55 less than the $x^2 \leq 9.49$. Generally, the factors have a better significant association with *Online Shopping in General* compared to *Personal Experience of Online Shopping.*

4.11 Hypothesis Testing and Revised Model

The research's proposed conceptual model, Figure 3.2 was tested whether it was statistically significant in influencing consumers to retain or shift towards online shopping. The correlation testing and Cohen's d value were used to examine the significance of all the independent factors. The results of the significance of the independent factors on Online shopping are illustrated in Table 4-37 and 4-38.

Table 4-37: Hypothesis Testing – Cohen's d

Hypothesis Description	**F-value**	**D.F.**	**p**	**Cohen's d**	Accept or Reject
Preferred Method of Payment	8.32	2; 591	<.0005	n/a	Accept
Preferred Method of Communication	2.61	2; 591	.074	n/a	Reject
Preferred delivery method for online purchases	2.34	1; 591	.127	n/a	Reject

Table 4-38:Hypothesis Testing – Correlations

Hypothesis Description	**n**	**Chi²**	**p (d.f = 4)**	**Cramer's V**	Pearson's r	Accept or Reject
Interaction with products	673	66.12	<.0005	0.22 Medium	***-.308***	Accept
Interaction with people	673	61.33	<.0005	0.21 Medium	***-.345***	Accept
Shopping Behaviour	673	74.44	<.0005	0.24 Medium	***-.377***	Accept
Acceptance of Internet Technologies	673	127.82	<.0005	0.31 Medium	***.525***	Accept
Initial impact of Covid-19 on shopping	673	13.45	.009	0.10 Small	**.114**	Reject
Current impact of Covid-19 on shopping	673	146.82	<.0005	0.33 Medium	***.435***	Accept
Covid-19 & Shopping	673	50.57	<.0005	0.19 Small	***.310***	Accept
Products Bought Online	673	122.39	<.0005	0.30 Medium	***.437***	Accept

The results summarised in Table 4-37 and Table 4-38 show that 8 of the 11 independent factors with a p-value <.0005 are statistically significant and medium practical significant as indicated by the Cramer's V on the dependent factor, Online shopping. Interaction with people, interaction with products and shopping behaviour have a low negative correlation on Online shopping, which is statistically significant. Acceptance of Internet technologies, Current impact of COVID-19 on shopping, COVID-19 and shopping, Products bought online and Preferred method of payment have a low to medium positive correlation on Online shopping. The null hypotheses of these independent factors were rejected, with the alternative hypotheses supported. Therefore, a revised hypothesised model depicted in Figure 4.16 was formulated based on the accepted independent factors. The independent factors with p-values >.0005, Initial impact of COVID-19 on shopping, Preferred communication and delivery methods were deemed to have no significant correlation on Online shopping according to the respondent's results.

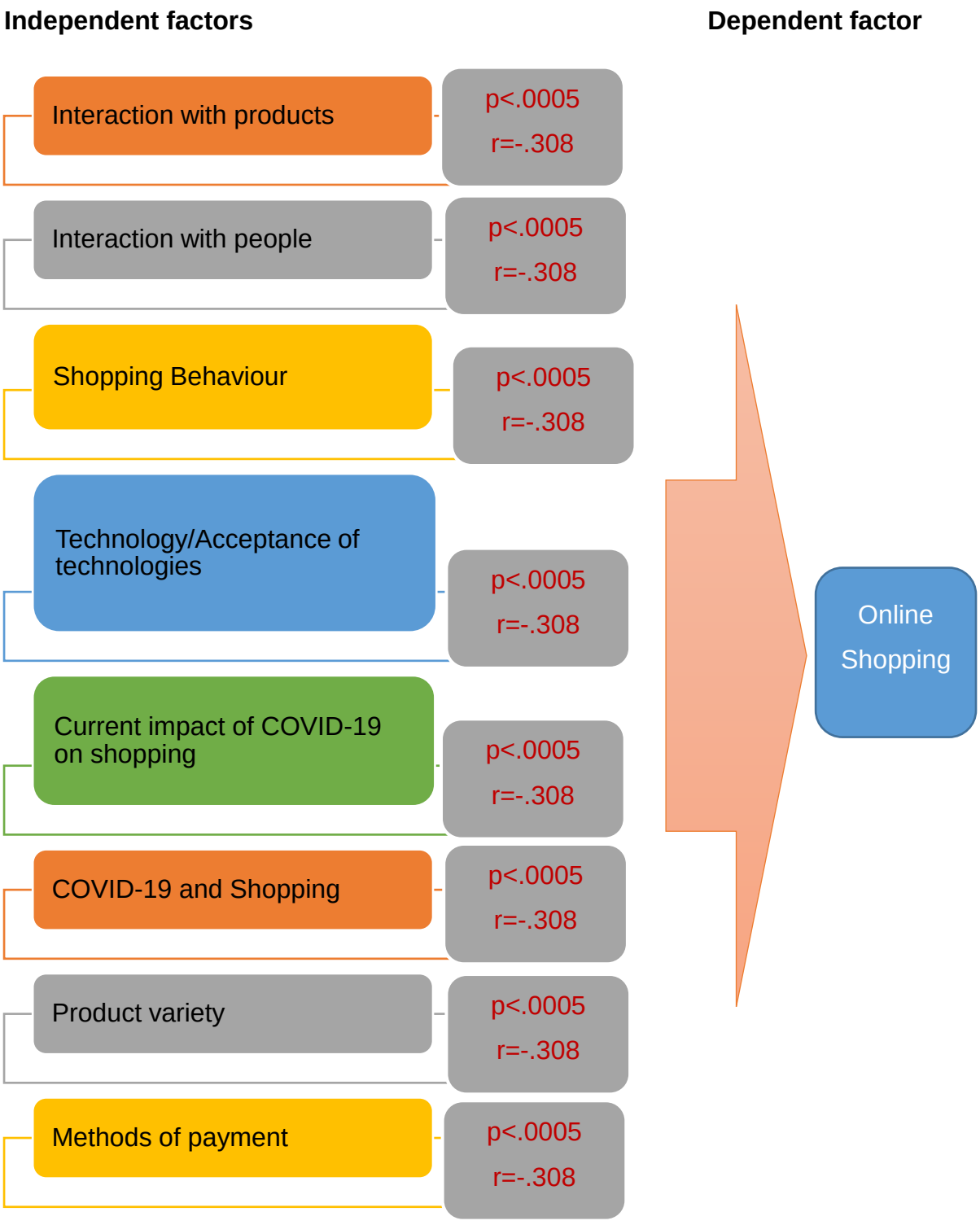


Figure 4.16: Revised Hypothesised Model

4.12 Relationship between the Demographic Variables and the Factors

The relationship between the demographic variables and the factors that have an influence on online shopping was examined statistically. The statistical relationship between the demographics and the factors was measured using the analysis of variance (ANOVA). The study analysed Online shopping and Personal experience of online shopping factors against demographics, preferred method of payment, communication and delivery.

4.12.1 Descriptive Statistics for the ANOVAs

Descriptive statistics, which allow patterns to be discerned (Collis & Hussey, 2014), were used to analyse the relationship between the demographic variables and both the Online shopping and Personal experience of online shopping. The research also analysed variances of Online shopping and Personal experience against preferred method of payment, communication and delivery. The results of the statistical analysis of variances are detailed in section 4.12.2 *ANOVA Results*.

4.12.2 ANOVA Results

The study conducted a univariate analysis on Online shopping in general. The results shown in Table 4-39 indicate that only marital status has a small practical significance ($p < .005$) with a Cohen's d value of .20. This indicates that there is a difference between the mean of values of online shopping based on marital status. The rest of the demographics have a p-value greater than .05, meaning the factors have no statistically significant relationship with Online shopping in general.

Table 4-39: Univariate ANOVA Results - Online Shopping and Demographics

Effect	F-value	D.F.	p	Cohen's d
Employment Status	0.56	2; 656	.574	n/a
Gender	2.86	1; 656	.091	n/a
Marital Status	8.24	1; 656	.004	0.20
No. of Children	1.47	2; 656	.231	n/a
Age	1.61	3; 656	.186	n/a
Highest Education Level	1.11	4; 656	.352	n/a
Monthly Income	2.10	3; 656	.099	n/a

Table 4-40 illustrates the univariate ANOVA results of Online shopping in general against three factors. The results are evidence that there is a strong significance (p <.0005) between the Preferred method of payment and Online shopping in general. This means that methods of payment offered by businesses have a strong influence on consumers shifting to online shopping. Both Method of communication and Delivery methods have a statistically insignificant relationship with Online shopping in general indicated by the p-value greater than .05.

Table 4-40: Univariate ANOVA Results - Online Shopping in General

Effect	F-value	D.F.	p	Cohen's d
Preferred Method of Payment	8.32	2; 591	<.0005	n/a
Preferred Method of Communication	2.61	2; 591	.074	n/a
Preferred delivery method for online purchases	2.34	1; 591	.127	n/a

The post-hoc results of Online shopping in general presented in Table 4-41, show the differences in means between the different payment methods. Cash and EFT/Mobile payment have the largest mean differences while the Credit/Debit card has the highest mean of 3.91 and Cohen's d of 0.59. This means that respondents who used credit/debit cards have a more positive relationship with Online shopping in general. It also demonstrates that the use of cash has significant influence on the factor evidenced by both cash methods' Scheffe p values of less than .05.

Table 4-41: Post-hoc Results - Online Shopping in General

Effect	Level 1	Level 2	M_1	M_2	Scheffé p	Cohen's d
Preferred Method of Payment	Cash	EFT/Mobile payment	3.59	3.80	.027	0.38
	Cash	Credit/Debit Card	3.59	3.91	.000	0.59
	EFT/Mobile payment	Credit/Debit Card	3.80	3.91	.064	0.21

The univariate ANOVA results of Personal experience of online shopping presented in Table 4-42 show that all demographics factors have no statistical significance on

the factor. Gender and marital status do have p-values less than .05 but the Cohen's d values are less than .20 meaning the factors have no practical significance on Personal experience of online shopping.

