



CONSUMER BUYING BEHAVIOUR DURING THE COVID-19 PANDEMIC IN THE GREATER DURBAN REGION.

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Date: 07 April 2025

ABSTRACT

The COVID-19 pandemic and resultant lockdowns significantly impacted consumer behaviour globally, including in South Africa, particularly in the Durban region. Strict regulations disrupted economic activities and imposed social isolation, leading to an accelerated adoption of online shopping, although infrastructure limitations posed challenges in rural areas. Panic buying and pre-lockdown stockpiling reflected consumer anxiety over supply shortages, prompting businesses to adapt through digital strategies and e-commerce offerings. The aim of the study was to determine the COVID-19 lockdown regulations that affected consumer buying behaviour within the greater Durban region. Utilising a quantitative, descriptive approach, the study collected data via 400 online questionnaires distributed through Microsoft Forms, resulting in 384 valid responses and a 96% response rate. Participation was voluntary, with confidentiality and anonymity assured. Data analysis, conducted using SPSS and Amos software, included descriptive analysis and reliability testing via Cronbach's Alpha. Key findings revealed a shift in consumer priorities, with a preference for locally produced goods and long-shelf-life items. The pandemic accelerated the adoption of online and contactless shopping methods, driven by fears and external influences, including health and safety concerns. Customer service also evolved, emphasising digital engagement, store hygiene, and enhanced delivery processes. Changes in consumer behaviour reflect global patterns and demonstrate a lasting shift toward digital and contactless commerce. The study recommends expanding consumer decision-making models to incorporate customer service as a situational variable, and fear and anxiety as environmental factors. It also highlights the importance of integrating online purchasing behaviour within these models. Policymakers should consider region-specific strategies to address infrastructure disparities, promote digital literacy, and build resilient local supply chains to mitigate future disruptions. Retailers must prioritise consistent product availability and balance safety measures with customer satisfaction to foster trust and loyalty.



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DEDICATION

This work is dedicated to the beloved memory of my late brother, Uveshan Achary. Although you are no longer with us, your presence remains a guiding beacon in my life. Your unwavering spirit, strength, and the cherished moments we shared continue to inspire me each day. This accomplishment is just as much yours as it is mine, as your memory has served as a constant source of motivation throughout this journey. While you may not be able to witness this achievement, I perpetually carry your love and influence with me. This thesis serves as a tribute to you, Uveshan—may your soul continue its journey towards serenity and enlightenment.

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ACRONYMS

AVE	Average Variance Extracted
CCS	Change in customer service
CFA	Confirmatory Factor Analysis
CFI	Comparative Fit Index
CR	Composite reliability
DUT	Durban University of Technology
EFA	Exploratory Factor Analysis
EKB	Engel, Kollat and Blackwell
FMCG	Fast-moving consumer goods
GFI	Goodness of Fit Index
MAXR(H)	Maximum correlation with Heterotrait
MM	Measurement Model
MSV	Maximum Shared Variance
PB	Panic buying
PCA	Principal component analysis
RC	Reducing in-person contact
RMSEA	Root Mean Square Error of Approximation
SA	South Africa
SASSA	South African Social Security Agency
SEM	Structural Equation Model
SP	Shops and products
UK	United Kingdom
WHO	World Health Organization

CHAPTER ONE: INTRODUCTION AND OVERVIEW OF THE STUDY

1.1 INTRODUCTION

South Africa was profoundly affected by the onset of the COVID-19 pandemic on 5 March 2020. In response, the country swiftly implemented stringent containment measures that deeply impacted its economic and societal fabric. Consumer behaviour became a focal point, as there were distinct shifts due to concerns over infection, economic instability, and lifestyle changes. Understanding these shifts posed by the pandemic is vital for stakeholders, including businesses, policymakers, and scholars, amidst the pandemic's multifaceted challenges. Given South Africa's unique socio-economic landscape marked by disparities, analysing consumer behaviour offers insights into its varied impact across societal layers. This chapter aims to delve into consumer purchasing behaviour during the pandemic, focusing on preference adjustments, psychological influences, and the role of digital platforms. Through scholarly inquiry, the study aims to provide a comprehensive understanding of the challenges and opportunities for enterprises and policymakers in the post-pandemic period (Njomane and Telukdarie 2022:05).

1.2 CONTEXT OF THE STUDY

Durban, as a significant urban centre within the South African context, provides a distinctive vantage point from which to investigate the ramifications of the COVID-19 pandemic on consumer behaviour. The city's heterogeneous populace, complex socioeconomic dynamics, and diverse cultural nuances intricately inform the responses of individuals and communities to crises. Set against the backdrop of stringent lockdown measures, economic volatility, and heightened health apprehensions, Durban's residents have undergone discernible shifts in their purchasing habits and consumption patterns (Carlitz and Makhura 2021:02).

The diversity of Durban's demographic composition, reflected in various ethnicities, linguistic backgrounds, and cultural practices, plays a pivotal role in shaping the adaptive strategies employed by its inhabitants amidst the challenges posed by the pandemic. Economic uncertainties, exacerbated by widespread job insecurity and financial strains, have necessitated a reevaluation of expenditure priorities among residents, leading to a discernible inclination towards essential goods procurement and the adoption of more conservative spending behaviours. Furthermore, the escalation of health concerns has caused a pronounced demand for hygiene-related products and a tendency towards contactless

transaction methods, highlighting a prevailing emphasis on safety considerations within the consumer decision-making paradigm (Wang, Xu, Schwartz, Ghosh, and Chen 2020:202)

During the COVID-19 pandemic in South Africa, the government implemented varying levels of lockdown restrictions, primarily limiting activities to essential services. Retail establishments faced constraints on customer numbers to ensure social distancing measures. However, online purchasing was not as prevalent, posing challenges for accessing goods. Despite these obstacles, Durban's residents showed resilience, adapting their purchasing habits amidst the evolving circumstances. This period underscored the need for flexibility and innovation in consumer behaviour within the city (Dobbelstein and Naidoo 2019:70).

In summary, Durban emerges as an illustrative microcosm, characteristic of the intricate interplay between societal determinants and the transformative impacts of the COVID-19 pandemic on consumer behaviour. Through a scholarly lens centered on Durban's unique demographic and socioeconomic environment, it becomes evident that the pandemic has instigated substantial alterations in consumption practices, mandating adaptability and resilience in the face of adversity.

1.3 BACKGROUND OF THE STUDY

Globally, governments implemented lockdowns, self-isolation, and quarantine to enforce social isolation within the population due to the COVID-19 pandemic. The National Lockdown resulted in economic isolation between sectors (Butu, Tanasa, Rodino, Vasiliu, Dobos, and Bruma 2020:2). The initial case of COVID-19 in South Africa acknowledged on 5 March 2020 by the South African Institute for Communicable Diseases. The South African government recognised the need to 'flatten the curve' from experiences abroad, which promptly led to the stringent measures known as lockdown level five on 27 March 2020 (Olivier, Botha and Craig 2020:205755).

Following the implementation of stringent measures known as lockdown level five on 27 March 2020, South African businesses were advised to cease operations, except for those supplying essential goods and services. Citizens were advised to stay at home unless they were providing essential services or purchasing necessary items such as food, medication, and clothing. Individuals were also permitted to leave their residences for medical treatment, obtaining chronic medication, or collecting social grants (Carlitz and Makhura 2021:02).

As movement restrictions imposed by governments led to consumers seeking alternatives to physical stores, many had to adapt to online retailing. Retailers responded by offering online shopping methods that prioritise convenience and safety, including options for doorstep and curbside deliveries to minimise the risk associated with physical gatherings at retail stores.

However, in some countries like Iraq, issues related to a lack of infrastructure have hindered the adoption of online shopping (Ali 2020:268). In South Africa, inadequate infrastructure in non-urban areas exacerbated the impact of the COVID-19 pandemic. Limited healthcare facilities, digital divides, transportation challenges, and sanitation issues have not only worsened the spread of the virus but also hindered access to essential services (Govender 2019:2).

Furthermore, consumers engaged in panic buying to avoid frequent shopping queues and wait-times to avoid potential exposure to the COVID-19 virus. Consumer movement was restricted due to regulations allowing them to travel only within a five-kilometre-radius of their homes, limiting their choices of where to shop due to the level five lockdown restriction, which also enforced a limitation of fifty customers within a store (Pophiwa, Moroane and Kenny 2021:12). Additionally, Svajdoya (2020:36) noted accelerated growth in online purchasing behaviour during the pandemic in the Czech Republic across all different sectors.

Moreover, the pre-lockdown phase in South Africa witnessed a notable increase in consumer purchasing behaviour driven by concerns of potential shortages and disruptions to supply chains ahead of impending lockdown measures. The surge in buying, aimed at mitigating perceived risks associated with restricted movement and access to essential goods, was followed by a subsequent decrease in spending during the initial stages of the lockdown, notably at level five. Overall, the pre-lockdown phase was characterised by heightened consumer activity and proactive responses to the uncertainties posed by the COVID-19 pandemic (Nyabadza, Chirove, Chukuru and Visaya 2020:2). The shift in buying behaviour prompted businesses to reach consumers digitally. In response to the evolving landscape of digital consumer behaviour, businesses in South Africa underwent a significant re-evaluation of their strategies and operations. Numerous companies heightened their online presence, directing initiatives towards e-commerce platforms, digital marketing, and the enhancement of omnichannel capabilities (Ali 2020:268).

1.4 RESEARCH PROBLEM

On 26 March 2020, the South African government declared a national lockdown, which promoted social distancing and imposed restrictions on movement and gatherings of people. Social distancing was enforced to limit the number of individuals within a physical space. This posed a challenge to South Africans, as it was the first time the country had received such a directive. COVID-19 positive patients were placed in isolation, while asymptomatic individuals were quarantined. Gatherings were initially limited during the lockdown's fifth level to fifty people at funerals, subject to strict COVID-19 regulations. Consumers were advised to

maintain a distance of one square meter and to wear masks when in contact with others (Carlitz and Makhura 2021:02).

Social distancing and self-isolation were imperative measures in curbing the spread of COVID-19 in South Africa. However, these measures encountered significant challenges due to poor sanitation, informal settlements, uneven distribution of relief aid, poverty, food insecurity, political and social unrest, religious and cultural practices, extended households, and weak healthcare systems, among other factors (Mbunge, Fashoto, Akinnuwesi, Gurajena and Metfula 2020:01). Since the start of the lockdown in 2020, the national regulations included measures such as social distancing, intermittent closures of restaurants, minimised operational hours, and intermittent bans on alcohol, which were implemented. Additionally, fast food establishments were not allowed to operate during certain periods (Bhoola 2022:1409).

The implementation of COVID-19 restrictions resulted in the closure or downsizing of numerous businesses, leaving millions of individuals without employment. Many households relied on informal sources of income, making their survival hand-to-mouth. The lockdown measures disrupted their daily means of sustenance, significantly impacting family finances. In response to these challenges, governments introduced relief measures aimed at alleviating the economic strain experienced by families during that period (Adebiyi, Roman, Chinyakata and Balogun 2021:234).

Consumers in South Africa generally use brick-and-mortar retail stores for shopping and procuring essential products. Due to restrictions on gatherings and movement during lockdown level five, in-store capacity was limited to no more than fifty percent. Consequently, these restrictions created a shift in purchasing patterns during lockdown level five. Some checkouts were closed in retail outlets, prompting bulk buying due to the fear of supply shortages. Furthermore, the perception of scarcity led to panic buying. Some consumers stockpiled to avoid frequenting stores (Nguyen, Quach and Thaichon 2022:481).

Some consumers turned to digital (online) channels and received curb side and doorstep delivery. Online shopping applications such as the Sixty60 application by Checkers were used for consumer shopping (Wang, Xu, Schwartz, Ghosh and Chen 2020:202). As South Africa's retail landscape moved towards digitalisation (e-commerce), COVID-19 restrictions accelerated the use of digital technologies in retail shopping applications, such as the Checkers' Sixty60 app. The app, launched in November 2019, promising 60-minute deliveries and an extensive product selection, gained popularity during South Africa's 2020 lockdown after its launch in November 2019. The service's success, particularly amidst COVID-19

challenges, underscored its ability to meet evolving consumer needs, highlighting its efficacy as an on-demand solution (Njomane and Telukdarie 2022:05).

Apart from limitations during level five of the lockdown, there was a prohibition on the sales of certain non-essential products, namely tobacco and alcohol (Dobbelstein and Naidoo 2019:70). The lockdown's adverse effects, such as job losses and pay cuts, altered consumer behaviour and demand, particularly impacted retail sectors. Among the significantly affected categories were textiles, clothing, footwear, and household furniture retailers. Conversely, pharmaceuticals, cosmetics, general dealers, and food/beverage/tobacco retailers experienced lesser impacts. Notably, restrictions on alcohol and tobacco sales by South Africa's National Coronavirus Command Council exacerbated the decline in specialised stores selling these products (Redda 2021:17). However, resulted in high levels of stress and anxiety, which stimulated the urge to purchase alcohol and tobacco from illegal establishments (Loxton, Truskett, Scarf, Sindone, Baldry and Zhao 2020:9).

The long queues at supermarkets were a major problem during South Africa's lockdown. Customers became frustrated due to safety precautions and store capacity limitations. Long wait times in queues increased the chance of contracting the virus, making crowd control more difficult. Retailers highlighted the need for creative solutions as they battled to strike a balance between demand and safety (Denoon-Stevens and Du Toit 2021:69). During the COVID-19 pandemic, South African retail outlets faced delivery delays due to disrupted supply chains and logistical challenges. Restrictions on movement and safety measures led to reduced workforce capacity, impacting operational efficiency. Fluctuating demand patterns and panic buying exacerbated the strain on supply chains. These delays highlighted the vulnerability of the retail sector during times of crisis (Hove-Sibanda, Motshidisi and Igwe 2021:228).

While global studies have explored the impact of the pandemic on e-commerce (Nguyen et al. 2022:481), there is a scarcity of region-specific research, particularly in South Africa (Stitch 2024). This study aims to highlight the unique challenges faced by South African consumers, especially in Durban, as they transitioned from traditional brick-and-mortar shopping to online retail. Recent data indicates that e-commerce sales in South Africa reached a record \$4.065 billion (R71 billion) in 2023, representing a 29% increase from the previous year (WordWideWorx 2024). However, limited studies have examined the role of digital technologies, such as AI-driven retail applications, in influencing consumer behaviour in South Africa (Pearson and Smit 2024). Furthermore, there is a need for deeper exploration of socio-economic factors, such as increased unemployment and income reduction, that may have further impacted consumers' reliance on digital platforms during the pandemic (Chamberlink 2024).

1.4.1 Problem statement

The COVID-19 pandemic prompted a significant shift in consumer behavior in South Africa, particularly moving from traditional in-store purchasing to online shopping. However, there is limited understanding of how this transformation occurred in specific regional contexts, such as Durban, especially amidst the compounded challenges of digital inequality, economic hardship, and supply chain disruptions. This study aims to address this gap by examining the impact of COVID-19 restrictions on the adoption of digital retail platforms and the subsequent reshaping of consumer purchasing patterns in Durban.

1.5 CONCEPTUAL FRAMEWORK

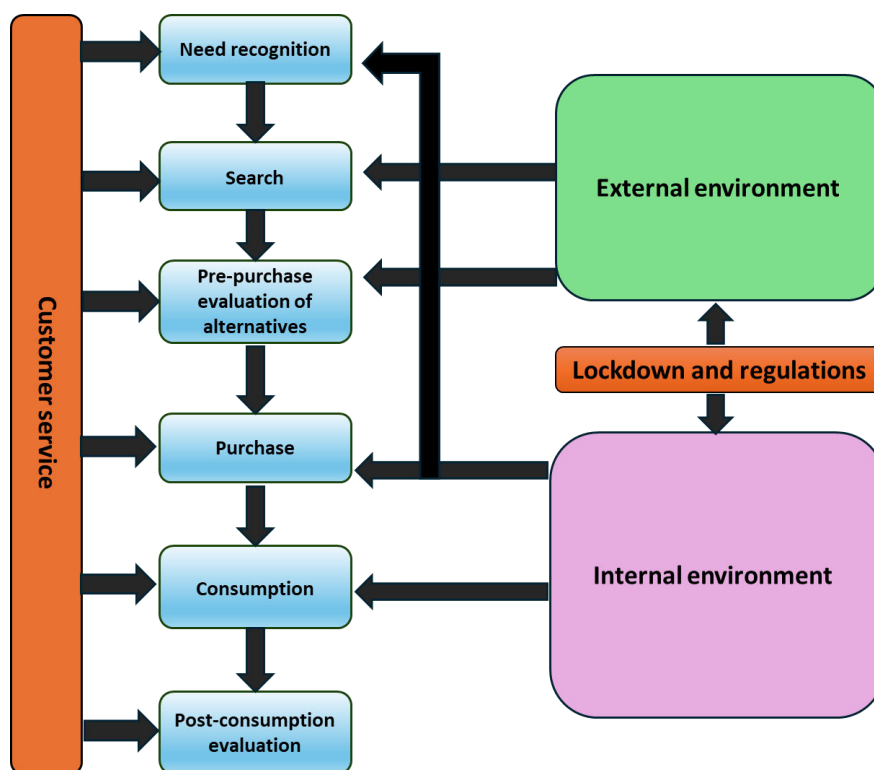


Figure 1.1: Conceptual framework

1.6 AIM OF THE STUDY

The aim of the study is to determine the COVID-19 lockdown regulations that affected consumer buying behaviour within the greater Durban region.