Table 4-42: Univariate ANOVA Results - Personal Experience and Demographics

Effect	F-value	D.F.	p	Cohen's d
Employment Status	1.85	2; 548	.159	n/a
Gender	6.70	1; 548	.010	0.19
Marital Status	5.31	1; 548	.022	0.12
No. of Children	1.32	2; 548	.269	n/a
Age	1.53	3; 548	.204	n/a
Highest Education Level	1.01	4; 548	.402	n/a
Monthly Income	1.33	3; 548	.262	n/a

The univariate ANOVA results for the Personal experience of online shopping against preferred method of payment, communication and delivery are shown in Table 4-43. The results of the analysis indicate that all the three factors have no statistically significant relationship with Personal experience of online shopping evidenced by the p-values greater than .05.

Table 4-43: Univariate ANOVA Results- Personal Experience of Online Shopping

Effect	F-value	D.F.	p	Cohen's d
Preferred Method of Payment	1.56	2; 540	.211	n/a
Preferred Method of Communication	2.31	2; 540	.100	n/a
Preferred delivery method for online purchases	1.93	1; 540	.166	n/a

4.13 Summary

This chapter discussed the analysis methods of the collected data. The 673 respondents' demographics thus age, gender, employment status, income and education level were examined with the aim of profiling the respondents. The frequency distribution based on the responses collected was analysed. The analysis examined the respondents' responses to determine who shops online, has Internet access, how much time do respondents spend on the Internet, the preferred method

of communication, payment and delivery. The next section of the chapter measured the factors proposed to have an influence on online shopping. The main research findings are discussed in section 5.3.

The factors measured based on the 5-point Likert scale were summarised into either 'Disagree' composed of 'Strongly Disagree' and 'Disagree' or 'Neutral' or 'Agree' a combination of 'Strongly Agree' and 'Agree'. Online shopping in general, Personal experience of online shopping, Shopping behaviour, Acceptance of Internet technologies, COVID-19 and shopping and Products bough online were the research's measured factors. Facto analysis, which examines correlations between the respondents' responses while summing them into factors of similar content, was conducted for the proposed factors. The research used Eigenvalues and Scree plots to carry out the exploratory factor analysis. The results led to adoption of various 1-factor and 2-factor models for the different factors. Chapter Four also examined the consistency of the measuring instrument, reliability, based on the Cronbach's alpha coefficient.

Chapter Three adopted conceptual model was adjusted after the exploratory factor analysis was conducted on factors. The Shopping behaviour and COVID-19 and shopping factors were each split into two separate factors. The section also summarised the changes and rationale for such changes to the original questionnaire's questions. A section of the descriptive statistics was included, which indicated the responses to each factor in terms of how positive or negative it was before presenting the central tendency and standard deviation. After the descriptive statistics, inferential statistics' results were analysed, which showed 95% Confidence Interval classification of the factors. The p-value and Cohen's d were then used to measure the statistical and practical significance of the different factors. Further, the correlations and Chi^2 tests were conducted to determine the statistical association between the factors. The majority of the factors have positive correlations and have both statistically and practically significant with a $r > .082$ for $n = 673$ and $r > .076$ for $n = 565$. Cramer's V was also used together with the Chi^2 to indicate the relationship of each independent factor with the dependent factor Online shopping in general. The research's proposed hypothesis model was tested whether it was statistically significant and based on the analysis results was revised to only include statistically

significant dependent factors. The study conducted a univariate analysis on Online shopping in general. This indicates that there is a difference between the mean of values of online shopping based on marital status and preferred method of payment. The whole chapter aided in addressing the main research objective, **RO$_M$**: *To investigate the influence of the corona virus pandemic on online shopping behaviour*.

The following chapter, Findings, Conclusions and Recommendations, will present the research findings, conclusions and recommendations. The chapter will aim to respond to the research questions and address the research problem.

CHAPTER 5 : FINDINGS, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

Most consumers avoiding populated areas, adhering to social distancing protocols and working from home because of the pandemic opted for online shopping (Yuen et al., 2020). The influence of the pandemic on online shopping during and post COVID-19 in South Africa is relatively unknown, presenting a research gap. Therefore, this research seeks to determine whether COVID-19 had an influence on online shopping behaviour in South Africa. The research objectives and questions were set out to solve the research problem.

As part of research objectives, the study examined the various shopping channels available to consumers and the consumers' behaviour on adoption and continued use of technologies. The research further investigated independent factors that have an influence on online shopping behaviour in South Africa based on peer reviewed literature. A hypothesised model was developed based on the reviewed literature and was tested against the analysed survey's responses. The analysed results identified independent factors that were both practically and statistically significant on online shopping. The results obtained from the survey contribute to the literature on whether COVID-19 has an influence on online shopping behaviour in South Africa and provides a platform for future studies on related research problems.

Chapter Five presents conclusions and recommendations of the research. The chapter responds to the research question **RQ_4:** *What are recommendations on the effects of the pandemic on online shopping?* Chapter five aims to achieve the research objective **RO_5:** *Frame recommendations to assist businesses to gain competitive advantage from the effects of the pandemic*. The chapter will be presented as outlined in Figure 5.1.

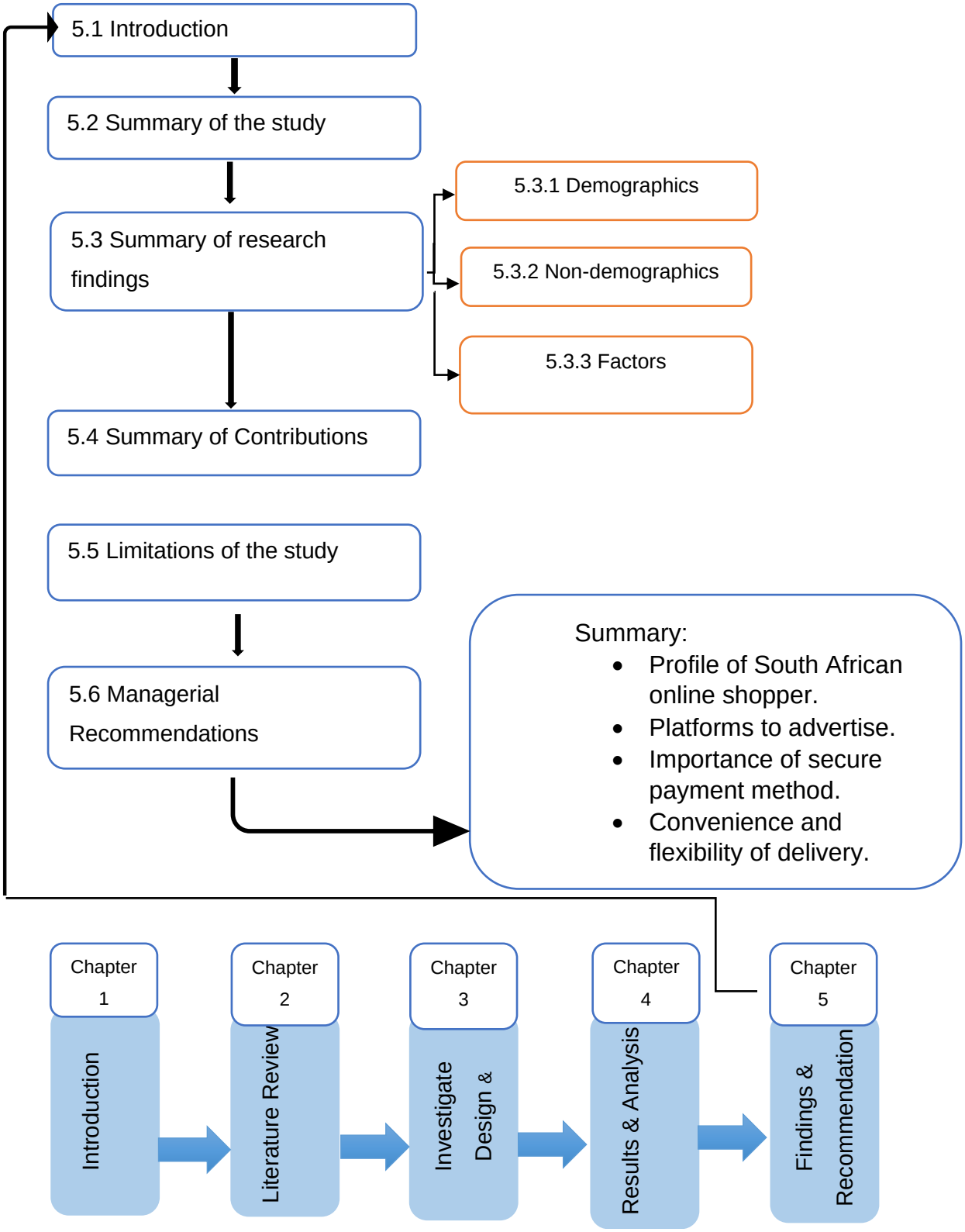


Figure 5.1: Chapter 5 Outline

5.2 Summary of the Study

The study was segmented into five chapters with each chapter tackling specific research objectives and questions to address the research problem. Chapter one presented the research problem statement after a background on various shopping platforms and the advent of online shopping. It further detailed the research objectives and research questions the study aimed to answer before briefly discussing the methodology and how the research intended to address the research questions. Additionally, perceived limitations were raised before briefly discussing the ethical considerations.

The second chapter examined shopping in general, the concept of online shopping and its growth rate pre-pandemic before investigating the effect of the corona virus pandemic on online shopping in South Africa. The chapter investigated the independent factors that drive online shopping and developed a conceptual model. Literature from peer reviewed articles and other sources on the increased online shopping behaviour on account of COVID-19 effects, was examined. Furthermore, the chapter discussed the consumers' behaviour towards the adoption of technologies focusing on the factors of the pandemic that affect online shopping. The chapter was structured to respond to research questions **RQ_M**, **RQ_{S1}**, and **RQ_{S2}** allowing the research to achieve the research objectives **RO_1**, **RO_2**, **RO_3** and **RO_4**.

The design and methodology chapter builds on the previous chapter, which reviewed literature on the possible factors that influence online shopping. The literature review chapter provided the factors which culminated into a conceptual model. Chapter three detailed the research design and methodology employed by the study to investigate the independent factors in order to meet the main objective of the study, **RO_M**: *To investigate the influence of the corona virus pandemic on online shopping behaviour*. The chapter provided an overview of the adopted research design and methodology.

Chapter four examined the collected and analysed data with the aim of addressing the primary objective of the research, **RO_M**: *To investigate the influence of the corona virus pandemic on online shopping behaviour.* The chapter investigated the independent factors' statistical significance on online shopping and formulated a revised conceptual model informed by the significant factors. Based on the analysis results, chapter four

responded to the research question **RQ_M:** *How has the corona virus influenced South African consumers' online buying behaviour?* through statistically examining the analysed data that address objectives **RO_2:** *To understand the consumer's behaviour on adoption and continuance use of technologies,* **RO_3:** *To enhance the understanding of consumer behaviour on online shopping in response to the pandemic*, and **RO_4:** *To examine the effects of the pandemic on long term online shopping.*

5.3 Summary of the Research Findings

This section of the chapter summarises the research findings from the data analysed in the previous chapter. The findings are categorised in terms of demographics, non-demographics and factors that have an influence on online shopping in South Africa during the pandemic.

5.3.1 Demographics

According to the study, the majority of online shoppers in South Africa are females (63%; n=424), slightly over the nation's population distribution, which shows that females make up 51.4% of the population (StatsSA, 2013). The millennials and tricenarians constitute 71.6% (n=482) of online shoppers in South Africa. These are the generation cohorts who are both exposed to technology and economically active (Rudansky-Kloppers, 2014; Swiegers, 2018). An overwhelming majority, 84.1% (n=566) of the respondents had a tertiary qualification. This is representative of typical online shoppers as some of form of education is required to conduct online shopping. The tertiary qualification also enhances the economic muscle of the respondents. The income data confirmed that at least 85% (n=569) of the typical online shoppers earn a monthly income of over R10 000 concurring with Mapande and Appiah (2019), who theorised that consumers living above the poverty datum line are likely to engage in online shopping. The findings indicate that nearly 1 in 2 (n=334) respondents who shop online earn over R30 000 monthly, supporting suggestions by Yahya and Sugiyanto (2020), that online shoppers are relatively middle to high earners with disposable income. Lastly, the demographics showed that over 90% (n=615) of the respondents were either employed or self-employed. The employed or self-employed earn an income that they use to shop online to take advantage of online shopping convenience and flexibility (Nielsen, 2018), as they are mostly engaged during working

hours. The demographics section drew a typical profile of an online shopper as mostly being an urban female with tertiary education aged between 18-39 years, employed and earning at least a monthly income of R10 000. This supports the literature which profiled a typical online shopper as a millennial urban dweller (McKinsey, 2019), with access to the Internet, earning a substantial income and reasonably educated (Yahya & Sugiyanto, 2020).

5.3.2 Non-Demographics

The analysed results indicated that the majority of respondents (87%; n=489) shopped online at most once a month, representative of the target population as the majority of South Africans receive monthly incomes (StatsSA, 2019b). The data, as expected, showed that almost all respondents had access to the Internet, mainly through mobile devices. The extensive access to the Internet is a result of rapid penetration of mobile technology and acceptance of technologies in South Africa (Swiegers, 2018). Most of the respondents, 90.5% (n=609) have access to the Internet at home and 76.8% (n=334) spend over three hours on the Internet daily. The extensive use and acceptance of technologies for social interactions and work have positively influenced the perceived ease of use (Ha & Stoel, 2009), which allows for quicker shift to online shopping (Olivier, 2016).

The research found out that nearly 5 out of every 10 respondents opted for either the use of credit or debit cards as a method of payment. A low but worryingly 12% (n=77) of the sample indicated that they used cash, which represents the lack of trust these respondents have on the secureness of digital payment methods. The percentage of cash users is low because of the rapid advent of various secure payment apps (Mahajan, 2020) and constant improvement of payment methods' technology (Dannenberg et al., 2020). The findings surprisingly indicated that 64% (n=431) of the respondents preferred emails to 22% (n=148) who favour instant messaging. The findings are surprising considering that online shopping is interactive (Zaveri & Amin, 2013) and it mainly advertises on zero-cost social platforms, where most of its potential consumers are (Zhang & Tsai, 2017). The findings indicate that consumers are tired of the repetitive adverts on their social platforms. Delivery at either workplace or home is favoured by almost 9 out of 10 respondents. This concurs with Nielsen (2020a), who

postulated that most consumers move online to enjoy the convenience of prompt delivery of purchased products from all over the globe.

5.3.3 Factors

The factors proposed to have an influence on online shopping in South Africa during the pandemic were analysed in the previous chapter. The findings of the factor analysis are discussed in this section.

Online Shopping in General

Online shopping involves transacting goods or services over the Internet (Akram, 2018), a platform that allows consumers to conveniently search, select products and choose a delivery method before paying for the goods or services (Rudansky-Kloppers, 2014). The rapid proliferation of Internet technologies, which provide flexible access, global reach (Vaitkevicius et al., 2019), and secure digital payment method (Handayani et al., 2020), has seen online shopping growing. Asiedu and Dube (2020) add that the convenience offered by home delivery has increased online shopping's market share.

The analysed results showed that 57% (n=384) and 51% (n=346) of the respondents agree that online shopping is safe and trust it, respectively. The results are almost similar because trusting online shopping is linked to the safety of the channel (Mapande & Appiah, 2019). The Exploratory Factor Analysis (EFA) was used to further analyse the Online shopping in general factor. The results after eliminating item OSG_03 *Online shopping is cheaper than traditional shopping,* which was below the minimum significant loading, showed that the factor explained 47% of variance of online shopping.

The statistical analysis of the independent factor showed a high mean $\mu = 3.77$ and low standard deviation $\sigma = 0.57$. The results indicated that the factor had a combined 78.5% (n=528) of positive responses. This shows that most of the respondents agree that online shopping offers convenience and flexibility, ability to compare and access a variety of products, with only a low number of respondents disagreeing. The results align with Girard et al. (2003) who suggested that consumers use online shopping platforms for convenience and expediency in comparing prices before making a

purchase. The reliability of the measuring instrument on the factor was a high Cronbach's value of 0.8 indicating consistency.

Personal Experience of Online Shopping

The majority of the respondents, 80% (n=452), enjoy shopping online with only 44% (n=248) who have had a bad online shopping experience. The enjoyment of online shopping means that the channel will retain and lure more hedonic motivated consumers (Kim et al., 2019). The number of respondents who have had a bad shopping experience, though lesser than the ones who have enjoyed good shopping experience, is significant particularly when online shopping is fiercely competing for a sizeable market share. Mapande and Appiah (2019) suggest that companies leverage the available technology to offer tailored improved customer experience to various generations of different gender and educational levels. The analysed results showed that 4 out of 10 respondents buy locally, giving the local online shops a market that is insulated from the global competition.

The EFA analysis on the independent factor showed that the factor explained 60.9% of the variance in personal experience after eliminating the OSP_03 *I have had some bad experiences when shopping online* a non-significant loading item and negative statement. The statistical analysis of Personal experience showed that 67.4% (n=381) of the responses were positive. This indicates that the respondents generally agreed that they are experienced online shoppers who enjoy shopping online because it suits their lifestyles. The Cronbach's value of the section was determined as 0.76, which is relatively good.

Shopping Behaviour

Consumers select a shopping channel based on either hedonic or utilitarian motives (Kim et al., 2019). Hedonic motivated consumers seek entertainment while the utilitarian motivated consumers desire to complete shopping in a way that saves money, effort and time.

A tad above 8 out of 10 respondents prefer to touch before purchasing the product, which poses a behavioural challenge to online shopping platforms as this stifles the growth on online shopping (Rudansky-Kloppers, 2014). However, the results showed

that only 30% (n=205) of the respondents prefer physical interaction when shopping probably because of the fear to contract the corona virus in shops.

The EFA subdivided shopping behaviour into two factors, interaction with products and interaction with people. The four of the factor's item related to interaction with products while the other three items loaded on the interaction with people factor. Both factors accounted for a combined 64.5% variance. The interaction with products and interaction with people factors have the Cronbach alpha coefficients of 0.79 and 0.74 for reliability, respectively.

The descriptive statistics for the interaction with products factor categorised it as positive to neutral while the interaction with people factor was classified as neutral. The results indicated the varying responses on the perceived influence of the factors on online shopping. The relationships between the factors and online shopping were further examined by conducting inferential statistics, thus correlations and Chi^2 tests. Interaction with products (r=-.308) and Interaction with people (r=-.345) have a low negative correlation both statistically and practically with Online shopping in general, indicating a weak inverse association. Both factors have medium statistically significant association ($p < .0005$) with Online shopping indicated by the Cramer's V of .22 for Interaction with products and .21 for Interaction with people.

Acceptance of Technologies

Considering that the survey was conducted online and that mobile technologies have rapidly penetrated the market, it was not surprising that over 85% (n=571) of respondents are comfortable with the use of Internet. Worryingly for online shops, the analysed results showed that only 58% (n=393) and 45% (n=302) trust the Internet and digital payment platforms, respectively. The lack of trust in both Internet and digital payment platforms inhibits the growth of online shopping (Akram, 2018).