1.7 OBJECTIVES OF THE STUDY

- To ascertain the lockdown restrictions that influenced consumer buying patterns during the pandemic.
- To determine consumers engagement in panic buying during the lockdown.

- To establish customer service changes during the lockdown.

1.8 HYPOTHESES

- Hypothesis 1: The relationship between reducing in-person contact (RC) and change in customer service (CCS).
- Hypothesis 2: The relationship between products and shops (PS) and change in customer service (CCS).
- Hypothesis 3: The relationship between shift in spending priorities (SP) and change in customer service (CCS).
- Hypothesis 4: The relationship between changes in customer services (CCS) and panic buying (PB).
- Hypothesis 5: The change in customer service (CCS) mediates the relationship between spending priorities (SP) and panic buying (PB).
- Hypothesis 6: The change in customer service (CCS) mediates the relationship between products and shops (PS) and panic buying (PB).
- Hypothesis 7: The change in customer service (CCS) mediates the relationship between reduced contact (RC) and panic buying (PB).

1.9 OVERVIEW OF THE RESEARCH METHODOLOGY

The quantitative research methodology, anchored in the rationalism philosophy, employs objective and systematic procedures, utilising numerical data to derive findings from a subgroup to a broader population (Creswell, Ebersohn, Eloff, Ferreira, Ivankova, Jansen, Nieuwenhuis, Pietersen and Clark 2020:184). The research method prioritises the measurement of variations in phenomena and variables through structured processes, emphasising the primacy of reliability and validity (Kumar 2018:20). Within the context of a study focusing on consumers in the Durban region, the adoption of a quantitative approach was justified by the comprehensive target population.

Non-probability sampling involves personal judgement in the sampling process, as it does not include all possible elements, making estimation of probability and assessment of sampling error unfeasible (Brown, Suter and Churchill 2018:207). For this study, non-probability and convenience sampling will be utilised. Convenience sampling, chosen for its ease and feasibility, focuses on readily available respondents but may limit generalisability. While less costly and simpler than probability sampling, convenience sampling may not accurately represent broader populations, particularly in developing contexts. In this study, the researcher

distributed 400 online questionnaires via Microsoft Forms, yielding 384 completed responses and achieving an overall response rate of 96%. (Babin 2019:248).

According to Sekaran and Bougie (2016:294), the sample size was considered adequate to represent the target population. Respondents, chosen based on their location in Durban, were recruited through various social media platforms. The estimated time to complete the questionnaire was around 25 minutes. The study used a self-designed online questionnaire based on the literature review. Microsoft Forms software was used to create, distribute, and collect the questionnaire. Invitations were sent through popular social media platforms such as Facebook, WhatsApp, and LinkedIn. Participants were verified based on their age (18+) and location in Durban. The questionnaire aimed to gather consumer demographic information and experiences related to decision-making during the pandemic. It included various question designs, such as Likert scales and multiple-choice formats.

In addition, descriptive statistics are employed to briefly summarise detailed data that may be too intricate for a frequency table (Malhotra, Nunan and Birks 2017:562). Babin, D'Alessandro, Winzar, Lowe and Zikmund (2020:284) suggest that validity pertains to the degree to which scale scores accurately reflect the measured characteristics, ensuring the integrity of research guarantee surveys. According to Wilson (2019:203), content validity is established through the development of a questionnaire based on a literature review, while construct validity is assessed through pre-testing with a sample of 15 respondents. Furthermore, Kumar, Leone, Aaker and Day (2018:279) advise reliability as the consistency of scale results, evaluated using Cronbach's alpha. These methodological considerations contribute to the study's credibility and robustness.

1.10 DELIMITATIONS AND LIMITATIONS

The study was conducted exclusively among residents of Durban, South Africa, aged 18 years and older, who participated in both online and offline purchasing activities during the COVID-19 pandemic. The sample size consisted of 384 respondents, the researcher distributed 400 online questionnaires via Microsoft Forms, yielding 384 completed responses and achieving an overall response rate of 96%. This limitation was primarily due to time and financial constraints. Consequently, the analysis was focused solely on the greater Durban region. As a result, the researcher is unable to draw broader inferences beyond this specific geographic area.

1.11 OUTLINE OF CHAPTERS

This study consists of five chapters:

Chapter one: Introduction and overview of the study

This chapter provides the general background and context of the study, the research problem concerning consumer buying behaviour during the pandemic. An overview of the research methodology, limitations and delimitations of the study is discussed.

Chapter two: Literature Review

Chapter two reviews the relevant secondary data sources; these included scholarly articles. The implications of the lockdown and consumer buying patterns to develop a conceptual framework are discussed. The last section of the literature review consists of the proposed conceptual model.

Chapter three: Research Methodology

Chapter three outlines the research process, including the research design, sampling criteria, research instrument, data collection, data analysis, the administration of the questionnaire and the validity and reliability of the study.

Chapter four: Analysis and interpretation of the findings/discussion of results

Chapter four presents the quantitative data analysis and interpretation of the primary data. The discussion of the findings was also examined using previous studies.

Chapter five: Summary, conclusion, and recommendations

The objectives of the study, as well as a summary of how these objectives were addressed are re-visited in the final chapter. Recommendations for policy makers and marketers are presented. The conceptual model as well as the hypothesis tested in the study will be discussed in detail.

Summary: This chapter outlined the scope and key components of this research, encompassing the problem statement, research aims and objectives, methodology, and the overall structure of the dissertation. The upcoming chapter will examine the existing literature pertinent to the core concepts underlying this study, with particular attention to consumer buying behaviour during the COVID-19 pandemic.

CHAPTER TWO: LITERATURE REVIEW

2.1 INTRODUCTION

Chapter one described the study's background and significance and provided its overview. This chapter will focus on the literature on consumer decision-making and the elements influencing consumer purchasing behaviour during the COVID-19 pandemic. Building on the existing literature and the study's aims and objectives, a proposed conceptual model is introduced to provide a comprehensive understanding of the phenomena under investigation.

2.2 CONSUMER BEHAVIOUR DEFINED

Consumer behaviour encompasses the entirety of decisions made by individuals or groups regarding the acquisition, usage, and disposal of goods, services, activities, experiences, people, and ideas over time. The field also extends to the interaction between human decision-making units and responses to various market offerings at different consumption points (Hoyer, MacInnis, Pieters, Chan and Northey 2021:04). Similarly, consumer behaviour involves investigating how individuals acquire, utilise, and dispose of products and services. These offerings can be obtained not only through purchase but also through barter, leasing, or borrowing. Once a product is acquired, it is used in various ways, either consumed in a single instance, such as a can of Coca-Cola, or over an extended period, like a mobile phone. Additionally, the way a product is used can influence the behaviour of others (Noel 2017:12).

In the 21st century, businesses have adopted a consumer-centric approach, carefully crafting marketing strategies based on the needs and behaviours of consumers. Consumer behaviour is complex and often unpredictable, influenced by various social, cultural, personal, and economic factors. Companies that actively engage consumers, providing information about their brands, values, corporate image, and competitive positioning, often employ proactive consumer strategies. By encouraging consumers to have a deeper connection with their brands, companies enhance the overall experience and strengthen the perceived value of their products. A thorough understanding of consumer behaviour is crucial for creating effective marketing campaigns, designing appealing products, and increasing brand awareness (Rajagopal 2018:35).

2.3 UNDERSTANDING CONSUMER BUYING BEHAVIOUR

Over the years, scholars and practitioners have extensively studied consumer behaviour, extending beyond the realm of marketing. The foundations of consumer behaviour research can be traced back to the mid-1960s. In the traditional sense, the term consumer referred to individuals involved in monetary transactions for goods and services, while "customer" was defined as an individual making purchases from a company or store. However, the term consumer now encompasses not only buyers, but also all users of products or services. In many cases, the purchaser may not be the ultimate end user. For instance, when a father buys a box of crayons for his four-year-old daughter, he serves as the customer, while the true consumer is the girl herself (Vij, Subhashree, Anand and Thakur 2023:02).

During its early developmental phase, the field of consumer behaviour was referred to as buyer behaviour, which emphasised the interaction between consumers and producers during the purchase in the 1960s and 1970s. However, modern marketers now recognise that consumer behaviour is a continuous process that extends beyond the moment of transaction when consumers exchange money or use a credit card to acquire a product or service. This exchange, which signifies a transaction where two or more entities swap something of value, remains a vital element of marketing. In this context, a consumer is an individual who identifies a need or desire, completes a purchase, and subsequently disposes of the product through the three stages of the consumption process (Solomon 2018:29).

Consumer behaviour is characterised by various pleasure-seeking tendencies and expenditure allocations, as pointed out by psychologists and consumer behaviour experts. These drives are manifested in diverse ways by individuals, who are influenced by factors like demographics, social dynamics, geography, and cultural nuances. Although predicting individual behaviour is challenging, a comprehensive understanding of customer types and their responses in different scenarios, along with careful observation of purchasing patterns, can improve the ability to effectively cater to their needs. This approach not only contributes to heightened customer satisfaction but also recognises the complexity of consumer behaviour and provides opportunities for businesses to adapt and thrive in diverse markets (Agarwal 2021:05).

The theory of planned behaviour posits that human actions are influenced by three primary factors: perceptions of potential outcomes, opinions of significant others, and confidence in executing the intended behaviour. These factors collectively contribute to the formation of an individual's intention to engage in specific behaviour. In the context of consumer behaviour, the translation of intention into action depends on one's level of behavioural control. Effective interventions, therefore, rely on modifying the beliefs that underpin intentions and ensuring

individuals possess the necessary skills and resources to enact their intentions. This comprehensive approach not only addresses the cognitive processes driving consumer behaviour but also emphasises the practical aspects necessary for successful implementation, thereby enhancing the effectiveness of behavioural interventions (Hagger, Cameron, Hamilton, Hankonen and Lintunen 2020:17).

An individual's attitude refers to their overall evaluation of specific behaviour. On the other hand, subjective injunctive norms refer to the perceived approval or disapproval of influential figures regarding acceptable behaviours. Similarly, subjective descriptive norms pertain to the perception of what behaviours are commonly practiced by the majority (Solomon 2018:298). According to Ajzen (2020:318), attitude is an individual's overall evaluation of a particular behaviour, while subjective injunctive norms indicate the acceptance of influential individuals regarding what is considered acceptable or unacceptable. In contrast, subjective descriptive norms denote the prevailing perception among the majority regarding common practices (Szmigin and Piacentini 2018:230).

The Engel-Kollat-Blackwell model offers a robust and comprehensive framework for comprehending consumer decision-making and the associated process. It effectively outlines the various stages and relationships involved, serving as a valuable tool for marketers to analyse consumer behaviour from problem recognition to post-purchase evaluation. Furthermore, this model recognises the dynamic nature of decision-making and highlights the intricate interplay between internal and external factors (Agarwal 2021:85).

The internal factors that exert influence are categorised into four main groups: cultural, social, personal, and psychological.

- Cultural factors pertain to influences on the behaviour of broader consumer groups.
- Social factors involve reference groups like family, social roles, and consumer status.
- Personal factors impacting purchasing behaviour include age, profession, income, lifestyle, and the individual's personality or self-image.
- Psychological factors encompass consumers' unique motivations, attitudes, perceptions, and learning behaviours (Kotler and Armstrong 2018:159-169).

Internal influencing factors can be categorised into four main groups: cultural, social, personal, and psychological factors. Cultural factors encompass the influences on the behaviour of larger consumer groups. Social factors include reference groups such as family, social roles, and the consumer's status. Personal factors that affect buying behaviour involve aspects such as age, profession, income, lifestyle, and the consumer's personality or self-image.

Psychological factors consist of individual motivations, attitudes, perceptions, and learning behaviour unique to each consumer (Meyer-Heydenrych, Human, Maduku, Meintjes and Nel 2019:92).

2.3.1 Engel, Kollat and Blackwell Model of consumer behaviour

The Engel, Kollat, and Blackwell (EKB) model, initially presented in 1968, provides an understanding of consumer behaviour by considering the interplay between decision-making stages and the impact of internal and external factors. This model served as a fundamental framework for elucidating the connections between behaviour and attitudes. In 1978, the model underwent revisions to enhance its functionality and suitability for empirical testing, thereby strengthening the associations between variables and improving the precision of these relationships for increased empirical rigour (Engel, Kollat and Blackwell 1978:4).

The Engel, Kollat, and Blackwell (EKB) decision-making model, initially formulated in 1968 by J.F. Engel, D.T. Kollat, and R.D. Blackwell, derives its name from the initials of its founders. In subsequent revisions, the model underwent further development in collaboration with a new author, Miniard, resulting in its rebranding as the Engel, Blackwell, and Miniard (EBM) model. Despite the updated authorship, the EBM model maintains its foundational structure, rooted in the principles of the original EKB framework, while continuing to enhance its core decision-making processes (Engel, Blackwell and Miniard 1995:148).

The original Engel-Kollat-Blackwell theory of consumer decision-making, formulated in 1968, underwent thorough analysis to augment its descriptive capacity. Revised editions were subsequently published in 1973 and later in 1978. This framework was rooted in learning theory, with a particular emphasis on the initial stage of information acquisition during the product purchase process. Marketers were required to concentrate on the stages delineated by this model that were relevant to consumer choice (Botha, Donga, Du Toit, Enlers, Jacobs, Maree, Mugobo and Shambare 2019:357).

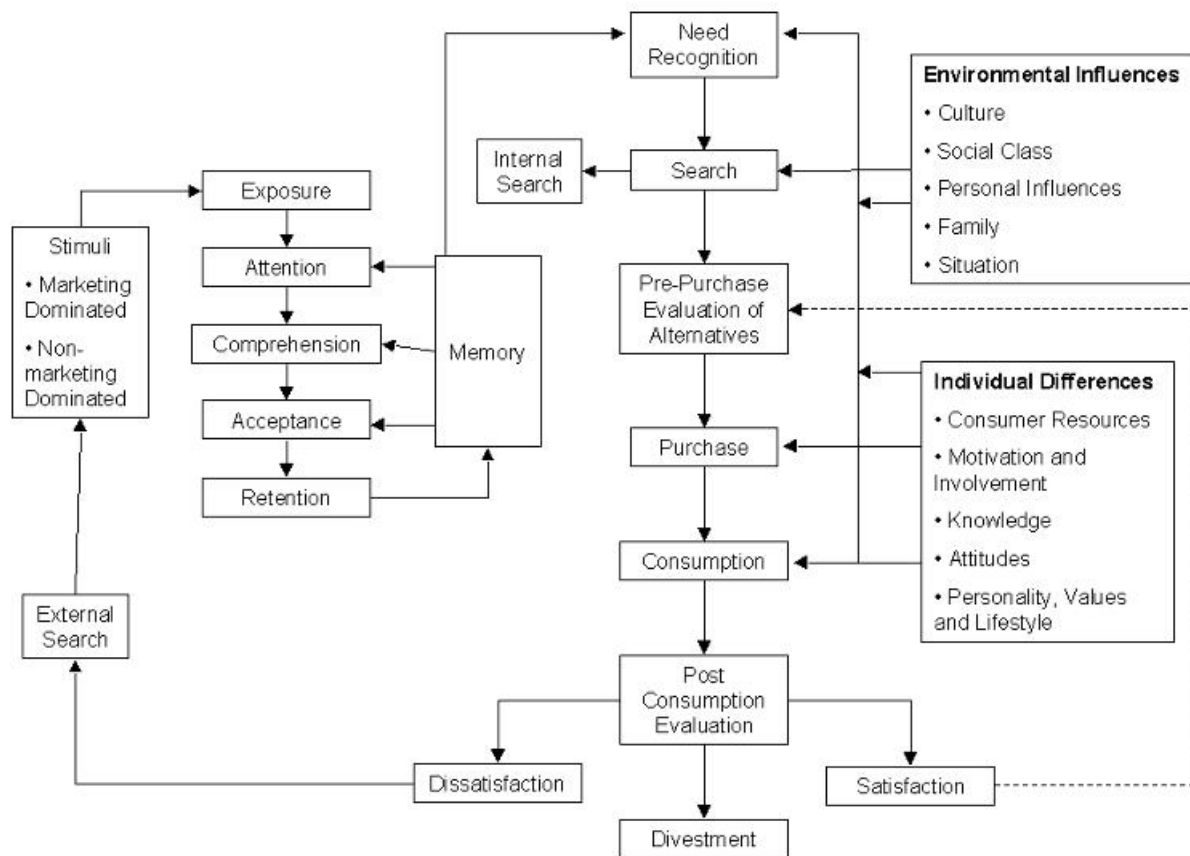


Figure 2.1: Engel-Kollat-Blackwell Model (Engel, Kollat and Blackwell 1978:4)

This study will concentrate on the stages of the decision-making process, with particular attention to the variables that influence this progression, aligning with the study's core objectives. The model outlines a sequential approach to decision-making, which includes the following stages: (i) problem recognition, (ii) information search, (iii) evaluation of alternatives, (iv) purchase, and (v) post-purchase evaluation.