After the initial EFA, AIT_01 *I am comfortable using Internet technologies* was eliminated as it may be interpreted as ease of online transactions. A 1-factor analysis was run with all remaining items meeting the minimum significant loading and resulted in Eigenvalue of 3.293, which explains 65.9% of the variance for the independent factor. The independent factor measuring instrument has a Cronbach alpha coefficient of 0.86 for reliability.

The descriptive statistics for the Acceptance of Internet technologies factor with a mean of 3.32 and standard deviation of 0.69 was classified as neutral. The results indicated the varying responses on the perceived influence of the factor on online shopping. The relationship between the factor and online shopping was further analysed using the Pearson correlations and Chi^2 tests. Acceptance of technologies (r=.525) has a medium positive correlation both statistically and practically with Online shopping in general, indicating a positive direct association. The factor has a medium statistically significant association ($p < .0005$) with Online shopping evidenced by the Cramer's V of .31.

COVID-19 and Shopping

The majority of the respondents indicated that they were already online shoppers before the pandemic though a significant number (68%; n=458) indicated that because of the pandemic they will continue to shop online. Almost 7 out of 10 respondents agreed that instore shopping is risky and that online shopping is safer. This according to Lee Yohn (2020) is shaping the behaviour of the consumers that post the pandemic, the consumers will maintain shopping online.

The initial EFA yielded two factors, thus the COVID-19 and shopping factor was then broken into Initial impact of COVID-19 on shopping and Current impact of COVID-19 on shopping. The combined factors explain 66.7% of the variance for COVID-19 and shopping after eliminating the non-significant item C19_10 *Physical stores pay attention to the COVID-19 health and safety measures.* The Initial impact of COVID-19 and Current impact of COVID-19 factors' measuring instrument have Cronbach alpha coefficients of 0.86 and 0.82 for reliability, respectively.

The Initial impact of COVID-19 on shopping factor was classified by descriptive statistics as neutral with a mean of 2.72 and a relatively high standard deviation of 0.97. The results indicated the varying responses on the perceived influence of the factor on online shopping. On the other hand, Current impact of COVID-19 was classified as positive with a mean of 3.61 and a standard deviation of 0.80. These results show that the factor is perceived to have a positive influence on online shopping. The relationships between the factors and online shopping were further examined using the Pearson correlations and Chi^2 tests. The Initial impact of COVID-

19 on shopping factor (r=.114) has a low statistical positive correlation, which is not practical with Online shopping in general. The Current impact of COVID-19 on shopping factor (r=.435) has a low to medium correlation both statistically and practically with Online shopping in general, indicating positive direct association. The Cramer's V of .10 for the Initial impact of COVID-19 on shopping factor shows that the factor has a non-significant association with Online shopping in general. The Current impact of COVID-19 on shopping factor has a medium statistically significant association ($p < .0005$) with Online shopping indicated by the Cramer's V of .33.

Products bought Online.

The product that is bought the most (62%; n=414) online by the respondents is fast food followed by clothing or apparel at 50% (n=337). The standardisation of fast food throughout the country and the convenience of delivery explains why most of the respondents buy fast food online. The analysed results showed that just over 1 in 10 of the respondents regularly purchase fresh produce. The consumers probably prefer to physically select fresh produce while from the companies' point of view, the supply chain involved in delivery of fresh produce is time sensitive and therefore costly due to the short life-span of the produce.

The descriptive statistics for the Products bought online factor, with a mean of 2.01 and standard deviation of 0.66, was classified as negative. The responses were negative probably due to the limited products on the provided list, which forced respondents to tick 'other'. The relationship between the factor and online shopping was further analysed using the Pearson correlations and Chi^2 tests. The Products bought online factor (r=.437) has a low to medium positive correlation both statistically and practically with Online shopping in general, indicating a positive direct association. The factor has a medium statistically significant association ($p < .0005$) with Online shopping evidenced by the Cramer's V of .30.

5.3.4 Relationship between Demographics and Online Shopping

The relationship between the demographics and online shopping was examined using the ANOVA. The results indicated that marital status has a small practical significance meaning there is a difference between mean values based on marital status. The married or living together partners slightly favour online shopping over the single or

widowed members of the community. Additionally, preferred method of payment had a strong significance on online shopping. This is probably due to the importance placed on secure payment by the consumers as they are weary of online fraud (Mahajan, 2020). The use of cash in the form of eft/mobile payment and credit/debit card has a positive significant influence on online shopping.

5.4 Summary of Contributions

The research adds to the theoretical development of literature on factors influencing online shopping in South Africa during the corona virus pandemic. The study's cross-sectional survey was statistically analysed indicating factors that have an influence on online shopping from a South African consumers' perspective. The research examined the change of shopping behaviour and adoption of technology due to COVID-19 based the theories of technology acceptance model (TAM), diffusion of innovation and theory of planned behaviour (TPB). The results concurring with TAM theory showed that improving online security enhances the adoption of online shopping. The majority of online shoppers spend over three hours on the Internet daily backing the diffusion of innovation theory, which posited that due to the pandemic, technology rapidly spread to support work and social activities among the population increasing online shopping.

The TPB theory supports the findings, which profiles an online shopper as a high-income earner and relatively educated individual who can confidently use technology. The results demonstrate that as explained by the TPB theory, the perceived control consumers had during the pandemic led to adopting of preventative behaviours and prevailing norms such as online shopping to curb the risk of contracting COVID-19. This will provide useful information to businesses operating and those planning to move to online platforms on how to entice consumers to initiate and continue to frequently shop online. The findings allow companies, marketers and other researchers to gain insight into the online shopping factors influencing South Africans and provide a foundation for further related research.

5.5 Limitations of the Study

The research, because of the use of convenience and snowball sampling due to time constraints, was limited to respondents connected to the Nelson Mandela University Business School's students who assisted in distributing the questionnaire. The

distribution of the questionnaires has the potential of limiting the findings from being generalised for all South African online shoppers. Additionally, the cross-sectional study was conducted during the pandemic, when there was no cure yet found for COVID-19, should there be an effective solution the findings may then differ.

The study investigated the research problem using the positivism paradigm and quantitative method which limited the depth of the responses. Therefore, the research determined whether COVID-19 had an influence online shopping but did not fully explore the reasons behind that. The English questionnaire was distributed online limiting it to only respondents with access to the Internet and English literate.

The limitation due to convenience and snowballing sampling can be addressed by carrying out a similar study in the future based on random sampling to minimise possible sampling bias. This will ensure that respondents are representative of the South African online shoppers. Additionally, this research should be conducted again after the pandemic has passed to determine whether the identified independent factors will still have an influence on online shopping. It is suggested that the study be conducted on an online platform because the target population conduct transactions online, therefore, they can easily access the online questionnaire. The questionnaire will be in English as an overwhelming majority of South African online shoppers conduct transactions in English (StatsSA, 2019). Future research based on interpretivism paradigm and qualitative method is recommended to obtain reasons behind the responses, with this study forming a basis. Further, it is recommended that future studies examine certain factors further such as delivery, which was found to be not significant in this research but other studies (Swiegers, 2018), emphasise such factors' influence on online shopping.

5.6 Managerial Recommendations

Factors that influence online shopping behaviour of consumers during the pandemic impact the business world. The understanding of the significant factors ensures that businesses are dynamic and promptly adapt to disruptions of the traditional shopping behaviour to maintain competitive advantage and enjoy first-mover advantage. This section outlines managerial recommendations based on the conducted study.

5.6.1 Demographics

The reviewed literature and the research findings suggest that age, income, education, gender and employment status have an influence on online shopping. The demographics show that in South Africa, online shoppers are generally urban, tertiary educated, employed females aged between 18-39 years with access to Internet and an income above the poverty datum line. Based on the findings, it is recommended that companies carry online geolocated adverts of their products and services primarily targeting urban, employed and educated females. The companies, on their online platforms, must offer products and services that appeal to the profiled online shopper.

5.6.2 Non-Demographics

The findings indicated that most of the respondents shopped once a month, it is therefore, recommended that companies run promotions on online platforms that align with the majority of the consumers' paydays. Most of the consumers based in the study, access the Internet through mobile devices meaning businesses must flight adverts and provide shopping platforms that are compatible with mobile devices. According to the research most of the online shoppers have access to Internet at home and spend over three hours daily on the Internet. It is recommended that companies save costs by advertising on online platforms where most of the prospective and current customers spend a greater part of their time on, after work.

The payment method plays a critical role in luring customers to online platforms. Online shopping platforms must offer secure payment methods, which include mobile apps, credit/debit card and cash facilities. These payment methods will cater for the majority of online shoppers even those still sceptical about the security of online platforms. It is recommended that businesses educate the consumers on the security of the payment methods and offer certain security guarantees as over 40% (n=260) of respondents do not think the online payment platforms are safe.

Surprisingly, considering that online shopping is interactive, most of the consumers prefer to receive communication through email rather than social media. It is important that businesses employ technology to track what potential consumers browse on the Internet and email the consumers promotional material. Despite the findings that consumers prefer email to social media, the amount of time spent on the Internet by

the prospective online shoppers, warrants that the business world keep on communicating through social media. The social media communication must be diverse, relevant and at reasonable frequency. When it comes to delivery, an overwhelming majority of consumers prefer delivery at either home or the workplace. The delivery factor can be costly to the business particularly in less populated and rural areas where economies of scale cannot be realised.

The research, therefore, recommends that companies use the Uber model for deliveries as it attracts consumers seeking convenience and avoids crowded areas (Gunday et al., 2020). Businesses can partner with logistics companies that will assist to provide strategic capabilities and resources gaining competitive advantage (Jacobides & Reeves, 2020). The companies must accommodate consumers, who due to the pandemic induced economic erosion cannot afford delivery fees, by offering free but delayed deliveries and click and collect options. This will attract more online shoppers (Nielsen, 2018).

5.6.3 Factors

The research's results showed that less than 60% (n=384) of all the respondents trust and think online shopping is safe. This, despite almost 8 out of 10 respondents considering that online shopping is convenient, flexible and provides access to a variety of products. Companies are urged to invest in ensuring that online shopping is not only secure but perceived as such to attract the consumers who doubt the safety of online shopping. Businesses are also recommended to tailor the shopping platforms to offer convenient and flexible shopping, something that has been attracting consumers during the pandemic to shift to online shopping.

On personal experience, the results indicated that the majority enjoyed online shopping, while 44% (n=248) of respondents had bad online shopping experiences. Online shops, based on the findings, are urged to be innovative and leverage the rapid technology advancement to improve the customer experience online. This will lure both hedonic consumers seeking enjoyment and brick-and-mortar customers attracted to positive customer experience, increasing market share for the online shops.

The shopping behaviour items indicated that consumers prefer touching before purchasing products. It is recommended that businesses use technology that will

compensate the loss of physical contact with products before purchasing (Mapande & Appiah, 2019), particularly companies selling differentiated products. Companies may invest in standardising products sold online to reduce the need for consumers to make physical contact before making a purchase. Where standardisation is impossible, businesses must offer flexible return policies. The acceptance of technologies factor showed that online consumers are comfortable with Internet technologies meaning online shops' growth will not be stifled on account of technology illiteracy. The results though, as already alluded to, indicated that consumers do not trust digital payment platforms, something the businesses have been recommended to address.

Most online consumers posit that post-COVID-19, they will remain shopping online. It is recommended that while consumers are still shopping online due to pandemic, companies must provide excellent customer experience to ensure that post the pandemic the consumers will remaining loyal to online shopping. The excellent customer experience will shape the shopping behaviour that post the pandemic, they will maintain the behaviour. Finally, the products on online factor showed that consumers primarily buy basic standard products online. This means that products that do not require to be differentiated attract more consumers online. Therefore, companies are urged to offer these standard products to increase traffic on their platforms. The consumers buying the basic goods once on the shopping platform will then buy the differentiated products. The findings inform the businesses that consumers of short-life span products prefer collecting the products. Therefore, companies must also have an option for click and collect, which will reduce the businesses' operating costs.

5.7 Summary

The study segmented into different chapters examined the corona virus' influence on online shopping in South Africa. The main research objective, **RO_M**: *To investigate the influence of the corona virus pandemic on online shopping behaviour*, was coined to address the research problem. The study broke down the main research objective into the secondary objectives, to answer the research question, **RQ_M:** *How has the corona virus influenced South African consumers' online buying behaviour?* The five chapters of the study addressed the secondary objectives and fulfilled the research's main

objective providing the significant factors, due to the pandemic, that have had an influence on online shopping.

In this chapter, the previous chapters of the research were summarised. The chapter then drew conclusions from the findings in chapter four. The research findings were categorised into demographics, non-demographics and factors that influence online shopping. The research's limitations are mentioned. Future areas for research are proposed. Furthermore, the managerial recommendations based on both the descriptive and inferential data analysis are presented.

References

Adiyoso, W., & Wilopo, W. (2021). Social distancing intentions to reduce the spread of COVID- 19: The extended Theory of Planned Behaviour. *Research Square*, 1–17. https://doi.org/https://doi.org/10.21203/rs.3.rs-61524/v1

Akram, M. S. (2018). Drivers and barriers to online shopping in a newly digitalized society. *TEM Journal*, *7*(1), 118–127. https://doi.org/10.18421/TEM71-14

Alasuutari, P., Bickman, L., & Brannen, J. (2008). The history of social reserach methods. In *The SAGE Handbook of Social Research Methods* (pp. 26–41). https://doi.org/10.4135/9781446212165

Ali, B. (2020). Impact of COVID-19 on consumer buying behavior toward online shopping in Iraq. *Economic Studies Journal*, *18*(03), 267–280.

Allwood, C. M. (2012). The distinction between qualitative and quantitative research methods is problematic. *Quality and Quantity*, *46*(5), 1417–1429. https://doi.org/10.1007/s11135-011-9455-8

Amaratunga, D., Baldry, D., Sarshar, M., & Newton, R. (2002). Quantitative and qualitative research in the built environment: Application of “mixed” research approach. *Work Study*, *51*(1), 17–31. https://doi.org/10.1108/00438020210415488

Ammar, N., Aly, N. M., Folayan, M. O., Khader, Y., Virtanen, I., Al-batayneh, O. B., … Rahardjo, A. (2020). Behavior change due to COVID-19 among dental academics — The theory of planned behavior: Stresses , worries , training , and pandemic severity. *PLoS ONE*, *September*, 1–13. https://doi.org/https://doi.org/10.1371/journal.pone.0239961

Andersen, A. L., Hansen, E. T., Johannesen, N., & Sheridan, A. (2020). Consumer responses to the COVID-19 crisis: Evidence from bank account transaction data. *SSRN Electronic Journal*, 1–30. https://doi.org/10.2139/ssrn.3609814

Asiedu, R., & Dube, F. N. M. (2020). Antecedents of Chinese consumer’s online shopping behaviour. *Asian Journal of Business Research*, *10*(2), 91–110. https://doi.org/10.14707/ajbr.200085

Banerjee, S., & Ho, S. S. (2020). Applying the theory of planned behavior: Examining how communication, attitudes, social norms, and perceived behavioral control relate to healthy lifestyle intention in Singapore. *International Journal of Healthcare Management*, *13*(S1), 496–504. https://doi.org/doi.org/10.1080/20479700.2019.1605687

Bell, B. (2017). *Business research* (pp. 1–56). pp. 1–56. Johannesburg: Regenesys.

Bobitt, J., Carter, J., Kuhne, J., & Bobitt, J. (2020). Using diffusion of innovations framework to examine the dissemination and implementation of the adult protective services national voluntary consensus guidelines services national voluntary consensus guidelines. *Journal of Elder Abuse & Neglect*, *32*(3), 201–216. https://doi.org/10.1080/08946566.2020.1742836

Brem, A., Viardot, E., & Nylund, P. A. (2021). Implications of the coronavirus (COVID-19) outbreak for innovation: Which technologies will improve our lives? *Technological Forecasting & Social Change*, *163*, 1–7. https://doi.org/10.1016/j.techfore.2020.120451

Buchanan, D., & Bryman, A. (2007). Contextualising methods in organizational research. *Sage Publications*, *10*(3), 483–502. https://doi.org/10.1177/1094428106295046

Cassim, L. (2017). *Guidelines on how to write a thesis & research report*. Johannesburg.

Chang, H., & Meyerhoefer, C. (2020). *COVID-19 and the demand for online food shopping services: Empirical evidence from Taiwan*. Retrieved from https://www.nber.org/system/files/working_papers/w27427/w27427.pdf

Collis, J., & Hussey, R. (2014). *Business research: A practical guide for undergraduate and postgraduate students* (Fourth).

Consumers Union of United States. (2004). *Secrets of Shopping Smart*. Retrieved from https://www.consumerreports.org/cro/magazine/2012/index.htm

Cowhitt, T., Butler, T., & Wilson, E. (2020). Using social network analysis to complete literature reviews : a new systematic approach for independent researchers to

detect and interpret prominent research programs within large collections of relevant literature. *International Journal of Social Research Methodology*, *23*(5), 483–496. https://doi.org/10.1080/13645579.2019.1704356

Creswell, J. W. (2014). *Research Design: Qualitative, quantitative and mixed methods approaches.* (4th ed.). Thousand Oaks: Sage Publications Ltd.

Dannenberg, P., Fuchs, M., Riedler, T., & Wiedemann, C. (2020). Digital transition by COVID-19 pandemic? The German food online retail. *Tijdschrift Voor Economische En Sociale Geografie*, *111*(3), 543–560. https://doi.org/10.1111/tesg.12453

Davis, F. D., Bagozzi, R. P., & Warshaw, P. R. (1989). User acceptance of computer technology: A comparison of two theoretical models. *Manage Sci*, *35*(8), 982–1003.

Davis, L. (2019). What does the current South African ecommerce landscape look like? In *Flicker Leap*. Retrieved from https://flickerleap.com/south-african-ecommerce-landscape/

Department of Higher Education and Training. (2018). *Statistics on Post-School*. Retrieved from www.dhet.gov.za

du Toit, J., Boshoff, N., & Mariette, N. (2017). Normative versus cctual methodologies in planning research: A hybrid picture. *Journal of Planning Education and Research*, *37*(4), 477–487. https://doi.org/10.1177/0739456X16658095

du Toit, J. L., & Johann, M. (2013). A typology of designs for social research in the built environment. *International Journal of Sociaal Research Methodology*, *16*(2), 125–139.

Elsbach, K. D., & van Knippenberg, D. (2020). Creating high-impact literature reviews: An argument for 'integrative reviews.' *Journal of Management Studies*, *57*(6), 1277–1289. https://doi.org/10.1111/joms.12581

Evan, A., & Rivera, A. (2020). Retailers face a data deficit in the wake of the pandemic. *Harvard Business Review*, *June*, 1–7.

Fabius, V., Kohli, S., Veranen, S. M., & Timelin, B. (2020). Meet the next-normal

consumer. *McKinsey & Company*, *August*, 1–9.

Girard, T., Korgaonkar, P., & Silverblatt, R. (2003). Relationship of type of product, shopping orientations, and demographics with preference. *Journal of Business and Psychology*, *18*(1), 101–120.

Gitter, G., Raymond, M., Robinson, K., & Wilkie, J. (2020). The end of shopping's boundaries: Omnichannel personalization. *McKinsey & Company*, *February*, 1–7.

Goldberg, L. R., & Velicer, W. F. (2006). Principles of exploratory factor analysis. In S. Strack (Ed.), *Differentiating normal and abnormal personality:* (2nd ed., pp. 209–237). New York: Springer.

Gravetter, F. J., & Wallnau, L. B. (2009). *Statistics for behavioral sciences* (8th ed.). Belmont, CA: Wadsworth.