2.3.2 Need recognition

The purchasing process commences with the identification of a need, whereby the consumer recognises a problem or desire that necessitates satisfaction. This need can either originate internally when a fundamental physiological or psychological requirement intensifies, reaching a point where action becomes imperative. On the other hand, external factors may trigger the recognition of a need. During this initial stage, marketers should conduct comprehensive research to grasp the essence of consumer needs, the root causes, and the specific routes that prompt individuals to pursue products or services. This understanding is pivotal in efficiently targeting and catering to consumer motivations (Kotler and Armstrong 2018:176).

The need recognition phase of the consumer decision-making process was significantly impacted by the COVID-19 pandemic, presenting consumers with new challenges and issues, including health concerns, financial instability, and limited access to goods and services (Kapoor 2021:3). Consumers became aware of the importance of health and safety products such as sanitisers, face masks, and home gym equipment. The recognition phase involved categorising needs and desires, including distinguishing between actual or perceived needs, as well as wants and desires. Due to the COVID-19 situation, customers were compelled to use hand sanitisers. Hand sanitiser became essential for individuals in various settings, such as work, home, or when outside, thus creating a demand for customers to purchase hand sanitisers. The use of hand sanitisers was encouraged by friends, peer groups, and professionals, such as a doctor (Kotni 2020:366).

2.3.3 Search

Information search is a crucial step in the consumer decision-making process, during which individuals actively seek out data to satisfy a recognised need. Depending on the urgency and availability of a suitable product, a consumer may either make an immediate purchase if the solution is close at hand or defer the decision and store the need for future reference. When pursuing information, consumers draw from various sources, including personal networks (family, neighbours and friends), commercial channels (advertising, manufacturer and retailer websites, sales personnel, mobile applications, packaging, and in-store displays), public outlets (social media, mass media, consumer ratings, online searches, and peer reviews), and experiential encounters such as examining or using the product directly (Kotler and Armstrong 2018:176).

Consumers sought information regarding product availability, shipping times, and safety measures implemented by retailers. When seeking information, consumers accessed various information providers to meet their defined wants, needs, and desires. Data was available from multiple sources, including television, radio, print, online, out-of-home, and social media. Additionally, opinions from friends, peers, family members, retailers, experts, and social media influencers influenced the information search. For instance, when purchasing hand sanitisers, customers consulted multiple sources to acquire more knowledge about hand sanitisers and various relevant companies (Kotni 2020:367).

2.3.4 Evaluation of alternatives

Marketers should possess a profound understanding of alternative evaluation, which pertains to the way consumers scrutinise and evaluate information to arrive at decisions when faced

with competing brands. Nevertheless, this process is not consistent across all purchasing scenarios; instead, consumers employ multiple evaluation mechanisms. The approach consumers adopt to assess their choices varies considerably, influenced by both their personal attributes and the purchase context. In certain cases, consumers engage in deliberate analysis and logical decision-making, meticulously considering their options through logical reasoning (Kotler and Armstrong 2018:177).

The evaluation of alternatives in the consumer decision-making process was influenced by various factors during the COVID-19 pandemic. Consumers assessed products based on their perceived safety and health benefits. They were also more likely to select products that were locally sourced or eco-friendly (Lee and Shin 2021:175). Furthermore, consumers considered the social responsibility of brands and their responses to the pandemic. Consumers evaluated different brands using specific criteria often referred to as the consumer black box, which varied from one consumer to another. The evaluation factors included brand image, pricing, availability, recommendations, quality, and distinctiveness. For instance, when it came to hand sanitisers, consumers sought product attributes such as being alcohol-based and the alcohol content because of public information provided by doctors and other professionals (Kotni 2020:368).

2.3.5 Purchase decision

During the evaluation phase, the consumer ranks various brands and develops purchase intentions. Typically, the decision will lean toward selecting the preferred brand; however, two key factors may intervene between the intention to purchase and the actual purchase decision. The first factor is the influence of others' opinions. For instance, if a significant person in your life believes you should opt for the lowest-priced car, it may decrease the likelihood of purchasing a more expensive model. The second factor involves unforeseen situational variables. A consumer may base their purchase intention on anticipated factors such as pricing, income and perceived product benefits, but unexpected changes in these areas can alter the final decision (Kotler and Armstrong 2018:177).

The purchase decision phase in the consumer decision-making process was significantly impacted during the pandemic. There was a notable increase in online purchases, leading to a global rise in e-commerce sales (Statista 2021). To minimise physical contact, consumers also showed a preference for contactless payment methods (Kapoor 2021:3). For instance, consumers carefully evaluated alternatives before making a purchase and opted for the best brand available. Additionally, factors such as location, timing, and purchase method played a significant role in influencing the consumer's decision. When it came to hand sanitisers,

customers specifically chose stores like medical supply stores, general stores, and online portals (Kotni 2020:369).

2.3.6 Post-purchase evaluation

Post-purchase evaluation is crucial in influencing consumer satisfaction and is a primary concern for marketers. Following the purchase of a product, consumers evaluate their experience to determine their level of satisfaction or dissatisfaction with their decision. This evaluation is primarily influenced by the degree to which the perceived performance of the product aligns with the consumer's expectations. If the product fails to meet expectations, the consumer will experience disappointment. Conversely, if it meets expectations, satisfaction is attained, and if the product exceeds expectations, the consumer will be pleasantly surprised. (Kotler and Armstrong 2018:177).

The post-purchase evaluation phase in the consumer decision-making process has undergone significant changes because of the pandemic. Consumers now express heightened concerns about product safety and hygiene. Moreover, they are more inclined to leave online reviews and provide feedback regarding their shopping experience, particularly regarding the safety measures implemented by retailers (Lee and Shin 2021:175). If customer expectations and perceptions are met, their satisfaction with the purchased brand increases, leading to positive consumer perception, improved brand image, and positive word-of-mouth advertising. Conversely, if customers are dissatisfied with their purchase, it results in negative consumer perception, a decline in the brand's reputation, unfavourable word-of-mouth advertising, and the potential for brand switching during the next purchase. The post-purchase behaviour of hand sanitiser brands is influenced by various behavioural factors, such as customer happiness, customer discontent, shifts in brand loyalty, and brand recommendations (Kotni 2020:370).

Depending on the complexity of the current issue, a consumer initially identifies a need before proceeding with an inquiry. After evaluating pre-purchase options, one explores the available choices based on reviews, resource availability, and other relevant factors. Subsequently, one makes a purchase decision based on the product or service's utility. Once utilised, the buyer conducts post-usage analysis, commonly known as feedback. The ongoing divestment phase anticipates the eventual discontinuation of the organisation or product. COVID-19 has played a significant role in social and economic transformation (Garg and Kumar 2020:01).

The Engel Kollat Blackwell model is widely recognised as a prominent consumer behaviour model in contemporary research. It is commonly referred to as the learning framework of

consumer behaviour. This model comprehensively depicts consumer behaviour by encompassing all the factors involved in decision-making and elucidating their interrelationships (Jisana 2014:39). The study will adapt the Engel Kollat Blackwell model and focus on individual differences, environmental influences and consumer decision-making variables.

2.3.7 Individual differences

Individual differences encompass numerous elements. Previously, consumers may have harboured specific beliefs, preferences, or dislikes toward a product or brand, which influenced their purchasing decisions. Historically, diverse buyers demonstrated distinct motivations for either buying or refraining from purchasing a product. Furthermore, each consumer possessed distinct personality traits that impacted their reactions to different alternatives (Agarwal 2021:87).

2.3.7.1 Motivation

Motivation is a crucial factor in shaping consumer behaviour and influencing individuals' purchasing decisions. Consumers are driven by a hierarchy of needs, which encompass basic physiological and safety needs, as well as social, esteem, and self-actualisation needs. However, it is important to note that basic and security needs exert the greatest influence, as they must be satisfied before other needs can be addressed. Consequently, these foundational needs serve as primary motivators for consumers when considering the purchase of goods and services, ultimately shaping their behaviour in the marketplace. A comprehensive understanding of this hierarchy is essential for effectively analysing and predicting consumer behaviour (Schiffman and Kanuk 2014:74).

2.3.7.2 Attitudes and beliefs

Through experience and learning, individuals develop beliefs and attitudes, which significantly influence their purchasing behaviour. A belief refers to a descriptive thought a person holds about something, which can stem from knowledge, opinions, or faith, and may or may not carry emotional weight. Marketers focus on consumer beliefs regarding specific products and services because these beliefs shape the overall image of the product or brand, directly impacting purchasing decisions. Attitudes, on the other hand, represent a person's consistent evaluations, feelings, and behavioural tendencies toward an object or idea, further guiding their buying behaviour (Kotler and Armstrong 2018:173).

2.3.7.3 Lifestyles

Lifestyle encompasses an individual's activities, interests, preferences, and opinions, thereby reflecting their manner of living and interaction with the environment. A person's lifestyle and values are moulded by intrinsic attributes cultivated over time. Comprehending the lifestyle and behaviours of their customers, including how they allocate their time and their perspectives on various matters, becomes imperative for retailers to fine-tune merchandise selection and improve the in-store experience. Consequently, consumers' lifestyle and values assume a pivotal role in shaping their decision-making process, thereby influencing their purchasing choices and preferences (Jisana 2014:36).

2.3.7.4 Personality

Individuals play a pivotal role in consumer behaviour, exerting a profound influence on how individuals perceive products, evaluate brands, and ultimately make purchasing decisions. It encompasses a range of distinctive psychological traits that shape an individual's behaviour, responses, and interactions within their environment. Key traits such as introversion or extroversion, risk tolerance, and self-confidence have a significant impact on consumer preferences and choices, each yielding distinct patterns. By comprehending these personality traits, marketers can achieve a more precise understanding of consumer behaviour, enabling them to develop strategies that align with the unique characteristics driving purchasing decisions (Barry 2017:98).

2.3.7.5 Knowledge

Knowledge is acquired through the process of gathering and assimilating information via learning. This information forms the basis of the consumer's understanding of products, brands, and usage. Consumers then organise this information into meaningful categories, creating what is commonly known as a knowledge structure. This structured knowledge is of utmost importance to marketers, as consumers heavily rely on it to categorise, interpret, and label products. By comprehending how consumers utilise their existing knowledge, marketers can strategically position their products within these mental frameworks, thus influencing purchasing decisions (Noel 2017:108).

2.3.8 Environmental differences

The significance of environmental influences in consumer decision-making cannot be overstated. These influences encompass a wide range of factors, including cultural norms, social class, reference groups, family dynamics, and broader situational variables. It is worth

noting that social media platforms have emerged as a particularly influential environmental factor, shaping the way consumers gather information and form preferences, especially in areas such as travel and retail. Additionally, financial conditions and situational factors, such as economic crises, exert a considerable impact on consumer choices by either constraining or expanding the range of available options. Recognising these external influences is crucial in comprehending why consumers do not always adhere to a linear decision-making process, as they must constantly adapt to ever-changing environmental cues (Kotler and Armstrong 2018:193).

2.3.8.1 Social class

Individuals sharing common values, interests and behaviours form social classes, which are enduring and structured divisions within society. Social class is not solely determined by a single factor such as income but rather established through a combination of factors, including occupation, income, education, and wealth. (Schiffman and Kanuk 2014:282).

2.3.8.2 Family

The family serves as a primary socio-cultural influence on the decision-making and behaviour of its members. It is defined as a group of two or more individuals who are connected by blood, marriage, or adoption and reside together. In the realm of consumer socialisation, the family plays a vital role. This process entails both children and adults acquiring knowledge about consumer behaviours, including where, what, and when to make purchases. The family environment assumes a significant role in cultivating purchasing patterns and preferences, ultimately shaping long-term consumer behaviour (Boshoff 2019:110).

2.3.8.3 Culture

Culture is a fundamental driver of individuals' desires and behaviours, as much of human behaviour is acquired through learning. As individuals mature within a society, they adopt values, perceptions, desires, and behaviours from their family and other influential institutions. Each society or group possesses its own distinct culture, and the impact of culture on consumer behaviour can vary greatly between regions and countries. Marketers actively track cultural changes to identify emerging needs and capitalise on new product opportunities that align with evolving consumer preferences. Gaining a deep understanding of these cultural dynamics is crucial for developing successful marketing strategies (Kotler and Armstrong 2018:159).

2.4 COVID-19 SITUATIONAL VARIABLES

The consumer behaviour scenarios described can be analysed using five key dimensions: social surroundings, physical surroundings, task definition, antecedent states and temporal perspectives. While these dimensions are universally present across cultures, consumer responses to these situational factors can vary significantly depending on the cultural context. Research in this field has primarily been conducted in the United States; however, marketers must exercise caution when generalising findings to different cultural environments, considering potential variations in consumer behaviour (Hawkins 2016:475).

- I. Physical surroundings such as decor, lighting, sounds, and aromas, significantly impact consumer behaviour, particularly in retail environments. The store's overall atmosphere, also known as the Servicescape in service industries, influences consumer perceptions and emotions, ultimately shaping their shopping experience and purchase choices. Elements like colour schemes, music, and scents have the potential to improve mood, prolong shopping duration, and boost spending. However, overcrowding can have adverse effects, underscoring the importance of effective space management by retailers. It is crucial for these environmental factors to be customised according to cultural preferences to maximise their impact (Solomon 2018:282).

The COVID-19 outbreak significantly increased the demand for products in the online physical goods market. Initially, many businesses and customers responded by stockpiling various items, including medical supplies such as hand sanitisers, disinfectants, and surgical face masks, as well as non-perishable goods and toilet paper. Additionally, businesses had to implement teleworking measures, while individuals confined to their homes turned to the internet for leisure and communication purposes. This surge in online activity, particularly through mobile phones and other internet-enabled devices, led to increased demand for a wide range of digital services and online purchases. Consequently, numerous brick-and-mortar businesses reallocated their resources to focus on online commerce (World Trade Organisation 2020:2).

- II. Social surroundings play a crucial role in shaping consumer behaviour, as individuals are significantly influenced by the presence of others in various situations. People's actions, particularly their shopping choices, are often guided by social expectations, especially in highly visible activities. To appear more interesting, consumers may actively seek out variety in public settings, while the power of social influence can also impact their purchasing decisions, as it can help alleviate potential embarrassment associated with certain products. It is important to note that shopping is not merely a

transactional activity but rather a social experience, where the presence of friends can greatly influence impulse purchases. Considering this, marketers can strategically leverage the social context in their advertising efforts to enhance brand appeal and effectively align with consumer behaviours across different viewing situations (Botha et al. 2019:259).

Contactless digital payments through mobile money promoted merchant payments and supported social distancing measures, limiting physical cash transactions and in-person interactions along the supply chain. Additionally, mobile money helped individuals' smooth consumption and managed risk during the lockdown caused by the COVID-19 pandemic (Bongomin, Balunywa, Basalirwa, Ngoma and Ntayi 2023:03). Near-field communication technology (NFC) was hailed as one of the most influential and hygienic payment methods to minimise virus transmission, as transactions did not necessitate physical contact. The pandemic transformed mobile payments from convenience to a vital necessity. Consequently, consumer payment habits, social behaviour and society underwent significant and likely lasting changes (Ooi and Tan 2022:937).

- III. Task definition encompasses the underlying objective of a consumer's engagement in a consumption activity, presenting a significant differentiation between purchases made for personal use and those intended for gift-giving purposes. The act of gift shopping is approached by consumers in a distinct manner, often influenced by societal expectations, customary practices, and the aspiration to convey affection or invoke reciprocation. The characteristics of a gift are contingent on the occasion and the nature of the relationship, with practical gifts being commonly selected for weddings and more light-hearted gifts preferred for birthdays. The act of gift-giving can elicit feelings of unease, as gifts carry symbolic implications that mirror the giver's perception of the recipient and the desired interpersonal dynamic between them (Hawkins 2016:482).

Consumers' purchasing habits shifted to align with the need to stock up on emergency supplies. People bought items categorised as essential, focusing on products that could be stored for an extended period or used later. This buying trend resembled the patterns observed during times of war. As the transition into what was coined the new normal took place, behavioural changes became evident. Consumers increasingly turned to online shopping, leveraging delivery services to minimise physical contact (Naeem 2021:378).

- IV. Antecedent states refer to transient personal attributes, such as moods and momentary conditions, which exert an influence on consumer behaviour. Moods, including happiness or sadness, have the potential to impact decision-making

processes and shopping patterns. Positive moods may stimulate browsing activities and impulse purchases, while negative moods could potentially result in compulsive buying. Marketers could leverage mood states by aligning advertisements with uplifting content, thereby enhancing the effectiveness of their campaigns. Momentary conditions, such as fatigue or limited financial resources, also play a role in shaping specific consumer behaviours. For instance, individuals experiencing fatigue may actively seek out products or services that provide an energy boost, while those facing financial constraints may prioritise seeking out financial services that cater to their short-term cash needs (Botha et al. 2019:269).

COVID-19 had significant psychological consequences, creating new problems for public health. This included fear, which has a distressing effect; social isolation linked to poor mental health outcomes; and compulsive buying characterised by excessive buying-related thinking and behaviour and consequently causing suffering and impairment. Although compulsive buying is not extremely common in the public, it can become more common during unsettled times like the COVID-19 pandemic. People started buying compulsively due to the pandemic, focusing mainly on antibacterial wipes and hand sanitiser packets. Notably, purchasing obsessively during a pandemic can heighten worry and anxiety, as well as the risk of infections as the number of individuals frequenting small retail areas increases. Given the number of people who visit relatively limited areas, like supermarkets, obsessive purchases during a pandemic can increase fear and anxiety and the danger of infection (Jaspal, Lopes and Lopes 2020:3).

- V. Temporal perspectives encompass the impact of time on consumer behaviour. In situations where time is constrained, consumers, particularly among dual-career and single-parent households, tend to expedite their decision-making process and brand loyalty. Retailers such as 7-Eleven adeptly cater to time-sensitive consumers, whereas the convenience and adaptability of online shopping resonate with individuals leading hectic lives, thereby contributing to the expansion of e-commerce (Solomon 2018:382).

During the COVID-19 pandemic, certain local and state authorities mandated the closure of non-essential retailers. These retailers, in turn, implemented various temporary measures. These measures included the closure of specific stores, temporary layoff or permanent termination of employees, and the modification of in-store selling procedures. Changes included restricting the number of customers allowed inside stores simultaneously and adjusting operating days and hours (Yildirim 2021:03).

2.4.1 Locally produced products

The South African Social Security Agency (SASSA) distributed food parcels in South Africa, intending to supply essential food items to citizens facing food insecurity. This initiative led to significant spikes in demand for dry beans, maize, and soya at the local level. According to a key informant, commercial farmers reaped the benefits, experiencing higher local selling prices for these commodities because of the food parcels. Additionally, farmers found improved market access, as they were able to sell directly at the farmgate (Tripathi, Smith, Sait, Sallu, Whitfield, Jankielsohn, Kunin, Mazibuko and Nyhodo 2021:08). However, pandemic-induced impulse buying led to a surge in stockpiling, with people purchasing essential items like food, medicine, and hygiene products in bulk. This trend saw consumers favouring locally manufactured goods, bolstering the country's gross domestic product (GDP) during the lockdown (Verma and Naveen 2021:27). As the COVID-19 pandemic escalated, consumers became increasingly hesitant to purchase food from physical grocery stores. Concerned about overcrowding and close contact with others, they transitioned from large-format retail establishments to smaller, local retailers and neighbourhood shopping options (Kusz, Witek, Kusz, Chudy-Laskowska, Ostyńska and Walenia 2023:02)

2.4.2 Online and offline purchasing

Research on consumer purchasing patterns has revealed that millennials, especially during the COVID-19 pandemic, showed a preference for minimum social interaction by customising their purchases through online channels that utilised speech bots and algorithms. Moreover, customers' sentiments towards a brand had been assessed through social media data. Interestingly, despite the significant increase in online shopping in Thailand due to the pandemic, some Millennial consumers still preferred to visit physical stores. Additionally, certain younger generations changed their fashion choices to exhibit a greater commitment to sustainable consumption during COVID-19 (Cattapan and Pongsakornrungrungsilp 2022:7). The surge in online shopping during the outbreak can be directly attributed to the growing concerns about the risk of infection (Hartono, Ishak, Abdurrahman, Astuti, Marsasi, Ridanasti, Roostika, and Muhammad 2021; Retail Customer Experience 2020).

In March 2020, South African consumers commenced online grocery shopping for the first time as a result of the COVID-19 outbreak and associated movement restrictions, with 53% also acquiring products from pharmacies. Nonetheless, challenges such as unreliable and costly delivery systems, elevated prices, and inadequate Internet services impeded the growth of e-commerce in the country (Musakwa and Petersen 2023:02). According to Heyns and

Kilbourn (2022:02) members of Generation Z in emerging markets predominantly preferred to shop online using their smartphones.

2.4.3 Decrease in travel, vacation, tourism

Most restaurants were instructed to restrict their operations to take-out services. Travel limitations and stay-at-home orders, enforced by the authorities, resulted in a significant decrease in hotel occupancies and revenues. For instance, they permitted dine-in restaurants to resume operations with reduced capacity, implementing strict social distancing guidelines. Domestic and international travel restrictions were also gradually lifted (Gursoy and Chi 2020:527). However, the tourism industry being the most brutal hit. The imperative for social distancing led to the shutdown of borders and entry points as nations and territories grappled with containing the disease (Dube 2021:270).

The travel industry underwent a substantial downturn due to the COVID-19 pandemic, marked by a significant reduction in travel. This decline stemmed from various factors, including the swift global spread of the virus, unprecedented government measures such as border closures, travel restrictions, and national lockdowns, as well as the shutdown of restaurants and hotels (Orindaru, Popescu, Alexoaei, Caescu, Florescu and Orzan 2021).

2.5 LOCKDOWN AND REGULATIONS

Coronavirus, believed to have originated from animals, emerged in Wuhan, China, towards the end of 2019. Named SARS-CoV-2, the virus led to the development of the disease known as COVID-19, which rapidly spread worldwide. On 11 March 2020, the World Health Organization (WHO) declared COVID-19 a global pandemic. Initially, the virus spread rapidly in areas with significant air traffic connections to China. The concept of flattening the curve, aimed at reducing the number of critically ill COVID-19 patients to a level that can be handled by intensive care units and field hospitals, became crucial. South Africa confirmed its first COVID-19 case on 5 March 2020, as reported by the National Institute for Communicable Diseases. Having learnt from the experiences of other countries, the South African government promptly implemented a strict lockdown (later known as lockdown level 5) on 27 March 2020 (Olivier, Botha and Craig 2020:205755).

The COVID-19 environment negatively impacted physical activity, diet, and sleep. Reduced shopping frequency led to a decline in the consumption of fresh food, while the intake of foods with longer shelf life, such as frozen foods, canned goods, and sweets, increased. Bread and dairy products experienced the most minor fluctuation in consumption rates. Studies on

alcohol consumption during this period yielded conflicting results (Hajipoor, Rahbarinejad, Irankhah and Sobhani 2023:2). Amid the COVID-19 pandemic, consumers preferred food products characterised by extended shelf life, resulting in a surge in the purchase of items such as dried or canned foods, pasta, milk, milk substitutes, and frozen foods. The shift towards these products was driven by the convenience they offered to everyday home cooking. Moreover, individuals stockpiled food items, influenced by rumours or misinformation (Bakalis, Valdramidis, Argyropoulos et al. 2020; Shahidi, 2020). Government-imposed restrictions on mobility, threats to public health, economic challenges, and pervasive media coverage of negative events have profoundly influenced consumer psychology and behaviour. The retail sector, one of the most severely affected industries, has become a focal point for extensive research aimed at understanding the pandemic's impact on consumer decision-making and purchasing patterns (Gupta, Mukherjee and Garg 2023:1414). The table below illustrates the various alert levels during the COVID-19 pandemic and the corresponding regulations



SUMMARY OF ALERT LEVELS

5 ALERT LEVELS	ALERT LEVEL 4	ALERT LEVEL 3	ALERT LEVEL 2	ALERT LEVEL 1
 OBJECTIVE				
Drastic measures to contain the spread of the virus and save lives.	Extreme precautions to limit community transmission and outbreaks, while allowing some activity to resume.	Restrictions on many activities, including at workplaces and socially, to address a high risk of transmission.	Physical distancing and restrictions on leisure and social activities to prevent a resurgence of the virus.	Most normal activity can resume, with precautions and health guidelines followed at all times. Population prepared for an increase in alert levels if necessary.
 SECTORS PERMITTED				
Only essential services as per existing regulations.	All essential services, plus a limited number of sectors with a low rate of transmission and high economic or social value.	A wider range of sectors permitted with a low to moderate risk of transmission that can be effectively mitigated.	Most sectors permitted, with limitations remaining where the risk of transmission is high.	All sectors permitted.
 RETAIL PERMITTED (including stores, eCommerce and informal traders)				
Only essential goods, including food, medical products, cleaning and hygiene products, fuel, and winter goods such as blankets and heaters.	All essential goods, as well as books, stationery and office equipment. Alcohol may be sold within restricted hours, and in limited quantities, for off-site consumption. Restaurants and fast food outlets may open for delivery only.	All retail permitted at levels 5 and 4, as well as clothing stores and hardware stores.	All retail permitted. Restaurants and fast food outlets may open for delivery and take-away.	All retail permitted. Restaurants may open, with stringent social distancing measures.
 MOVEMENT				
You must stay at home unless you are an essential worker. You may leave home only to purchase essential goods or seek medical care. No inter-provincial movement of people, except for transportation of goods and exceptional circumstances (e.g. funerals).	You must stay at home except to go to work, do shopping where necessary, or seek medical care. No inter-provincial movement of people, except to return to usual place of residence, for transportation of goods and exceptional circumstances (e.g. funerals). Curfew in place between 7pm and 5am. Walking, jogging and cycling permitted.	All South Africans are encouraged to stay at home as far as possible, and limit their interactions with others. No inter-provincial movement of people, except to return to usual place of residence, for transportation of goods and exceptional circumstances (e.g. funerals).	All South Africans are encouraged to stay at home as far as possible, and limit their interactions with others. Movement between provinces at levels 1 and 2. Movement from provinces at a higher level to those with a lower level may be restricted.	You may leave home, but take precautions while interacting with others. Interprovincial movement allowed, with restrictions on international travel. Curfew lifted.
 GATHERINGS				
All public gatherings are prohibited.	All public gatherings are prohibited.	All public gatherings are prohibited.	All public gatherings are prohibited.	All public gatherings are prohibited.

Figure 2.2: Summary of alert levels and COVID-19 regulations

Figure 2.2 illustrates restrictions imposed under the COVID-19 regulations (Pophiwa et al. 2021).

South African authorities enforced a nationwide lockdown to stop an outbreak of illnesses. The limitations justified restricting meetings, limiting movement and fostering social distance in enclosed spaces. Retailers were required to allow no more than 50% of capacity inside their stores (Carlitz and Makhura 2021:02). Purchase duration and prohibitions on non-essential purchases were used to limit consumers' purchasing power. Alcohol, cigarettes, and sales of non-essential commodities were prohibited during the initial lockdown (level five). The extent of the lockdown was further controlled, extending the shopping hours to permit the purchase of previously banned products (Satgar 2020:173). The COVID-19 lockdown level four in South Africa in March 2020 forced the closure of numerous clothing retailers and altered consumer buying patterns. Consumers were only allowed to buy specific winter clothing items during the fourth level of the lockdown, including T-shirts, undergarments, shoes (except for open-toed shoes), jerseys, jeans, and coats (Kempen and Tobias-Mamina 2022:221).

On 1 June 2020, South Africa transitioned from lockdown level 4 to Level 3. The government implemented a differentiated approach to address COVID-19 hotspot areas with higher infection and transmission rates. This approach included the complete reopening of wholesale and retail trades, such as stores, spaza shops, and informal traders. Additionally, universities were permitted to accommodate up to one-third of their student population on campus. Under lockdown level 3, all sectors, including manufacturing, mining, construction, financial services, professional and business services, information technology, communications, government services, and media services, were allowed to operate if they adhered to proper hygiene and social distancing measures (Whata and Chimedza 2021:500).

What follows is an excerpt from the revised level one alert regulations that have been gazetted. Most routine activities were resumed with safety measures and health regulations implemented during alert level one regulations. People were ready to raise their alertness levels if necessary. The modified alert level one is adequate as of 1 March 2021 (Anon 2021). The four significant contexts that disrupted or governed consumers' habits were the introduction of new technology (delivery and online shopping), social contexts (changes in interactions), less predictable contexts (pandemic development), and new rules (COVID-19 regulations) (Svajdova 2020:34).

During the various levels of lockdown, different government responses to alcohol control were observed. Some nations imposed outright bans on the sale of alcohol, while others deemed off-premises sales and alcohol delivery services essential, thereby allowing additional delivery methods and relaxing restrictions on availability. Implementing total sales bans proved challenging but aligned with public health theory and research, which indicated that restricting

access to retail alcohol would reduce consumption and, consequently, alcohol-related harm. (Neufeld, Lachenmeier, and Ferreira-Borges 2020:1906).

2.5.1 Social distancing

Social distancing had a significant impact on consumers' shopping habits, leading to longer wait-times for entering shops and completing purchases. Furthermore, during lockdown level 5, the number of shoppers allowed in malls was limited to prevent overcrowding (Pophiwa, Moroane and Kenny 2021:12). The South African government implemented national lockdown regulations on 26 March 2020, which included social distancing and restrictions on movement and gatherings. The enforcement of social distancing aimed to limit the number of individuals in physical spaces. This directive posed a considerable challenge to South Africans, as it was the first time such measures were implemented. Patients who test positive for COVID-19 were required to undergo isolation, while asymptomatic individuals were placed in quarantine. In addition, outdoor gatherings including shopping venues were restricted to a maximum of one hundred people as a preventative measure (Carlitz and Makhura 2021:02).

Social distancing involved maintaining a distance of at least one metre between individuals and avoiding crowded gatherings where close contact was likely. Research demonstrated that implementing social distancing measures resulted in a decrease in COVID-19 infections and transmissions (Sewpaul, Mabaso, Dukhi, Naidoo, Vondo, Davids, Mokhele and Reddy 2021:02). To effectively manage crowds and queues, store managers worldwide have had to establish regulations such as limiting the number of shoppers allowed inside and implementing maximum capacity restrictions in checkout areas. Adapting to these measures and maintaining control posed a significant challenge for them (Perlman and Yechiali 2020:01). The picture below graphically depicts social distancing in a retail setting.

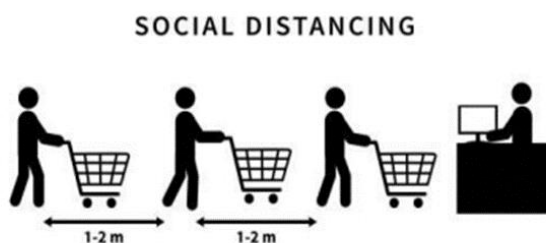


Figure 2.3: Social distancing

Figure 2.3 illustrates social distancing (Pophiwa et al. 2021)

To alleviate the effects of the COVID-19 pandemic on individuals in different regions, the South African government introduced psycho-social measures such as lockdowns, social distancing, mask-wearing, and hand sanitisation. These containment measures restricted movement, work, education, and shopping. Individuals were faced with the challenge of finding adequate space at home to accommodate work, maintain privacy, and ensure convenience. However, there was also a newfound flexibility in terms of working, attending school, and shopping. Consequently, these restrictions led to a scarcity of both space and time, thereby making all forms of consumption dependent on these factors (Abe and Mugobo 2021:86).