Gunday, G., Karabon, M., Kooij, S., Moulton, J., & Omeñaca, J. (2020). How European shoppers will buy groceries in the next normal. *McKinsey & Company*, *December*, 1–10.

Ha, S., & Stoel, L. (2009). Consumer e-shopping acceptance: Antecedents in a technology acceptance model. *Journal of Business Research*, *62*(5), 565–571. https://doi.org/10.1016/j.jbusres.2008.06.016

Haigh, N., & Withell, A. J. (2020). The place of research paradigms in SoTL practice: An inquiry. *Teaching and Learning Inquiry*, *8*(2), 17–31. https://doi.org/10.20343/TEACHLEARNINQU.8.2.3

Hair, J. F., Black, W. C., Babin, B. J., Anderson, R. E., & Tatham, R. L. (2006). *Multivariate data analysis*. Upper Saddle River, NJ: Pearson Education Inc.

Handayani, P. W., Nurahmawati, R. A., Pinem, A. A., & Azzahro, F. (2020). Switching intention from traditional to online groceries using the moderating effect of gender in Indonesia. *Journal of Food Products Marketing*, *26*(6), 1–15. https://doi.org/10.1080/10454446.2020.1792023

Hao, N., Wang, H. H., & Zhou, Q. (2020). The impact of online grocery shopping on stockpile behavior in Covid-19. *China Agricultural Economic Review*, *12*(3), 459–470. https://doi.org/10.1108/CAER-04-2020-0064

Hasanat, M. W., Hoque, A., Shikha, F. A., Anwar, M., Abdul Hamid, A. B., & Hon Tat, H. (2020). The impact of coronavirus (Covid-19) on e-business in Malaysia. *Asian Journal of Multidisciplinary Studies*, *3*(1), 85–90. Retrieved from https://asianjournal.org/online/index.php/ajms/article/view/219

Hays, D. G., Wood, C., Dahl, H., & Kirk-Jenkins, A. (2016). Methodological rigor in journal of counseling and development qualitative research articles: A 15-year review. *Journal of Counseling and Development*, *94*(2), 172–183. https://doi.org/10.1002/jcad.12074

Headley, M. G., & Plano Clark, V. L. (2020). Multilevel mixed methods research designs: Advancing a refined definition. *Journal of Mixed Methods Research*, *14*(2), 145–163. https://doi.org/10.1177/1558689819844417

Hesse-Biber, S., & Griffin, A. J. (2013). Internet-mediated technologies and mixed methods research: Problems and prospects. *Journal of Mixed Methods Research*, *7*(1), 43–61. https://doi.org/10.1177/1558689812451791

Hooper, D. (2012). Exploratory Factor Analysis. In H. Chen (Ed.), *Approaches to Quantitative Research – Theory and its Practical Application: A Guide to Dissertation Students* (pp. 1–32). Cork, Ireland: Oak Tree Press.

Huang, X., Kuijpers, D., Li, L., Sha, S., & Xia, C. (2020). How Chinese consumers are changing shopping habits in response to COVID-19. *McKinsey & Company*, *May*, 1–12.

Ibrahim, Y. M., Hami, N., & Abdulameer, S. S. (2020). A scale for measuring sustainable manufacturing practices and sustainability performance: Validity and reliability. *Quality Innovation Prosperity*, *24*(2), 59–74. https://doi.org/10.12776/QIP.V24I2.1385

Infiniti Research. (2020a). *Impact of Covid-19 on customer buying behavior*. Retrieved from https://www.businesswire.com/news/home/20200402005574/en/Impact of Covid-1 9 on Customer Buying Behavior (Graphic)

Infiniti Research. (2020b). Industry experts share their thought on how the Covid-19 pandemic is influencing customer buying behavior. *Business Wire*, 70–71.

International Council of Shopping Centers. (2019). *Mixed-use properties: A convenient option for shoppers*. Retrieved from https://www.icsc.com/uploads/t07-subpage/Mix_Use_Convenience_ConsumerSeries.pdf

Jacobides, M. G., & Reeves, M. (2020). Adapt your business to the new reality. *Harvard Business Review*, *September-*, 74–82.

Jadidoleslami, S., Saghatforoush, E., & Zare Ravasan, A. (2021). Constructability obstacles: An exploratory factor analysis approach. *International Journal of Construction Management*, *21*(3), 312–325. https://doi.org/10.1080/15623599.2018.1534044

Kalleberg, A. L., Marsden, P. V., Aldrich, H. E., & Cassell, J. W. (1990). Comparing Organizational Sampling Frames. *Administrative Science Quarterly*, *35*(4), 658–688. https://doi.org/10.2307/2393513

Karadeniz, M., & Kocamaz, I. (2020). An investigation of post-purchase cognitive dissonance and its determinants in online shopping. *Journal of Yasar University*, *15*(Special), 307–315.

Kaufman-Scarboroug, C., & Lindquist, J. D. (2002). E-shopping in a multiple channel environment. *Journal of Consumer Marketing*, *19*(4), 333–350. https://doi.org/10.1108/07363760210433645

Kim, E., Libaque-Saenz, C. F., & Park, M.-C. (2019). Understanding shopping routes of offline purchasers: Selection of search channels and search platforms based on product types. *Service Business*, *13*(2), 305–338. https://doi.org/10.1007/s11628-018-0384-7

Koch, J., Frommeyer, B., & Schewe, G. (2020). Online shopping motives during the COVID-19 pandemic — Lessons from the Crisis. *Sustainability*, *12*(10247), 1–20. https://doi.org/10.3390/su122410247

Krauss, S. E. (2005). Research Paradigms and Meaning Making : A Primer. *The Qualitative Report*, *10*(4), 758–770. https://doi.org/10.1176/appi.ajp.162.10.1985

Lee Yohn, D. (2020). The pandemic is rewriting the rules of retail. *Harvard Business Review*, *July*, 2–6. Retrieved from https://hbr.org/2020/07/the-pandemic-is-

rewriting-the-rules-of-retail%0Ahttps://hbr.org/2020/07/the-pandemic-is-rewriting-the-rules-of-retail?ab=hero-main-text

Legris, P., Ingham, J., & Collerette, P. (2003). Why do people use information technology? A critical review of the technology acceptance model. *Information & Management*, *40*, 191–204.

Lin, C. (2020). Delivery technology is keeping Chinese cities afloat through coronavirus. *Harvard Business Review*, *March*, 1–5.

Mackenzie, N., & Knipe, S. (2006). Research dilemmas: Paradigms, methods and methodology. *Issues In Educational Research*, *16*, 193–205. Retrieved from http://www.iier.org.au/iier16/mackenzie.html

Mahajan, V. (2020). How Indian companies are using technology to reach new consumers. *Harvard Business Review*, *October*, 1–6.

Makombe, G. (2017). An expose of the relationship between paradigm, method and design in research. *The Qualitative Report*, *22*(12), 3363–3382. Retrieved from http://nsuworks.nova.edu/tqr/vol22/iss12/18

Mapande, F. V., & Appiah, M. (2019). The factors influencing customers to conduct online shopping: South African perspective. *2018 International Conference on Intelligent and Innovative Computing Applications, ICONIC 2018*, 5. https://doi.org/10.1109/ICONIC.2018.8601257

McKinsey. (2019). The future of shopping: Connected, virtual and augmented. *McKinsey & Company*, *March*, 1–33. Retrieved from https://www.mckinsey.com/business-functions/marketing-and-sales/solutions/periscope/our-insights/surveys/the-future-of-shopping-connected-virtual-and-augmented

McKinsey. (2020). *2020 Holiday season: Navigating shopper behaviors in the pandemic*. Retrieved from https://www.mckinsey.com/business-functions/marketing-and-sales/solutions/periscope/our-insights/surveys/2020-holiday-season-navigating-shopper-behaviors-in-the-pandemic

McKinsey & Company. (2020). *The four big shifts in food retail in Asia due to the*

COVID-19 crisis. Retrieved from https://www.mckinsey.com/featured-insights/future-of-asia/future-of-asia-podcasts/the-four-big-shifts-in-food-retail-in-asia-due-to-the-covid-19-crisis

Narayandas, D., Hebbar, V., & Li, L. (2020). Lessons from Chinese companies' response to Covid-19. *Harvard Business Review*.

Nel, J. (2013). *Cellphone banking adoption and continuance of use in an Internet banking context: A study of consumers' cross-channel cognitive evaluations*. Stellenbosch University.

Nelson Mandela University. (2010). *Policy on Research Ethics*. Retrieved from https://rd.mandela.ac.za/Research-Ethics/Research-Ethics-Committee-Human-(REC-H)

Nielsen. (2018). Connect commerce: Connectivity is enabling lifestyle evolution. *Nielsen Company*, (November), 1–19. Retrieved from https://www.nielsen.com/pt/pt/insights/report/2019/connected-commerce-connectivity-is-enabling-lifestyle-evolution/

Nielsen. (2020a). *China's shifting retail lanscape signals the permanence of change post Covid-19*. 24–26.

Nielsen. (2020b). *COVID-19 has flipped the value proposition of omnichannel shopping for constrained consumers*. *May*, 1–4.

Olivier, X. R. (2016). *An investigation into the antecedents and outcomes of the m-shopping experience*. Stellenbosch University.

Pal, D., & Vanijja, V. (2020). Perceived usability evaluation of Microsoft Teams as an online learning platform during COVID-19 using system usability scale and technology acceptance model in India. *Children and Youth Services Review*, *119*(September), 1–12. https://doi.org/10.1016/j.childyouth.2020.105535

Palanica, A., & Fossat, Y. (2020). COVID-19 has inspired global healthcare innovation. *Canadian Journal of Public Health (2020)*, *111*, 645–648. https://doi.org/10.17269/s41997-020-00406-2

Pham, V. K., Do Thi, T. H., & Ha Le, T. H. (2020). A study on the COVID-19 awareness

affecting the consumer perceived benefits of online shopping in Vietnam. *Cogent Business and Management*, *7*(1), 1–16. https://doi.org/10.1080/23311975.2020.1846882

Rudansky-Kloppers, S. (2014). Investigating factors influencing customer online buying satisfaction in Gauteng, South Africa. *International Business & Economics Research Journal (IBER)*, *13*(5), 1187. https://doi.org/10.19030/iber.v13i5.8784

Saunders, M., Lewis, P., & Thornhill, A. (2009). *Research methods for business students* (5th ed.). UK: Prentice-Hall.