2.5.2 Restriction of movement

Global restriction policies prevented customers from visiting physical stores and making cash transactions, resulting in a decline in consumer demand. Consequently, businesses were compelled to revise their marketing strategies, while product shortages further impeded online retailers' ability to meet consumer needs (Hamli and Sobaih 2023:04). Restrictions on movement had a profound impact on the lives and livelihoods of individual consumers and businesses due to the first South African government regulations in 2020. Gazetted on 26 March 2020, these regulations initiated a 21-day lockdown period until 16 April 2020, which was later extended until the end of April 2020. The strict Level five lockdown included the prohibition of public transport, limited mining operations, restrictions on various service-providing institutions and businesses, and severe penalties for those who violated the regulations (Redda 2021:03).

Under lockdown level 4, movement restrictions were eased, and all South Africans were required to wear face masks whenever they left their homes. Some businesses were allowed to resume operations under specific conditions, but the government encouraged businesses to implement work-from-home strategies where possible. Additionally, activities such as walking, jogging, and cycling were permitted between 6 am and 9 am (Whata and Chimedza 2021:498).

2.5.3 Health and safety concerns

The 'no mask, no entry' policy implemented by the government prevented some consumers from engaging in purchases due to their lack of adherence to the government's safety regulations. People without face masks were not allowed admission by the trader/shopping mall security or shopping mall management. This measure ensured that everyone in the immediate vicinity wore protective face masks when entering these places. The simultaneous distribution of the government's R350 special COVID-19 Social Relief award and the standard

social grant appeared to worsen the foot traffic situation within retail environments. Since more than 17 million people nationwide already receive child, old age, and disability grants, the extra recipients added to the already heavy traffic in shopping centres, making it challenging to maintain a social distance (Rasila, Mashau and Obadaire 2020:16518). The COVID-19 pandemic spurred consumers to heighten their focus on health and well-being, resulting in a substantial increase in the demand for health and wellness products from the onset of the outbreak (Nielsen Company 2020).

In the wake of the COVID-19 pandemic, the global economy experienced a significant slowdown. Governments worldwide sought ways to assist their citizens by deferring tax payments, providing benefits to support businesses, offering wage reimbursements, and contributing to rental expenses to alleviate the adverse effects on consumer living standards. These measures had a noticeable impact on consumer spending, real estate investment, financial planning, and various aspects of daily life. Consumers adapted their shopping behaviour in response to the prevailing circumstances. The uncertainty surrounding the pandemic's duration heightened consumer awareness about expenditures, mainly focusing on health, hygiene, and food (Valaskova, Durana and Adamko 2021:01).

During the COVID-19 outbreak, consumers became highly health-conscious. They paid meticulous attention to hygiene and embraced preventative measures. Shopping behaviours underwent modifications, with fewer consumers visiting physical stores and reducing the time spent there. The emphasis on preventing virus transmission fostered trust between consumers and sellers. The paramount need for safety during shopping was crucial, influencing satisfaction and customer intent. Safety forms a positive connection between consumers and the service provided, whether in a physical store or online (Untaru and Han 2021:02).

2.5.4 Economic uncertainty

Consumers had to reconsider their purchases and consumption of goods because of the COVID-19 pandemic's impact on the world economy. Many people lost their jobs because of the pandemic and resultant economic unrest. Customers tailored their purchases to meet their fundamental needs, prioritising daily necessities, such as food and drink, over comfort and durable goods (Magzter 2020).

2.5.5 Technology adoption

The decision to discontinue the use of cash for transactions and the adoption of contactless payment technologies were both motivated by concerns regarding contagion. Recent studies

have indicated that the COVID-19 outbreak had a significant impact on the uptake and expansion of branchless banking. Additionally, since the beginning of 2020, numerous public financial institutions have highlighted risks and apprehensions. The World Health Organization, central banks, and other entities have all stressed the importance of ensuring safety in payment transactions (Huterska, Piotrowska and Szalacha-Jarmuzek 2021:3). The COVID-19 pandemic significantly transformed consumer behaviour, resulting in a considerable increase in online shopping. With the expansion of internet accessibility, businesses adapted to digital commerce, while consumers endeavoured to make informed purchasing decisions regarding a diverse range of products across multiple online platforms. During this period, consumers had the ability to shop at any time and on any day without leaving their homes, benefiting from the extensive variety of products offered by e-commerce stores (Theodorou, Hatzithomas, Fotiadis, Diamantidis and Gasteratos 2023:01). According to Heyns and Kilbourn (2022:02), there was a global shift towards digitalisation that resulted in fundamental changes in consumer behaviour.

2.5.6 Omnichannel shopping

The emergence of omnichannel shopping emerged during the period of stay-at-home orders and social isolation, resulting in a significant growth in e-commerce. Initially perceived as a temporary trend driven by the requirements of remote workers, this surge may have been expected to diminish with the financial crisis. However, enduring changes in consumer behaviour have caused businesses and consumers to embrace online services for both professional and personal needs. Consequently, customers have started to adopt an omnichannel approach, making purchases from both physical stores and online retailers (World Trade Organization 2020:4). The landscape of omnichannel commerce has undergone significant shifts as a result of the pandemic. Consequently, conventional omnichannel practices no longer function in their former capacity. Among the services offered by stores to support omnichannel operations was the practice of showrooming. Showrooming entails customers physically inspecting a product in-store prior to making an online purchase. The pandemic introduced a multitude of obstacles and complexities for customers seeking to utilise this in-store option (Mansour and Hoque 2021:9).

The COVID-19 pandemic has underscored the significant impact of digital transformation on retail businesses. In response to the exponential growth of online businesses, companies have identified and invested in various tools and systems to enhance their offerings and shopping experiences. This included the adoption of innovative digital payment options such as installment plans, mobile wallets, and even cryptocurrencies. Since the onset of the COVID-19 crisis, there have been notable advancements in the global digital payments market. This

includes the rise of mobile wallets, peer-to-peer mobile payments, real-time payments, and cryptocurrencies. These new and user-friendly cashless payment methods have garnered widespread popularity among consumers. Notably, major companies like Amazon, PayPal, Apple, and Facebook have significantly invested in online and mobile payment systems. The transition from uncoordinated online shopping environments to coordinated online businesses has created new opportunities for businesses. These advancements made shopping under restrictive conditions more convenient for consumers. As online shopping environments evolved from independent online stores to more coordinated platforms, new business models and potential for digital payment methods have emerged (Avsar 2021:101).

While omnichannel purchasing offers benefits to customers, it presents challenges for merchants. Even before the COVID-19 outbreak, retailers in South Africa faced difficulties in optimising their supply chains to support online purchasing. This was particularly true given the significant portion of the population living in rural areas with limited resources, internet access, and infrastructure, making online shopping inaccessible for many South Africans, especially those who are poor or unemployed. However, the pandemic has brought about a global retail revolution, changing the way customers make purchases and the functioning of existing retail supply networks. Interestingly, reports suggest that even as lockdown restrictions eased, many shoppers continued to reduce their in-person shopping trips in favour of safer alternatives available online (Weber 2021:4). Consequently, digital marketing emerged, and a variety of technologies and strategies were introduced to aid the promotion and sale of services and goods. Consumers utilised a variety of platforms to engage in information searches and purchases during the restricted phases of the lockdown (Arafat 2021:46).

2.6 FACTORS INFLUENCING THE DECISION-MAKING PROCESS DURING THE COVID-19 PANDEMIC

Understanding consumer behaviour has long been a shared objective among various institutions. It is a crucial aspect for businesses striving to acquire, enhance, or retain customer satisfaction while maximising profits. The key to achieving this objective is the meticulous monitoring of potential customers' needs and desires. The fundamental step in comprehending and addressing these needs and desires involves analysing past consumer behaviour. This process entails studying how individuals, groups, and organisations have historically made choices, purchased, utilised, and ultimately disposed of products or services. By delving into these patterns, marketers can gain valuable insights that inform strategic

decisions and facilitate meaningful connections with their target audience (Sant'Ana, Silva, Diogo and Nose 2021:55).

Consumer behaviour was influenced by several pivotal contextual factors. These factors include social dynamics, which encompass changes in workplace environments and interpersonal interactions with neighbours and friends. Additionally, the integration of emerging technologies, such as advancements in online shopping and delivery systems, played a significant role. Regulatory measures, particularly those resulting from the COVID-19 pandemic, also shaped consumption patterns. Finally, unforeseen contingencies, such as the ongoing evolution of the global COVID-19 pandemic, predicted the impact on consumer behaviour (Svajdova 2021:35).

During lockdown and the implementation of social distancing measures, consumers were faced with restrictions on their shopping choices, which resulted in limited access to certain locations and shortages of goods. This led to a significant change in mobility patterns and a lack of alternative transportation options. As a result, there was a shift towards localising activities such as work, schooling, and shopping, with an increasing focus on the home environment. Additionally, there was a newfound flexibility in managing time, as consumers were no longer bound by rigid schedules related to commuting, attending school, or going on shopping trips (Kaur 2020:1101).

2.7 BUYER BEHAVIOUR DURING LOCKDOWN

Due to the pandemic's extent, many countries limited their export of items considered essential to and from South Africa. The demand for medical supplies increased as the number of infected persons grew. South Africa reduced or removed tariffs to facilitate the import of crucial medical supplies, as the country did not have the capability of mass production. The government advised consumers to purchase essential goods such as masks and sanitiser. The various lockdown levels within the Disaster Management Act facilitated the process (Baldwin and Evenett 2020:77).

Governments worldwide have enacted similar export restrictions in response to the COVID-19 outbreak. For instance, the Indonesian Ministry of Trade announced on 18 March 2020 that face masks, hand sanitisers, and specific medical equipment would be temporarily prohibited from export until 30 June 2020. Similar goods, as well as all sorts of ventilators and anti-malarial medications, were banned from export by India. Additionally, certain countries wishing to buy these products experienced a shortage because of these export limitations (Carreno, Dolle, Medina, and Brandenburger 2020:405). In South Africa, as the country entered adjusted

Level 3 lockdown, various establishments, including cinemas, theatres, galleries, museums, libraries, archives, and casinos, were granted permission to resume operations. However, these venues were subject to a capacity limit of 50% and were required to close by 21:00. This measure aimed to ensure that both employees and customers could comply with the 22:00 curfew and return home safely (Ferreira 2020).

Some rules had to be followed during the COVID-19 predicament, when millions of people were told to stay safe and stay home. The lockdown came in five different forms, the first of which prohibited people from leaving their homes, the second of which allowed people to buy necessities but only for a short period, and the third of which allowed for extended availability of necessities. Many individuals wanted to isolate themselves at home; therefore, they bought necessities through e-commerce sites that delivered the items (Galhotra and Dewan 2020:864). The retail industry therefore has experienced decreased foot traffic at shopping centres and movie theatres. Given the situation where some retailers discontinued their services, employees' jobs were at stake. It was interesting to note the increased homestays. During the pandemic, there was a significant increase in demand for fast-moving consumer goods (FMCG), for example, milk, groceries and hygiene products (Debata, Patnaik, and Mishra 2020:4).

The declaration of the lockdown made consumers feel unsafe and caused panic. Forecasting a lack of necessities prompted people to flock to the markets for necessities. Essential items, such as medications, face masks, hand gloves, and hand sanitisers were being sold illegally by vendors. The news on television and in other media significantly created anxiety. Online marketers stopped providing their services during the lockout to safeguard the lives of both their staff and customers (Kadam, Mahavidyalanya, and Vidyapeeth 2020:3074). Customers stocked up on necessities because of the sudden changes in supply chain and logistics. Impulsive purchases of soap, toothpaste, prepared foods, bakery items, and other basics became common. Compared to their usual shopping, the demand for critical commodities caused price increases and prompted monthly advanced purchases. FMCG, which falls under the necessary goods category and sold during the lockdown due to COVID-19, were anticipated to see an increase in demand. Home delivery of necessities had also begun to meet demand (Kaur and Sharma 2020:3127).

Many manufacturers halted the production of non-essential items. This corrective measure was done to supplement and support the production and distribution of essential items. As consumers' demand for crucial products increased, businesses attempted to match these demands. Due to limited options within stores, consumers were forced to focus on essentials,

leading to stockpiling (Sandeep, Maheswari, Prabhu, Prasanna, Jayalakshmi, Suganya and Benjula 2020:310). Due to the COVID-19 pandemic's rapid spread, consumers engaged in impulsive purchases and experienced unanticipated panic buying. The demand for necessities had multiplied, and businesses were unable to keep up with the unexpected growth in customer demand. As a result, there was a disruption in the supply chain and a shortage of necessities in superstores, which created more anxiety amongst consumers. The COVID-19 pandemic caused supply and demand shocks that reverberated throughout the United States and the rest of the world (Ahmed, Streimikiene, Rolle and Duc 2020:8).

Psychological elements that affect consumer behaviour include fear, worry, stress, sadness, self-justification, personality qualities, and perceptions of economic stability. Notably, the emotions of fear and anxiety brought on by perceived sensations of instability and insecurity are what are causing these behavioural modifications. It is noteworthy that all these variables have been linked to panic buying. This phenomenon happens when fear and panic impact behaviour and cause people to buy more than usual. Panic buying is described explicitly as a herd behaviour when customers purchase a sizable number of goods before, during, or after a calamity. These reactions may lead people to spend money to feel safe, at ease, or momentarily escape the world (Di Crosta et al. 2021:3). During the pandemic, which continued to cause significant disruption, consumer behaviour underwent a profound transformation. Various underlying factors contributed to heightened uncertainty, triggering anxiety among consumers and resulting in distinct purchasing patterns. One such behavioural response was panic buying, characterised by the excessive procurement and stockpiling of goods in anticipation of potential supply chain disruptions (Dash 2023:01).

2.7.1 Customer value

Yazdanparast and Alhenawi (2022:818) delved into the repercussions of the pandemic on how Chinese households operated and discovered a noteworthy surge in savings along with heightened financial constraints, mainly linked to concerns about potential job or income loss. South Africans were expected to allocate a consistent percentage of their nominal income toward consumption, with the remainder designated for savings, in anticipation of a possible reduction in income (Heerden and Roos 2021:109).

When the pandemic initially hit, the fear of infection prompted a societal reaction marked by panic purchases and a rush for supplies. Yet, following the initial surge in consumption, the practical implications of shortened working hours became apparent. This realisation triggered a decline in both consumer demand and business confidence, resulting in a subsequent reduction in spending and investment (Krüger and Meyer 2021:251). During a crisis, people

rediscovered their love for cooking and integrated it with expert advice on the importance of proper nutrition for better defence against the virus. Consequently, there was a surge in the amount of money spent on food, driven by escalating prices resulting from increased demand for food products (Pappalardo, Selvaggi, Pittalà and Bellia 2022:07).

2.7.2 Consumer spending

Social distancing measures compelled individuals to seek and adopt alternatives for tasks like shopping, working, attending school, and staying informed. As a result, many communicated with mobile devices, which induced an increase in mobile data purchases (Fischer, Tonder, Gumede and Lalla-Edward 2021:02). The pandemic increased demand for data as people relied heavily on the internet for various purposes (De', Pandeyb and Pal 2020:03). The COVID-19 pandemic significantly impacted consumer behaviour globally, prompting a shift in purchasing patterns. Consumers increasingly prioritised essential items, such as home appliances and supplies, over discretionary products like clothing and home décor (Tantawi 2024:03).

Kempen et al. (2022:223) suggested that during the pandemic, economic hardships encountered by consumers resulted in reduced purchases, given that consumers had less money to spend. Additionally, social and personal norms might have influenced consumers' motivation to reduce their fashion consumption. Restaurants, pubs, hotels, and tourism agencies had to shut down. During the fourth and fifth stages of lockdown, alcohol and cigarette sales were prohibited. Clothing stores also faced closures in the initial weeks of the lockdown. South Africa underwent one of the strictest lockdowns globally (Dobbelstein and Naidoo 2019:70).

2.7.3 Family

The perceived risk refers to the uncertainty experienced by consumers when they are unable to anticipate the outcomes of their purchase decisions. This definition underscores two critical elements: uncertainty and consequences. The extent of risk perceived by consumers, as well as their willingness to tolerate risk, greatly impact their purchasing strategies. It is crucial to acknowledge that consumers are influenced by the risks they perceive, irrespective of the actual existence of those risks (Schiffman and Kanuk 2014:154). The perception of risk by the consumer that a specific product would not fulfil their expectations was a significant component in the purchasing decision. Before COVID-19, customers often sought product validation from friends, family, considered specialists, and opinion leaders to reduce their perceived risk. The COVID-19 pandemic, however, limited customers' access to their social

influencers directly. Fortunately, social networking platforms allow users to communicate with a greater number of people without physically meeting them. Social media became more critical during the COVID-19 pandemic as consumers engaged with influencers to lower their perceived risk (Mason, Narcum and Mason 2021:06).

2.7.4 Shopping patterns

By late August 2020, lockdown level 2 had been implemented, granting permission for interprovincial travel for both business and leisure. Licensed restaurants were also authorised to sell alcoholic beverages for on-site consumption throughout the week, with the condition of adhering to the curfew hours. The nightly curfew, which commenced at 22:00, providing an additional hour for business operations was embraced by restaurateurs (De Witt 2020 as cited by Mathekga 2022:09). Consumer behaviour across various product categories had undergone a fundamental transformation, reflecting shifts in purchasing patterns, preferences, and decision-making processes (Bashar, Nyagadza, Ligaraba and Maziriri 2024:586)

2.7.5 Customer delivery

E-commerce platforms were crucial in delivering essentials, allowing people to purchase items like masks, sanitisers, and necessary commodities. E-commerce facilitated safe shopping for essentials and allowed farmers to engage directly with wholesale buyers. As infections rose, people grew enthusiastic about exploring new online purchasing options for safety reasons (Galhotra and Dewan 2020:861). Informal food traders were also challenged due to the ban on on-site food consumption. These actions necessitated that informal food traders serve meals in takeaway containers or arrange for deliveries (Rwafa-Ponela, Goldstein, Kruger, Erzse, Karim and Hofman 2022:09).

Metropolitan Health Services had opted to implement the home delivery of medication to mitigate the risk of COVID-19 among vulnerable patients and consequently minimise the overall transmission risk linked with people's mobility. The department enlisted numerous Uber drivers to retrieve and deliver the medication (Brey, Mash, Goliath and Roman 2019:2). In November 2019, Checkers introduced an on-demand mobile application named Sixty60. Although the product was launched before the onset of the COVID-19 outbreak, its popularity and subscription rates surged during the lockdown in March 2020 in South Africa. Sixty60 assured clients that their orders would be delivered within 60 minutes, with the commitment to offer the most extensive range of available products (Njomane and Telukdarie 2022:07). Companies such as Mr D and Uber Eats initiated motorcycle on-demand logistics in Cape Town. While initially focused on fast-food delivery, the COVID-19 pandemic and subsequent

lockdown regulations led to a rise in food and grocery delivery throughout South African cities, particularly in Cape Town. The surge in on-demand motorcycle delivery services was driven by heightened online consumer behaviour, boosted by widespread smartphone usage, improved Wi-Fi accessibility, and the growing popularity of the 'convenience economy' (Fortuin 2023:05).

Consumers significantly leaned towards takeaway and home delivery options for their dining preferences in response to the imperative requirement for social distancing and the closure of restaurants during the pandemic. Although there was a possibility of downtrading as individuals sought more budget-friendly options, it is noteworthy that, at least for a period, consumers gravitated towards well-known brands and household names, expressing a preference for these overvalued or private label products (Morgan 2020).

2.7.6 Shopping destinations at venues

Spaza shops were permitted to operate under the regulations established by the Disaster Management Act 2002 (Act No. 57 of 2002). However, challenges arose as statements from a government minister suggested a preference for South African-owned shops, and the confusion surrounding diverse permitting systems hindered many spaza shops from functioning (Wegerif 2020:798). During the COVID-19 pandemic, a significant number of consumers engaged in cross-shopping between online and offline channels. It was crucial to comprehend how shoppers interacted with apparel purchases amid the pandemic and whether their shopping behaviour changed to adapt to physical stores' restrictions. Additionally, it was essential to explore whether consumers found ways to navigate the retail landscape for fashion shopping available to them (Bauerová and Braciníková 2021, as cited in Kempen et al. 2022:224).

2.7.7 Consumer buying trends

The pandemic led to a surge in online shopping for groceries and essential items. Many individuals experimented with online shopping for the first time during the pandemic (Blue, Yang, Zhou, Ravin, Teng, Arguelles, Huang, Wathen, Miranda, Marcotte and Malhotra 2020: 22). Various digital platforms (Takealot, Checkers Sixty60) served diverse purposes during the lockdown. E-commerce platforms played a crucial role in ensuring the delivery of essential items, including masks, sanitisers, and necessary commodities. They facilitated the safe and convenient online purchase of essentials, offering a valuable option for individuals to meet their needs while adhering to safety measures. Moreover, e-commerce benefited farmers, allowing them to engage directly with wholesale buyers. As infection rates rose, people were

eager to explore new online purchasing alternatives for safety reasons (Galhotra and Dewan 2020:861).

2.7.8 Bulk buying

Vendor-specific vulnerabilities, like those found in fashion items and scarcity resulting from limited quantities and low prices, played pivotal roles in encouraging in-store hoarding. The perceived scarcity, stemming from restricted production, heightened the appeal of products and raised apprehensions about their future availability. Consumers sought products not just for imminent use but also due to the apprehension of potential unavailability (Çınar 2020:3870). Consumers shifted their preferences to assorted brands and products, chose substitutes when facing shortages, and exhibit heightened sensitivity towards health and hygiene. Studies on the effects of COVID-19 on consumers also showed increased expenditures on groceries and health and hygiene products (Das, Sarkar and Debroy 2021:693). During the outbreak, numerous consumers purchased masks, hand sanitiser, and other products in copious quantities due to the anticipation of panic (Lin, Yan, Zhou, Kaluri 2020:198).

A form of behaviour known as panic buying is defined by a sharp rise in purchase volume, which typically results in a spike in the price of a good or security. Panic buying results in a decrease in supply and, conversely, an increase in demand; from a macro-environmental perspective, it drives up the prices. In contrast, panic buying is associated with greed, panic selling and feelings of dread. An economy may experience panic buying for several different causes, each of which may affect the economy and monetary policy differently (Harahap, Ferine, Irawati, Nuraila and Amanah 2021:225).

COVID-19 caused panic and concern worldwide; as a result, grocery stores were crowded with individuals buying supplies to stockpile their food supply (Gazali 2020:86). Collecting emergency goods when there is a chance of supply disruptions, travel restrictions, or concern for demand-driven shortages is justified. In the early stages of the COVID-19 pandemic, stories of massive panic buying and ensuing shortages of popular commodities were widely reported. Politicians urged citizens to act responsibly in response, retailers limited the number of products shoppers could purchase in a single visit, and the UK competition authority loosened competition regulations (O'Connell, Paula and Smith 2020:249).

Germany's food-related consumer behaviour changed after the World Health Organization (WHO) declared the coronavirus illness (COVID-19) a global pandemic on 11 March 2020. Restaurants, takeout, and canteens closed, but nonperishable food sales increased (e.g.,

noodles, flour, canned food). From 9 March to 15 March 2020, Germany's demand for canned fruits and vegetables was significantly higher than typical (Lehberger, Kleih and Sparke 2020:2). Many consumers overreacted to the brand-new and unsettling scenario at the outset of the COVID-19 crisis by panic-buying goods to the extent of garnering media attention. Due to the potential for shortages, consumers made abnormally large purchases; this choice was chosen as a defensive measure. Food that could be stored for a long time or items deemed necessary for "survival," such as toilet paper, canned goods, pasta, rice, and frozen goods, were purchased. The need for hygiene and cleaning supplies was also extreme. These products were in high demand, such that the merchants had trouble stocking their shelves (Eriksson and Stenius 2020:1950).

Throughout the pandemic, there has been an increase in the frequency of anxiety and depressive symptoms, as well as the risk of substance abuse, suicide, and domestic violence. Anxiety and dread were particularly noticeable, with panic buying behaviour everywhere. The mass population's hoarding and frantic buying caused by COVID-19 left many grocery shelves empty for weeks. When people buy many goods in the event of a shortage, it is known as panic buying. This level of panic buying has not previously been observed during illness outbreaks. Toilet paper was one household item hoarded in several nations, including the United States, Australia, Canada, the United Kingdom, Singapore, Japan, and Hong Kong (Leung, Chung, Tisdale, Chiu and Lim 2021:1).

Store shelves were quickly depleted because of the frantic buying of numerous consumer products. Some customers even went as far as robbing a delivery man of hundreds of toilet paper rolls at knifepoint, as happened in Hong Kong and starting fights in supermarkets in Australian supermarkets over food items. Similar reports said many people panicked and filled up their cars at global gas stations, increasing the demand for oil. Even though people could not be protected from COVID-19. Surprisingly, while items like toilet paper and oil were in extremely high demand at one point during the crisis, essential food items like canned goods did not experience the same level of urgency (Kuruppu and Zoysa 2020:1). Due to the COVID-19 pandemic's rapid spread, people have been making a lot of impulsive purchases and experiencing unanticipated panic buying. The demand for necessities had multiplied, and businesses could not keep up with the unexpected growth in customer demand. Consumers were frightened due to the interruption of the supply chain and the resulting shortages of necessities at superstores (Ahmed et al. 2020:09).

Misperceptions about the state of the supply chain for food and other necessary products drove anxiety to the brink. Supermarkets and restaurants each had a portion of the food

inventory following the COVID-19 pandemic outbreak. Panic buying boosted the demand for necessities, affecting the broader supply chain for essential goods. As a result, consumers' anxiety increased under this circumstance, and they tended to engage in more impulse buying (Chua, Yuen, Wang, and Wong 2021:1). The mounting evidence of COVID-19-related panic buying worldwide revealed that stockpiling of non-perishable food and toiletries was not unusual, with panic toilet paper purchases gaining significant media attention. The more extensive consumption displacement process during calamities and pandemics includes panic buying. When consumers notice a change in the usual availability of goods, services, and amenities because of an outside event, it is called consumption displacement. Consumption displacement is characterised by the points in space and time and the movements to, from, and between those points where consumption occurs (Hall, Fieger, Prayag and Dyason 2021:2).

The COVID-19 pandemic wreaked havoc on the world economy and healthcare, instilling fear, terror and uncertainty in the hearts of billions of people. Panic buying became a dependable aspect of the coronavirus outbreak as lockdowns were enacted in several locations. Everywhere, store shelves were emptied. Toiletries, frozen food, rice, beans, eggs, and bread were just a few of the necessities that frequently sold out as customers made impulsive and compulsive purchases to stock up. People's sense of control was violated by the potentially fatal COVID-19, which is highly contagious. In the wake of the coronavirus lockdown, customers lost control, as evidenced by the global phenomenon known as panic buying (Islam, Pitafi, Arya, Wang, Akhtar, Mubarik and Xiabei 2021:2).

2.7.9 Impulse buying

An impulsive choice to buy a good or service is made right before a transaction. Impulsive buying occurs because of unplanned actions brought on by specific stimuli. Impulsive purchasing is the propensity of a consumer to make last-minute purchases of products and services. When a buyer makes such impulsive purchases, feelings and emotions drive them. When someone buys impulsively, they are not actively searching for what they want and do not have a pre-shopping strategy (Iriani, Nuswantara, and Kartika 2021:944). Panic buying and impulsive buying are correlated due to the emotional connection between both behaviours. However, the emotional states of impulsive and panic buying served distinct purposes and had different motivations. While panic buying is linked to negative emotions as being motivated by consumer behaviour, pleasant emotions can impact impulsive purchases (Eva, Saputra, Wulandri, Yahya, and Annisa 2021:84).

During the lockdown, there was a distinction between panic buying and hoarding necessities and impulsive shopping. When individuals were uncertain about when shops would open next, purchasing groceries and other essentials was natural behaviour. However, consumers also bought items they did not necessarily need as a coping mechanism. According to e-commerce sites, there was a surge in purchases of various items such as face masks, musical instruments, toys, books, kitchen appliances, and sports equipment (Thakur, Diwekar, Reddy and Niteesh 2020:87).

Due to COVID-19, it was challenging to see the merchandise in person and make a purchase. Therefore, the advertising sector required a clever move to compensate for its losses and persuade consumers to buy its goods. For businesses to promote their products, the advertising sector partnered with several internet platforms and social media sites. For instance, YouTube videos, Facebook, and other websites advocated certain products. On the other hand, these advertising mediums encouraged impulsive purchasing of goods. Impulse buying refers to a last-minute, unplanned choice to acquire a product or service (Chauhan, Banerjee, and Mittal 2020:199). Consumers were enticed to buy new products compulsively. Online purchasing enhances the prevalence of compulsive buying behaviour due to its convenience and other features. Consumers may alter their decision-making and behaviour to purchase online more frequently and intensively because of the COVID-19 pandemic's ongoing global spread. Repeated internet buying leads to producing more goods, cardboard, delivery trucks, and cars (Huang, Chen, and Sun 2022:1).

It is essential to note that perhaps the consumption patterns that emerged during the COVID-19 health crisis have indeed been exceptional, are currently unknown, and go beyond impulsive purchases of necessities. The health crisis also boosted consumer commitment to and knowledge of sustainability, conscious consumption and environmental issues. The fear of death can increase the consumer's urge to seek and consume material goods. Impulse buying can bring psychological and physiological comfort to consumers while consciously diverting their attention away from the pain of the threat of death. When consumers are faced with the fear of death, they tend to divert their attention through overeating and hedonistic food consumption. Besides, it has been suggested that consumer emotions influence impulse buying because consumers can use impulse buying to relieve negative emotions and obtain pleasure (Gawior, Polasik and Olmo 2022:2).

The COVID-19 pandemic caused consumers to make impulsive purchases. The setting where customers reside, changed government regulations (such as home isolation, social exclusion, and travel restrictions) and increased health concerns (e.g., infection and death). This

adjustment has increased customers' negative emotions and uncertainty in addition to provoking their fear of death. Consumers' desire to seek out and buy material goods may grow when they fear dying. Customers may purposefully turn their focus away from the discomfort of the death threat while receiving psychological and physical comfort from impulse purchases. Consumers often overeat and engage in hedonistic food intake when they are experiencing the fear of death. Additionally, it has been proposed that consumer emotions significantly impact impulsive purchases since customers might utilise impulsive purchases to manage their emotions and find pleasure (Wang, Liu, Du and Wang 2021:3).

An individual may experience multiple effects from the COVID-19 pandemic, which could encourage them to engage in impulsive consumption. For instance, COVID-19 causes someone to fear dying. Consumer behaviour studies have revealed that customers may overindulge and overconsume during difficult circumstances. According to the findings, people currently want quicker gratification. Additionally, people frequently experience several types of psychological distress, such as worry and anxiety, during a pandemic. According to earlier research, these consumers were more inclined to make impulsive purchases to feel better immediately (Lim, Zhao, Huang, and Li 2020:2). The COVID-19 pandemic, combined with social distancing measures and lockdown restrictions, considerably disrupted consumer purchasing, shopping, and consumption behaviours. Consequently, many consumers turned to online shopping. While this shift provided greater convenience, it also heightened the likelihood of impulsive purchases (Chauhan, Banerjee and Dagar 2023:279).

Panic buying started among consumers when the lockdown was announced, and this condition is also present in other countries. Customers stocked up on necessities because of sudden supply chain and logistics changes. Impulsive purchases of soap, toothpaste, prepared foods, bakery items, and other basics are becoming common. Compared to their usual shopping, the demand for critical commodities caused price increases and prompted advance purchases for a month. FMCG products, which fall under the necessary goods category and were sold during the lockdown due to COVID-19, were anticipated to see an increase in demand. Home delivery of necessities also began to meet the demand (Kaur and Sharma 2020:3127).

With the surge in network technology, consumers' buying habits are continually evolving. Nowadays, especially during the coronavirus disease 2019 (COVID-19) epidemic, online purchasing has taken over most of the consumer market as the primary means of shopping. Impulse buying behaviour (IBB) among users has dramatically increased thanks to the e-commerce sector, a crucial pillar of the market economy. Customers' shopping habits have

changed considerably because of the quick development of society and the economy. The main effects of these changes were a sharp decline in planned purchases and a sharp rise in unplanned (emotional) purchases. Impulsive purchase is the term used to describe consumer behaviour motivated by such emotional considerations (Wang and Chapa 2020:01).