Singh, V., & Walwyn, D. R. (2017). Influence of personal epistemology on research method: Implications for research education. *Journal of Research Practice*, *13*(2), 56–63. Retrieved from http://jrp.icaap.org/index.php/jrp/article/view/570/474

Smith, W. G. (2008). Does gender influence online survey participation? A record-linkage analysis of university faculty online survey response behavior. Retrieved from http://files.eric.ed.gov/fulltext/ED501717.pdf

Sousa, R., Horta, C., Ribeiro, R., & Rabinovich, E. (2020). How to serve online consumers in rural markets: Evidence-based recommendations. *Business Horizons*, *63*(3), 351–362. https://doi.org/10.1016/j.bushor.2020.01.007

StatsSA. (2013). *Gender gaps in SA* (Vol. 4). Retrieved from http://www.statssa.gov.za/wp-content/uploads/2013/11/Fieldworker-AugSept-2013.pdf

StatsSA. (2019a). *Inequality Trends in South Africa: A multidimensional diagnostic of inequality*. Retrieved from http://www.statssa.gov.za/?p=12744

StatsSA. (2019b). *Quarterly labour force survey*. Retrieved from http://www.statssa.gov.za/?page_id=1854&PPN=P0211&SCH=7619

Steinmetz, H., Knappstein, M., Ajzen, I., Schmidt, P., & Kabst, R. (2016). How effective are behaviour change interventions based on the Theory of Planned Behaviour?: A three-level meat analysis. *Zeitschrift Für Psychologie*, *224*(November), 216–233. https://doi.org/10.1027/2151-2604/a000255

Sukendro, S., Habibi, A., Khaeruddin, K., Indrayana, B., Syahruddin, S., Alfrets, F., &

Hakim, H. (2020). Using an extended Technology Acceptance Model to understand students' use of e-learning during Covid-19 : Indonesian sport science education context. *Heliyon*, *6*(August), e05410. https://doi.org/10.1016/j.heliyon.2020.e05410

Sułkowski, Ł., Lenart-Gansiniec, R., & Bilan, S. (2020). Crowdsourcing creativity in government: State of the field in the four research paradigms. *Creativity Studies*, *13*(2), 419–436. https://doi.org/10.3846/cs.2020.12265

Swanepoel, D. (2007). Research-driven: A scientific profession accountable within contextual realities. *South African Journal of Communication Disorders*, *54*(1), 10–11. https://doi.org/10.4102/sajcd.v54i1.747

Swiegers, L. (2018). Perceived risk barriers to online shopping: experiences of technologically enabled generation y consumers (Stellenbosch University). https://doi.org/10.1109/robot.1994.350900

Vaitkevicius, S., Mazeikiene, E., Bilan, S., Navickas, V., & Savaneviciene, A. (2019). Economic demand formation motives in online-shopping. *Engineering Economics*, *30*(5), 631–640. https://doi.org/10.5755/j01.ee.30.5.23755

Walker, P. (2011). *Pick 'n Pay Online Shop*. Retrieved from https://www.pnp.co.za/pnpstorefront/pnp/en/

Ward, S.-J. (2008). *The consumer-perceived risk associated with the intention to purchase online*.

Wegner, T. (2014). *Applied business statistics* (4th ed.). Cape Town: Juta and Company Ltd.

Yahya, S., & Sugiyanto, C. (2020). Indonesian demand for online shopping: Revisited. *Journal of Indonesian Economy and Business*, *35*(3), 188–203. https://doi.org/10.22146/jieb.55358

Yan, Z. (2020). Unprecedented pandemic, unprecedented shift, and unprecedented opportunity. *Human Behavior and Emerging Technologies*, *2*(2), 110–112. https://doi.org/10.1002/hbe2.192

Yong-sub, K. (2020). While you are sleeping. *Korean Culture & Arts*, *Summer*, 85–87.

Yoon, E. (2020). 3 behavioral trends that will reshape our post - Covid world. *Harvard Business Review*.

Yuen, K. F., Wang, X., Ma, F., & Li, K. X. (2020). The psychological causes of panic buying following a health crisis. *International Journal of Environmental Research and Public Health*, *17*(10 PG-3513–3513), 3513. https://doi.org/10.3390/ijerph17103513

Zaczkiewicz, A. (2020). Report reveals online preferences of beauty shoppers. *InFocus: Business Insights*, 1–2.

Zaveri, B., & Amin, P. (2013). A conceptual framework to understanding online consumer buying behavior. *International Journal of Online Marketing*, *3*(1), 47–58.

Zhang, J., & Tsai, W. S. (2017). What promotes online group-buying? A cross-cultural comparison study between China and the United States. *Journal of Promotion Management*, *23*(5), 748–768. https://doi.org/10.1080/10496491.2017.1297986

Zwanka, R. J., & Buff, C. (2020). COVID-19 generation: A conceptual framework of the consumer behavioral shifts to be caused by the COVID-19 pandemic. *Journal of International Consumer Marketing*, 1–10. https://doi.org/10.1080/08961530.2020.1771646

Annexures

APPENDIX A: ETHICS CLEARANCE APPROVAL

NELSON MANDELA
UNIVERSITY

PO Box 77000, Nelson Mandela University, Port Elizabeth, 6031, South Africa mandela.ac.za

Chairperson: Faculty Research Ethics Committee (Human)
Tel: +27 (0)41 504 2906

Ref: [H21-BES-BS-003] / Approval]

14 January 2021

Prof M Cullen
Department: Graduate School

Dear Prof Cullen,

TITLE OF STUDY: THE INFLUENCE OF COVID-19 ON ONLINE SHOPPING BEHAVIOUR (MASTERS)

PRP: Prof M Cullen
PI: J Shati

Your above-entitled application served at the *Faculty Ethics Committee of the Faculty of Business and Economic Science, (16 November 2020)* for approval. The study is classified as a negligible/low risk study. The ethics clearance reference number is **H21-BES-BS-003** and approval is subject to the following conditions:

1. The immediate completion and return of the attached acknowledgement to Lindie@mandela.ac.za, the date of receipt of such returned acknowledgement determining the final date of approval for the study where after data collection may commence.
2. Approval for data collection is for 1 calendar year from date of receipt of above mentioned acknowledgement.
3. The submission of an annual progress report by the PRP on the data collection activities of the study (form RECH-004 to be made available shortly on Research Ethics Committee (Human) portal) by 15 December this year for studies approved/extended in the period October of the previous year up to and including September of this year, or 15 December next year for studies approved/extended after September this year.
4. In the event of a requirement to extend the period of data collection (i.e. for a period in excess of 1 calendar year from date of approval), completion of an extension request is required (form RECH-005 to be made available shortly on Research Ethics Committee (Human) portal)
5. In the event of any changes made to the study (excluding extension of the study), completion of an amendments form is required (form RECH-006 to be made available shortly on Research Ethics Committee (Human) portal).
6. Immediate submission (and possible discontinuation of the study in the case of serious events) of the relevant report to RECH (form RECH-007 to be made available shortly on Research Ethics Committee (Human) portal) in the event of any unanticipated problems, serious incidents or adverse events observed during the course of the study.
7. Immediate submission of a Study Termination Report to RECH (form RECH-008 to be made available shortly on Research Ethics Committee (Human) portal) upon unexpected closure/termination of study.
8. Immediate submission of a Study Exception Report of RECH (form RECH-009 to be made available shortly on Research Ethics Committee (Human) portal) in the event of any study deviations, violations and/or exceptions.
9. Acknowledgement that the study could be subjected to passive and/or active monitoring without prior notice at the discretion of Research Ethics Committee (Human).

Please quote the ethics clearance reference number in all correspondence and enquiries related to the study. For speedy processing of email queries (to be directed to Lindie@mandela.ac.za), it is recommended that the ethics clearance reference number together with an indication of the query appear in the subject line of the email.

We wish you well with the study.

Yours sincerely

Prof S Mago

Cc: Department of Research Capacity Development
Faculty Research Co-ordinator: Lindie van Rensburg

APPENDIX B: QUESTIONNAIRE

Dear Participant

COVID-19 has forced businesses to rethink their business models. This includes the consideration of having an online presence. An online presence enables retailers to keep contact with their customers and still satisfy their needs through different channels. There has been an increase in online shopping because of the COVID-19 pandemic. We are interested to find out consumers' perceptions about online shopping and aspects related to it, for example the impact of COVID-19. Your participation in this study is voluntary. This will take approximately 15 minutes of your time. There are no foreseeable risks associated with this project. However, if you feel uncomfortable answering any question, you can withdraw from the survey at any point. It is very important for us to learn your opinions. Your survey responses will be strictly confidential and data from this research will be reported only in the aggregate. Your information will be coded and will remain confidential. The study has been approved by the faculty and awarded the following ethics number [H21-BES-BS-003]. If you have questions about the survey or the procedures, you may contact Professor Margaret Cullen at margaret.cullen@mandela.ac.za. Thank you very much for your time and support. Please start with the survey by clicking on next below. Clicking on the Next survey button implies consent.

Please indicate the sector you work in

1. Accommodation and food service activities
2. Administrative and support service activities
3. Agriculture, forestry and fishing
4. Arts, entertainment and recreation
5. Construction
6. Education
7. Financial and insurance activities
8. Human health and social work activities
9. Information and communication
10. Manufacturing
11. Mining and quarrying
12. Professional, scientific and technical activities
13. Transportation and storage
14. Wholesale and retail trade; repair of motor vehicles and motorcycles
15. Electricity, gas, steam and air conditioning supply
16. Public administration and defence
17. Real estate activities
18. Water supply; sewerage, waste management and remediation activities
19. Other

In which town, city, area do you live?