Business studies have shown that social media use affects clients' decision-making and causes them to change their preferences. Social media has enabled internet users to establish and keep connections while making it quick and easy to share and obtain information during the COVID-19 epidemic. It is not surprising that social media usage has increased dramatically in this extraordinary situation. Every day, millions of posts about COVID-19 are made on social media, including images and videos of empty shelves and other impulsive and compulsive purchases that make users more anxious and panicked (Elisa, Fakhri and Pradana 2022:05).

2.7.10 Frequency of shopping trips

During the pandemic, the economic strain on consumers explained reduced purchases as individuals had less money to spend. Thus, there was a reduction in the number of shopping trips within physical stores. Social and personal norms influenced consumers' motivation to curtail their fashion consumption, leading to a conflict between the desire to follow fashion trends and the necessity to cope with decreased purchases amid the economic crisis triggered by the pandemic (Kempen et al. 2022: 221). A noticeable decrease in human traffic was observed following the enforcement of lockdowns. This impact was particularly pronounced on streets with a higher concentration of shops, indicating that people were steering clear of busy areas to reduce the risk of infection (Koster, van Ommeren, Ang and Bras 2022:03). Many shoppers started shopping less frequently, opting instead to explore new recipes and enjoy more homemade meals. The increased time spent at home allowed them the opportunity to cook more and try out different dishes (Yamamoto 2021:1).

Bracale and Vaccaro (2020, as cited in Leal Filho, Voronova, Kloga, Paço, Minhas, Salvia, Ferreira and Sivapalan 2021:03) reported that amid Italy's quarantine, similar to the lockdown in South Africa, there was a surge in the purchase of pasta, flour, eggs, long-life milk, and frozen foods, while the demand for fresh produce declined. The pandemic restrictions and lockdown measures accelerated the adoption of digital technologies, transforming the retail landscape by bringing shopping experiences into consumer's homes. Consequently, many individuals reduced their in-store visits and increasingly opted for alternative shopping methods such as curbside pickup and home delivery (Diaz-Gutierrez, Mohammadi-Maviand Ranjbari 2023:581).

2.8 CUSTOMER SERVICE

Customers play a crucial role in the success of any company or organisation. It is essential for companies to actively comprehend customers' market needs. Monitoring different types of customer markets for growth and potential is necessary. The primary types of customer markets include:

- Consumer Markets: The largest market segment, which involves the sale of goods and services to individuals and households for personal use.
- Business Markets: Although smaller in size compared to the consumer market, business markets have larger individual contracts and revenues.
- Reseller Markets: This market segment purchases products or services with the intention of selling them again at a profit.
- Government Markets: Government markets are significant players that provide services to meet the needs of society.
- Global Markets: With advancements in technology, global markets are becoming more accessible and involve consumers, businesses, and governments worldwide (Cunningham 2018:21).

Delivering superior customer service is crucial to guaranteeing customer satisfaction. This entails aiding customers throughout their journey, particularly after a purchase has been made. The primary goal of efficient customer service is to ensure that customers are completely content with their overall experience (Berndt, Bick, Boshoff, Chigada, Klopper, Maduku, Mpinganjira, Ndoro, Rugimbana and Strydom 2014:347). Significant customer service channels were observed in South African retailing. Customers valued stores that followed social distancing rules and sanitised their shelves, counters and doors. Due to the processes and procedures put in place, customers felt comfortable while shopping (Brandtner, Darbanian, Fatatouri and Udolwu 2021:02). Customers took preventative steps and paid close attention to hygiene. Post-pandemic, customers shop less frequently and spend less time in stores, changing the nature of shopping. Building confidence between customers and merchants has resulted from the attempts to avoid the virus. Customer safety when shopping is crucial, as is the relationship between protection and customer happiness. Customers and customer service in a physical store or online space positively correlate with safety (Untaru and Han 2021:02).

As a consequence of the COVID-19 outbreak, traditional shopping encountered various challenges. Individuals exhibited reluctance to venture outside their residences due to stringent regulations, limited transportation availability because of reduced public transit options, and subpar customer service at brick-and-mortar stores. Moreover, non-compliance with social distancing guidelines by certain individuals resulted in decreased footfall at physical establishments. Consequently, those who still opted for in-person shopping often failed to observe social distancing measures, thereby discouraging others from visiting physical stores to minimise the risk of virus transmission (Aryani et al. 2021:87).

Many retailers seized the opportunity to move their business operations from brick-and-mortar to an online environment. Businesses have tried to offer excellent customer service to retain their customers. Due to the convenience and acceptable customer service, customers have happily transitioned to a new way of making purchases. New service offerings such as free delivery, promotional items, and curbside delivery have influenced customers to remain with online retailers (Valaskova et al. 2021:04).

Customer satisfaction affects buyers' intentions to make additional purchases. Customer loyalty and purchasing intent are influenced by customer service. According to studies, customer happiness and online customer retention are positively correlated. Consumer satisfaction and aspirations to use e-finance frequently were controlled by online trust. Further, internet trust influences consumers' intention to shop online (Al-Ghreibah 2020:2466). With many businesses being compelled to switch to online platforms because of lockdown regulations, the pandemic has underlined the significance of online customer service. Due to the inability of businesses to communicate with clients face-to-face, customer service through the Internet has become essential. The transition to online platforms has been advantageous in increasing efficiency and convenience while also being necessary (Knox 2023).

Good customer service is crucial for a business to thrive, survive, or succeed. If a company neglects to improve its services, it could ultimately lead to shutting down operations. With the ongoing COVID-19 pandemic, businesses swiftly adapted to the growing need for online customer service in new and existing markets. Technological advancements allowed customers to shop at their convenience, increasing interaction with retailers through various information and content presentation channels (Thaba, Jacobs and Laby 2023:05). These methods involve less hands-on interaction, making people feel safer by avoiding physical contact with things like cash or other people's hands (Puriwat and Tripopsakul 2021:85).

2.9 SUMMARY

The literature review chapter examines the complex dimensions of consumer buying behaviour during the COVID-19 pandemic, particularly in Durban, South Africa. It contextualises the unprecedented shifts in consumer habits and preferences resulting from the pandemic, including the rise of online shopping, changes in spending priorities, and the prevalence of panic buying. The chapter explores theoretical frameworks, such as consumer decision-making models, and highlights the influence of situational, environmental, and psychological factors, including fear and anxiety on consumer choices. Additionally, it analyses the impact of lockdown restrictions and social distancing measures on purchasing behaviour, emphasising the increased reliance on digital channels and the transformation of customer service practices. Key demographic factors, such as age, gender, and socio-economic status, are assessed to clarify their role in shaping consumer responses. Furthermore, the literature delved into relevant studies from both global and South African perspectives provide insights into the comparative and localised effects of the pandemic on consumer markets.

CHAPTER THREE: RESEARCH METHODOLOGY

3.1 INTRODUCTION

Chapter two covered the literature relating to the study. This chapter delineates the research design and methodological approach contained in this study. It serves to introduce the research methodology and elucidate the rationale behind the chosen research endeavours. A comparative analysis between two principal research approaches is presented, substantiating the preference for the quantitative research approach in this particular study. The chapter delves into the intricacies of data collection methods and expounds upon the sampling techniques employed to procure pertinent data. The sections that will be covered in this chapter are the aim, objectives, research philosophy, epistemology, ontology, research paradigm, research process, qualitative research methodology, quantitative research methodology, research methodology for the study, target population, sampling techniques, sampling method chosen, inclusion and exclusion criteria, research instrument, pre-test study, collection of primary data, data analysis, descriptive statistics, inferential statistics, model measurement, reliability, validity and conclusion.

This study aimed to conduct a comprehensive analysis of consumer behaviour during the COVID-19 pandemic, necessitating a thorough understanding of various research methodologies. After critically evaluating qualitative, quantitative, and mixed-method approaches, the researcher selected the most appropriate method that aligned with the study's objectives, context, and data requirements. The chosen methodology provided an optimal balance between empirical rigor and contextual relevance, enabling effective addressing of the research questions. This decision was informed by the nature of the research problem, the type of data required, and the need for a comprehensive understanding of the shifts in consumer behaviour within Durban.

3.2 AIM AND OBJECTIVES OF THE STUDY

The study aims to determine how COVID-19 lockdown regulations affected consumer buying behaviour within the greater Durban region.

The objectives of the study are as follows:

- To ascertain the extent to which the lockdown restrictions influenced consumer buying patterns during the pandemic
- To determine why consumers engaged in panic buying during the lockdown
- To establish whether customer service changed during the lockdown

3.3 RESEARCH PHILOSOPHY

Research philosophy is pivotal in shaping the nature of knowledge within a study. It encompasses two main paradigms, positivism and interpretivism, each grounded in distinct ontological, epistemological, and methodological assumptions. Positivism, aligned with quantitative research, asserts an objective reality and emphasises quantification. In contrast, interpretivism, associated with qualitative inquiry, recognises subjective realities and prioritises understanding human experiences. Philosophical perspectives guide researchers' methodologies and knowledge generation. (Saunders, Lewis and Thornhill 2019:130). The selection of the research strategy is driven by the research questions, aims, and objectives of the study. Three primary research approaches are outlined: qualitative (positivist), quantitative (phenomenological), and the mixed methods approach (Kumar, Leone, Aaker and Day 2018:203).

The positivist research approach commonly employs statistical analysis to predict the study's outcome, which can potentially be generalised to the study population. Crucially, this approach facilitates the collection of primary data at a faster pace and with relatively lower costs compared to qualitative or phenomenological research methodologies (Bell, Bryman and Harley 2019:34). Differing from positivism, interpretivist philosophical reasoning focuses on understanding people's behaviours and how individuals make sense of the world by sharing their experiences with others through language (Palmer 2020:294). Significantly, the positivist approach enables quicker collection of primary data and is relatively more cost-effective compared to qualitative or phenomenological research methods. This advantage rendered positivist research suitable for the study conducted in Durban, South Africa.

3.4 ONTOLOGY

The fundamental definition of ontology pertains to the science or study of existence. This description was formulated for the social sciences to encompass claims regarding what exists, its precise nature, the constituent units, and the interactions among these units (Sekaran and Bougie 2019:377). Nonetheless, at its core, ontology serves to articulate an individual's stance (whether through assumptions or assertions) regarding the fundamental nature of reality. It is principally utilised to grapple with the inquiry: does an objective reality genuinely exist or is it merely a subjective construct conceived within the confines of our minds (Singh 2022: 42). Furthermore, Phaladi (2021:109) posits that researchers' paradigm selection is influenced by their underlying value systems. These values dictate the selection of the paradigm, topic choice, research strategy, methods of data collection, data analysis, interpretation, and how researchers articulate their research findings. Understanding ontology lays the groundwork for

exploring reality's nature. This sets the stage for examining how our values and ethics, captured in axiology, influence the research process.

3.5 AXIOLOGY

Axiology, the third component of the research framework and the ethical backbone of positivism, examines the moral and ethical considerations influencing researchers within the positivist paradigm. This philosophical branch emphasises the significance of the researcher's morals and ethics throughout the research process. Axiology aligns with the positivist view of an objective reality, underscoring the importance of researcher neutrality. This neutrality is integral to the axiology of research, shaping the epistemological approach through logical and scientific methods for data collection. Consequently, the knowledge derived from data analysis remains unbiased, objective, and quantifiable (Saunders et al. 2019:134). Axiology's emphasis on neutrality seamlessly leads into the next essential component of the research framework, epistemology, which underpins the nature and scope of knowledge within positivism.

3.6 EPISTEMOLOGY

The foundation of positivism is epitomised by objectivism and empiricism (Park, Konge and Artino 2020:692). Only objectivism is deemed to represent the true reality in the realm of epistemological perspective within positivism. Thus, these key elements must convey the nature of reality from an objective philosophical standpoint. This implies that within the positivistic paradigm, only objective truth is acknowledged as acceptable knowledge through the lenses of ontology, epistemology, and axiology (Majeed 2019:120-122). Adopting an epistemological perspective rooted in positivism for studying consumer buying behaviour during the COVID-19 pandemic in Durban ensures that the research is grounded in objective reality, utilises empirical data, and adheres to scientific rigour. This approach not only provides accurate and reliable insights but also contributes to a deeper understanding of the impacts of the pandemic on consumer behaviour, aiding in informed decision-making and strategic planning.

3.7 RESEARCH PARADIGM

The preceding section provided an in-depth examination of the epistemological standpoint embraced by the study. Focusing on the chosen epistemological stance, this section delves into research paradigms and the specific one selected for the study. Scholars emphasise the importance of selecting a suitable research paradigm for a research endeavour (Bell et al. 2019:47). This discussion explores three primary paradigms, pivotal to management research, serving as foundational frameworks from which other paradigms emerge. These paradigms

were selected for their prevalent application and integral role in the field. Terminological variations often arise, reflecting parallel developments across various social science disciplines. Despite differing names, these paradigms share underlying similarities in their approaches.

3.7.1 Pragmatism

The significant preference of social scientists for either positivist or interpretivist philosophies has led to what is commonly referred to as the paradigm war in literature. However, this debate highlights a clear aspect regarding both positivism and interpretivism as paradigms. These paradigms establish the framework for research reality from a mono-paradigmatic perspective (Mandefro 2022:5-6). A positivist worldview perceives truth as ascertainable only through a singular scientific method. Conversely, the interpretive approach suggests the existence of multiple realities in research, yet it is constrained to the social constructs of individuals derived from shared meanings and lived experiences.

Pragmatism, as a philosophical perspective, encompasses ontological, epistemological, and methodological foundations that draw from both positivist and interpretivist paradigms (Phaladi 2021:106). Concerning a scientific approach, pragmatism demonstrates methodological robustness, particularly evident in mixed-method research. Therefore, while pragmatism's epistemology is flexible, its methodology is linked with mixed-method research as a philosophical partner (Shah, Shah and Khaskhelly 2018:94). To further understand these philosophical perspectives, it is essential to delve deeper into the principles of interpretivism, which emphasises the role of human behaviour and subjective meaning in constructing reality.

3.7.2 Interpretivist

Interpretivist philosophical reasoning revolves around human behaviour and the process by which individuals make sense of the world by sharing their experiences through language. Consequently, interpretivists assert that the world is socially constructed, and scientific inquiry is influenced by human behaviour and interests (Bell et al. 2019:554). Additionally, Creswell (2020:8) contends that interpretivist researchers typically rely on the perspectives of the participants engaged in the research study. Interpretivism offers avenues to comprehend intricate thematic patterns of individualistic thought, contrasting with the empirical data favoured within a positivist paradigm. While direct involvement is dismissed in a positivist worldview to prevent bias, interpretivism underscores the importance of engaging with participants to gather research data. Consequently, the potential bias of researchers is subject to scrutiny within the interpretive paradigm. Thus, in the realm of interpretivism in social research, the ontological stance of researchers must be both value-bound and value-laden.

However, it is worth noting that this ideal scenario may not always reflect the absolute reality (Maarouf 2019:9). In contrast to interpretivism's focus on subjective experiences and social constructs, positivism is grounded in the application of scientific methods to discover objective truth.

3.7.3 Positivism

Positivism, as a worldview, is rooted in the utilisation of scientific methods to uncover objective truth (Kelly, Dowling and Millar 2018:10). Chirkov and Anderson (2018:715) concur that positivism aims to measure relationships logically, systematically, and statistically between variables throughout the research process. This is achieved by employing empirical methods to uncover the reality. Hence, positivism is predominantly employed in the quantitative approach, as it guides researchers in methodological matters to scientifically investigate the objective truth using quantitative methods through empiricism (Younus and Zaidan 2022:65). The next section delves into the research process.

3.8 THE RESEARCH PROCESS

The first step in marketing research is to define the problem, considering the study's purpose, background, needed information, and decision-making. This involves discussions, expert interviews, secondary data analysis and possibly qualitative research. Once defined, an approach to the problem is developed, including theoretical frameworks, research questions, and hypotheses, guided by management discussions and secondary data analysis. The research design, detailing data collection procedures and measurement scales, is formulated next. Data collection involves various methods and requires proper field force management to minimise errors. Data preparation includes editing, coding, and analysis to provide decision-making input. Finally, the findings are documented and presented comprehensively to management, often using digital platforms for broader access (Malhotra 2020:34).