Are you
1. Self employed
2. Employed
3. Without work
4. Retired

Please indicate your gender
1. Female
2. Male
3. Other

Please indicate your marital status
1. Living together
2. Married
3. Divorced
4. Single
5. Widow/widower

How many children do you have?
1. 0
2. 1-2
3. 3-5
4. 6+

Please indicate your age
1. 18-29
2. 30-39
3. 40-49
4. 50-59
5. 60 plus

Please indicate your highest level of education
1. less than Matric
2. Matric
3. Certificate
4. Diploma
5. Degree
6. Post graduate degree

Please indicate your monthly income
1. less than R10 000
2. R10 000-R29 999
3. R30 000-R49 999
4. R50 000 or more

What brand of mobile phone do you have?

1. ACER
2. ALCATEL
3. APPLE
4. ASUS
5. BLACKBERRY
6. BLU
7. CAT
8. ENERGIZER
9. HTC
10. HUAWEI
11. INFINIX
12. LENOVO
13. LG
14. MICROMAX
15. MICROSOFT
16. MOTOROLA
17. NOKIA
18. PANASONIC
19. PLUM
20. SAMSUNG
21. SHARP
22. SONY
23. TECNO
24. ULEFONE
25. VODAFONE
26. WIKO
27. XIAOMI
28. ZTE
29. Other

Do you shop online?

1. Yes
2. No

If you answered yes to the previous question, please indicate how often you shop online.

1. Daily
2. Weekly
3. Monthly
4. Less often
5. Not applicable

Do you use your mobile phone for online shopping?

1. Yes
2. No

Please rate your Internet access where 1 is bad and 10 is excellent

	1	2	3	4	5	6	7	8	9	10	No Internet access
Internet access	❑	❑	❑	❑	❑	❑	❑	❑	❑	❑	❑

If you have shopped online before, please rate your online shopping experience where 1 is bad and 10 is excellent

	1	2	3	4	5	6	7	8	9	10	Not Applicable
Online shopping	❑	❑	❑	❑	❑	❑	❑	❑	❑	❑	❑

Do you have Internet access at home?

1. Yes
2. No

Do you have Internet access on your mobile device?

1. Yes
2. No

How many hours do you spend on the Internet on average per day every day?

1. less than 1
2. 1-2
3. 3 or more
4. None- I do not have Internet

The following statements relate to online shopping in general

	Strongly Disagree	Disagree	Neutral	Agree	Strongly agree
Online shopping is safe	❑	❑	❑	❑	❑
Online shopping is easy	❑	❑	❑	❑	❑
Online shopping is cheaper than traditional shopping	❑	❑	❑	❑	❑
Online shopping takes less time	❑	❑	❑	❑	❑
Online shopping is comfortable	❑	❑	❑	❑	❑
Online shopping is convenient	❑	❑	❑	❑	❑
Online shopping provides greater possibilities of product selection than traditional shopping	❑	❑	❑	❑	❑
I trust online shopping	❑	❑	❑	❑	❑

The following statements relate to your personal experience of online shopping

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	Not applicable. Do not shop online
I enjoy shopping online	❑	❑	❑	❑	❑	❑
I am an experienced online shopper	❑	❑	❑	❑	❑	❑
I have had some bad experiences when shopping online	❑	❑	❑	❑	❑	❑
Online shopping suits my lifestyle	❑	❑	❑	❑	❑	❑
I buy things from all over the world online	❑	❑	❑	❑	❑	❑

Which method of payment do you prefer?

1. Mobile payment
2. EFT
3. Cash on delivery
4. In store cash payment
5. In store credit/debit card payment
6. Credit/Debit Card
7. On account

Which mode of communication do you prefer?

1. Instant messaging such as WhatsApp, Signal or Telegram
2. Email
3. SMS
4. Printed Media
5. No communication

Communication should be:

1. Daily
2. Weekly
3. Monthly
4. No communication

The following statements relate to shopping behaviour

	Strongly Disagree	Disagree	Neutral	Agree	Strongly agree
I like to touch products before I purchase them	❑	❑	❑	❑	❑
I like to try on products before I buy them	❑	❑	❑	❑	❑
I like to taste products before I buy them	❑	❑	❑	❑	❑
I like to smell products like perfume etc. before I buy them	❑	❑	❑	❑	❑
Shopping is a social event for me	❑	❑	❑	❑	❑
I like to interact with salespeople face to face when shopping	❑	❑	❑	❑	❑
I prefer physical interaction when shopping for products	❑	❑	❑	❑	❑
Instore displays influence my shopping	❑	❑	❑	❑	❑

The following statements refer to acceptance of Internet technologies

	Strongly Disagree	Disagree	Neutral	Agree	Strongly agree
I am comfortable using Internet technologies	❑	❑	❑	❑	❑
I trust Internet technologies	❑	❑	❑	❑	❑
I trust online payments	❑	❑	❑	❑	❑
I trust that my personal information will not be compromised when using Internet technologies	❑	❑	❑	❑	❑
I trust online transactions	❑	❑	❑	❑	❑
I trust online purchasing	❑	❑	❑	❑	❑

The following relate to delivery of online purchases. Which do you prefer for goods purchased online?

1. Goods delivered to me at home
2. Click and collect
3. Not applicable- I do not shop online

Which of the following products do you buy online?

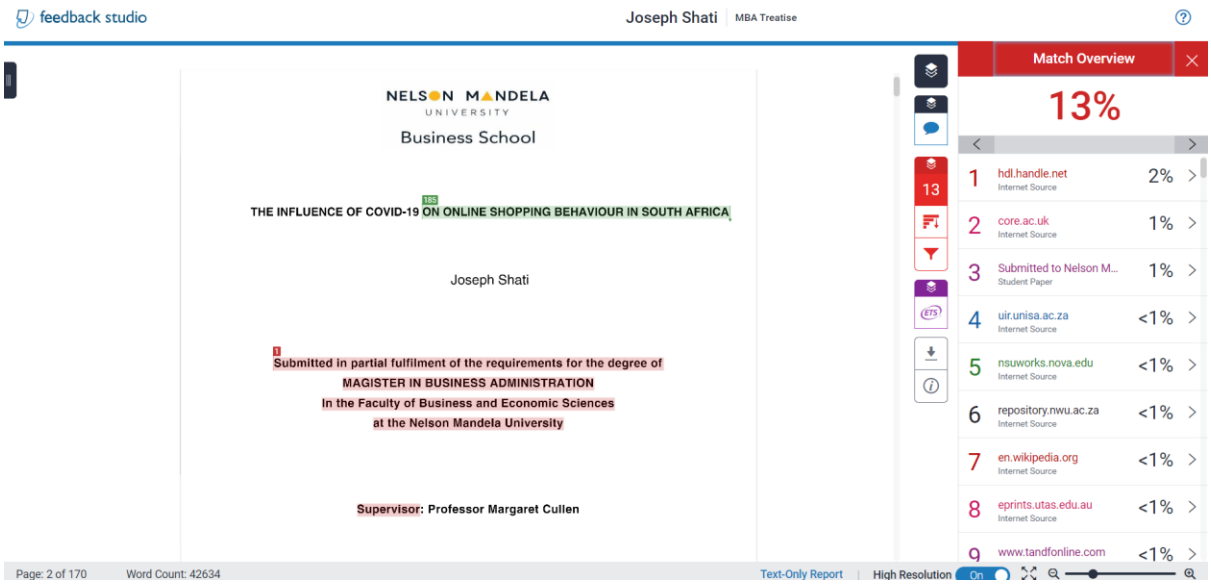
	Never	Seldom	Regularly	Often	Very often
Alcohol	❑	❑	❑	❑	❑
Books	❑	❑	❑	❑	❑
Clothing and other apparel	❑	❑	❑	❑	❑
Cosmetics & Toiletries	❑	❑	❑	❑	❑
Electrical goods & home appliances	❑	❑	❑	❑	❑
Fast Food	❑	❑	❑	❑	❑
Flowers	❑	❑	❑	❑	❑
Fresh produce	❑	❑	❑	❑	❑
Furniture	❑	❑	❑	❑	❑
Groceries	❑	❑	❑	❑	❑
Pharmaceutical products	❑	❑	❑	❑	❑
Toys	❑	❑	❑	❑	❑

Please indicate what other products you buy online

The following statements relate to COVID-19 and shopping

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
I bought online for the first time because of COVID-19	❑	❑	❑	❑	❑
COVID-19 has made me consider online shopping	❑	❑	❑	❑	❑
COVID-19 has made me switch to online shopping	❑	❑	❑	❑	❑
The COVID-19 lockdown forced me to buy online	❑	❑	❑	❑	❑
I prefer to buy online since COVID-19	❑	❑	❑	❑	❑
I will continue to buy online post COVID-19	❑	❑	❑	❑	❑
I trust online delivery services safety precautions for COVID-19	❑	❑	❑	❑	❑
Buying online is a safer option because of COVID-19	❑	❑	❑	❑	❑
In store experiences are risky with COVID-19	❑	❑	❑	❑	❑
Physical stores pay attention to the COVID-19 health and safety measures	❑	❑	❑	❑	❑

APPENDIX C: TURNITIN REPORT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NELSON MANDELA UNIVERSITY
Business School
THE INFLUENCE OF COVID-19 ON ONLINE SHOPPING BEHAVIOUR IN SOUTH AFRICA
Joseph Shati
Submitted in partial fulfilment of the requirements for the degree of
MAGISTER IN BUSINESS ADMINISTRATION
In the Faculty of Business and Economic Sciences
at the Nelson Mandela University
Supervisor: Professor Margaret Cullen
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Text-Only Report
High Resolution
On