An author of a similar view states that adherence to the research process is crucial for a successful research project. While the exact number of stages may vary, they generally include the following phases: clarifying and fine-tuning the research topic, conducting a review of existing literature, designing the research plan, collecting data, analysing the collected data, and presenting the research findings (Saunders et al. 2019:11). Similarly, formal scientific marketing research is a rigorous and methodical procedure aimed at gathering, analysing, and interpreting information to facilitate informed decision-making. This process follows a logical sequence of steps, where each phase is intricately linked and reliant upon the others. The steps involve defining the problem, setting research objectives, determining the research design, collecting secondary data, choosing the primary data collection method, designing the

questionnaire, creating the sampling plan, conducting the investigation, processing the data, analysing it, interpreting results, and compiling the research report (Wiid and Diggins 2022:45).



Figure 3.1: Research process

The research process adapted by the researcher from Saunders et al. (2019:11); Malhotra (2020:34); and Wiid and Diggins (2022:46).

The research problem: In the initial formulation of the research problem, it is essential to provide a brief description of the processes and phenomena under study, as well as any related issues and concerns. As the research progresses, it may inevitably encompass more aspects and dimensions than initially anticipated. Therefore, the focus at this stage is to ensure that the problem description is precise and allows for future growth and exploration (Singh 2022:25). This study cites the research problem in chapter one (1.4).

Research Design: The research design serves as the central framework for the project, guiding all subsequent stages aimed at achieving the goals stated in the issue statement and working hypotheses for the study. This plan furnishes essential details, such as the type and quantity of data needed to fulfil the study objectives or demonstrate their feasibility (Malhotra and Dash 2016:11). A descriptive research design was chosen for this study to thoroughly analyse factors influencing consumer buying behaviour during the COVID-19 pandemic in Durban. A survey questionnaire was used as the research instrument, aligning with the descriptive research focus on detailed data collection and analysis.

Literature review: The literature review involves critically evaluating previous research and subjective observations related to the identified study issue. It goes beyond simply

summarising existing work; it also identifies flaws and gaps in the current body of literature (Pride and Ferrell 2016:134). Relevant literature was reviewed to formulate a conceptual framework and design the questionnaire. Hypothesis: The hypothesis quantifies existing issues or constraints identified in earlier investigations, which need to be addressed when formulating the working hypothesis or intended outcome. Determining the scope and magnitude of what can be expected from the research becomes crucial, especially when exploring a research subject that has not been previously investigated (Mukherjee 2020:09).

Research methodology for this study: Research methodology refers to the specific techniques and processes employed in gathering the necessary data to address the research problem at hand. It encompasses the systematic collection of data, accompanied by a thorough description of the analytical procedures implemented to propose viable solutions. The methodology is guided by a research philosophy and approach and entails a well-defined plan and design. This encompasses the identification of the target population and sample, as well as the comprehensive delineation of the data collection instruments, sources, and procedures. Although not all proposals necessitate an exhaustive level of detail in the methodology section, academic proposals should strive to be as precise and specific as possible (Wiid and Diggins 2022:396). The research methodology for this study is cited in chapter three (3.12).

Collection of the primary data: Data collection employs a range of methodologies and personnel, which encompass personal interviews conducted in homes or malls or using computer assistance, telephone or computer-assisted interviews, mail surveys in both traditional and mail panel formats, as well as electronic methods such as email or online surveys. Guaranteeing the precision of the data necessitates meticulous selection, training, supervision, and evaluation of the data collection team to minimise potential errors (Malhotra 2020:35). In empirical research, addressing the research problem involves gathering primary and secondary data evidence. The theoretical study generates all the relevant data, approaches, tools, and findings. Sample surveys and planned experiments are two well-established techniques for collecting evidence. Appropriate instruments, such as inquiry schedules or open-ended questionnaires, are designed to gather data for sample surveys (Pride and Ferrell 2016:134).

Research instrument: The term questionnaire broadly encompasses all data collection methods where individuals are required to answer a standardised set of questions in a specific, predetermined manner. An alternative term commonly used to refer to this tool is instrument (Saunders et al. 2019:503). For every method of data collection, including experimental, observational or survey-based approaches, it is possible to develop specific instruments to

acquire primary data. The two main instruments for this purpose are questionnaires and mechanical or electronic devices. Out of these options, questionnaires are the most commonly utilised tool for collecting primary data. To guarantee the validity and reliability of the data collected, it is essential to meticulously design the questions in terms of their type, wording, format, and sequence (Wiid and Diggines 2022:49).

Target population: In this study, the term target population denotes the members or elements of the group being investigated, while sample refers to a subset selected from this population to take part in the research (Babin et al. 2020:26). The selection of the target population is contingent upon the particular marketing research problem at hand and its corresponding research questions (Malhotra 2020:55). In this study, the target population consisted of consumers in the greater Durban area, from which a sample of 384 respondents was selected.

Sampling technique: Sampling techniques can be broadly categorised into two types: probability sampling and non-probability sampling. Probability sampling ensures that each case within the target population has a known and typically equal chance of being selected. This characteristic enables researchers to statistically estimate the characteristics of the target population based on the sample, making it especially suitable for research methods such as surveys and experiments. In contrast, non-probability sampling does not provide a known probability for each case being selected, thereby making it impossible to derive statistical inferences about the population's characteristics. While it is still possible to make generalisations about the target population using non-probability samples, these generalisations lack statistical support (Saunders et al. 2019:296).

Sampling method for this study: The researcher must determine the approach for selecting a sample or develop a sample design for their study. A sample design is a precise plan established prior to data collection that outlines the method for drawing a sample from a defined population. Sampling methods can be classified into two categories: non-probability and probability sampling. Non-probability sampling involves a subjective selection process, which makes it a quick, easy, and cost-effective option. This type of sampling is often used in preliminary studies, focus groups, or follow-up research. Conversely, probability sampling includes methods such as simple random sampling, stratified sampling, systematic sampling, and cluster sampling. On the other hand, non-probability sampling techniques include convenience sampling, judgement sampling, and quota sampling (Mishra 2017:08). The sampling method chosen for this study is cited in chapter three (3.15).

Data analysis and interpretation: After the completion of data processing, the researcher's responsibility entails thoroughly scrutinising the processed data and interpreting it into meaningful and actionable information for individuals responsible for making decisions. Data

analysis encompasses a wide array of methods, ranging from fundamental techniques to sophisticated approaches, such as multivariate analysis. The selection of data analysis methods commences during the research design phase, where the specific data requirements are considered. To facilitate both data processing and analysis, a multitude of computer programs are readily accessible (Wiid and Diggines 2022:51). Analysing data requires an approach grounded in logical reasoning, employing a combination of qualitative and quantitative methods and techniques. It is important to understand that the effectiveness of the analysis is not solely determined by the complexity of the methodologies or tools utilised (Malhotra et al. 2016:10). The researcher utilised SPSS Version 28, a Statistical Package for the Social Sciences and IBM SPSS AMOS Version 28, to analyse the survey data collected from Likert scale responses.

Report preparation and presentation: Prior to disseminating information widely, submitting research for publication, or utilising the findings for internal documentation, it is imperative to prepare a comprehensive research report and share it with the relevant stakeholders (Mukherjee 2020:09). This study will culminate in a dissertation to be submitted for examination. The final phase of the marketing research process entails the interpretation of findings and the assessment of their applicability to decision-making. The efficacy of the research is contingent upon ensuring that the conclusions are aligned with the original objectives of the study. Subsequently, these conclusions are presented to the decision-maker in a meticulously structured and intelligible research report. It is imperative for this report to be prompt, succinct, and all-encompassing in order to facilitate informed decision-making. The decision-maker utilises this information to address the initial marketing challenge or opportunity and to execute suitable actions based on the acquired insights (Wiid and Diggines 2022:51). For this research the report preparation and presentation are cited in chapter five.

3.9 RESEARCH DESIGN

After formulating the research problem, the researcher is tasked with determining the research design. This design is commonly analogised to a recipe, delineating the systematic steps for collecting and analysing essential data, thereby serving as a structured framework or blueprint for the investigation. Furthermore, researchers must make informed decisions regarding various aspects, including information sources, design strategy (survey or experiment), sampling strategy, timetable, and budget allocation. Each design form—exploratory, descriptive, and causal—offers a particular set of alternatives for carrying out the design (Babin and Zikmund 2016:67).

Research design functions as a comprehensive roadmap that directs a study toward its goals. The process of designing a research study entails several interconnected considerations. The

choice of research strategy is crucial since it significantly impacts how information will be gathered, rendering it the most important option. The selected study should be adaptable enough to accommodate decision-making procedures, as this will aid in producing useful marketing intelligence tools (Kumar, Leone, Aaker and Day 2020:70).

When crafting a study plan, it is imperative for the researcher to strike a balance between the viewpoints of experts and the target audience. Decision-makers often favour strategies they deem highly effective, drawing upon their education and expertise. It is acceptable if the procedures employed align with the most effective methods for assessing or understanding the problem at hand, as perceived from the participants' viewpoint (Malhotra, Nunan and Birks 2020:24). To effectively implement the chosen research design, the researcher must consider the appropriate research methodologies. This necessitates an exploration of qualitative research methodology, which contrasts with quantitative approaches and involves distinct strategies for data collection and analysis.

3.10 QUALITATIVE RESEARCH METHODOLOGY

According to Malhotra, Nunan and Birks (2020:92), the phenomenological (qualitative) research approach employs distinct research strategies in contrast to the positivist (quantitative) research approach. Furthermore, qualitative methods of data collection encompass semi-structured techniques such as interviews, focus groups, and participant observation, yielding textual data retrieved from field notes, audio recordings, video recordings, and transcripts. The research strategies employed within the qualitative paradigm encompass narrative studies, case studies, action research, grounded theory, and ethnography (Saunders et al. 2019:638). To gain a comprehensive understanding of qualitative research methodology, the researcher examined key approaches such as narrative research, grounded theory and case studies. The subsequent sections provide detailed insights into these methodologies, each offering distinct perspectives and techniques for analysing qualitative data.

3.10.1 Narrative research

Bell, Bryman and Harley (2022:638) delineate two distinct research designs: narrative research and phenomenological research. Narrative research involves delving into the lives of individuals, soliciting stories about their experiences, and subsequently retelling these narratives in chronological order. On the other hand, phenomenological research, rooted in philosophy and psychology, focuses on elucidating the lived experiences of individuals regarding a particular phenomenon. This approach entails gathering information through interviews to capture participants' descriptions of their experiences (Saunders et al. 2019:674).

Narrative research retells individual experiences chronologically, while phenomenology explores lived experiences through interviews. The next section will examine grounded theory, which develops abstract theories based on participant perspectives.

3.10.2 Grounded theory

Babin, D'Alessandro, Winzar, Lowe and Zikmund (2020:70) observe that grounded theory methodology involves the formulation of a comprehensive and abstract theory about a process, action, or interaction, which is derived directly from the perspectives of the participants. This design necessitates multiple stages of data collection. Researchers delve into the shared behavioural patterns, language usage, and actions within a cohesive cultural group situated in a natural environment. This approach typically entails prolonged periods of observation and interviews to comprehend the intricacies of the culture under study (Kumar et al. 2019:271). Grounded theory formulates abstract theories from participant perspectives through extensive data collection, while case studies offer detailed examinations of specific cases, such as programs or individuals. The next section will focus on case studies.

3.10.3 Case studies

Case studies serve as a prevalent research design observed across diverse fields, where researchers undertake a comprehensive investigation into a specific case. This case may encompass various entities, including programs, events, activities, processes, or individuals (McDaniel and Gates 2019:403). The table below is a summarised version of qualitative research methodology types.

Table 3.1: Summary qualitative research methodology types

Aspect	Narrative Research	Grounded Theory	Case Studies
Purpose	To delve into individuals' lives and experiences, soliciting and retelling narratives (Bell, Bryman and Harley, 2022:638).	To formulate comprehensive theories directly from participants' perspectives (Babin et al. 2020:70).	To conduct a comprehensive investigation into a specific case (McDaniel & Gates, 2019: 403).
Main Objective	To chronologically recount individuals' experiences and stories.	To derive abstract theories from participants' viewpoints.	To provide an in-depth analysis of a specific case.
Methodology	It involves gathering stories and experiences through interviews and retelling them chronologically.	It entails multiple stages of data collection derived from participants' perspectives.	Utilizes various data collection methods, including interviews and observations.
Control Over Variables	Relies on participants' narratives and experiences.	Derived directly from participants' perspectives, allowing for flexibility and emergence of themes.	Less control over variables as the focus is on real-world situations and contexts.
Decision-Making Context	Aims to understand individuals' lived experiences and perspectives.	Seeks to formulate theories grounded in participants' realities.	Provides insights into specific cases for informed decision-making.
Examples	Oral history projects, autobiographies.	Studies on organisational processes, social interactions.	Investigations into business strategies, program evaluations.

Table 3.1 is a summary of qualitative research methodology

3.10.4 Mixed method strategy

Quantitative and qualitative research techniques enable researchers to engage in comprehensive and in-depth interviews and to collect data iteratively. Iteration, as a systematic and repetitive process, facilitates the analysis of qualitative data, leading to the extraction of insights and the development of meaning from the data. This iterative approach ensures a thorough examination of the collected data, fostering a deeper understanding of the research phenomena under investigation (Mertens 2023:11). In a mixed-method strategy, qualitative and quantitative approaches are integrated (D'Alessandro 2020:69). Kumar et al. (2019:135) elaborated on the various forms of mixed methods research, which depend on how qualitative and quantitative approaches are merged and to what extent. Saunders et al. (2019:182) clarified that mixed methods could be either convergent (parallel mixed method) or sequential mixed method, which necessitates an examination of specific mixed-method strategies, such as the convergent mixed method. The next section delves into the convergent mixed method.

3.10.4.1 Convergent mixed method

In a convergent mixed method, the researcher integrates quantitative and qualitative data to offer a comprehensive analysis of the research problem (Ngulube 2021:136). Triangulation proponents advocate for the compatibility thesis, asserting that qualitative and quantitative

methods can be inseparable in certain contexts. This view emphasises the necessity of integrating diverse research methodologies to gain a comprehensive understanding of phenomena. Aligned with the pragmatic philosophy, proponents recognise the practical importance of employing a versatile approach that draws from multiple methodological traditions. Ultimately, they emphasise the interconnectedness and mutual reinforcement of qualitative and quantitative methods as crucial aspects in advancing scholarly inquiry (Baran and Jones 2019:39). This methodological fusion aligns with the pragmatic recognition of the practical utility of integrating diverse approaches, paving the way for the subsequent exploration of the sequential mixed method.

3.10.4.2 Sequential mixed method

In a sequential mixed-method research design, the researcher initially conducts either quantitative or qualitative research, analyses the results, and then enhances them by further exploring the findings using either qualitative or quantitative methods. When quantitative research is employed first and the findings are elaborated upon using qualitative research, it is referred to as a sequential explanatory mixed method. Conversely, the opposite approach is termed exploratory sequential mixed methods (Creswell and Creswell 2022:135).

Table 3.2: Summary of mixed method research methodology

Aspect	Convergent Mixed Method	Sequential Mixed Method
Purpose	Integrates both quantitative and qualitative data for comprehensive analysis (Ngulube 2021:136).	Initially conducts either quantitative or qualitative research, then enhances findings with the other method (Creswell and Creswell 2022:135).
Main Objective	To provide a comprehensive analysis of the research problem	To validate and enrich research findings through a systematic process.
Methodology	Integrates diverse research methodologies, emphasising compatibility thesis (Baran and Jones 2019: 39).	Provides a structured approach for analysing results and further exploring findings (Creswell and Creswell 2022:135).
Control Over Variables	Relies on integrated analysis of data from different sources.	Involves a sequential process of research, offering controlled exploration of variables.
Decision-Making Context	Recognises the interconnectedness of qualitative and quantitative methods for advancing scholarly inquiry (Baran and Jones 2019: 39).	Acknowledges the practical utility of integrating diverse approaches, enhancing rigour and depth in analysis (Creswell and Creswell 2022:135).
Examples	Preliminary market research; exploratory studies.	Studies assessing effectiveness of interventions; longitudinal research.

Table 3.2 is a summary of mixed method research methodology

3.11 QUANTITATIVE RESEARCH METHODOLOGY

Quantitative research utilises a variety of statistical and graphical methods to assess and analyse the relationships between variables. In experimental designs, control systems are

commonly employed to maintain the validity of the data. The formulation of clear questions is essential to ensure consistent participant understanding, especially considering the standardised data collection process. Probability sampling techniques are typically employed in the methodology to ensure the generalisability of findings (Saunders et al. 2019:178). Quantitative research involves sampling from a population and adopts a structured research approach to generate quantifiable insights into behaviour, motivation, and attitudes. Unlike qualitative research, data collection in quantitative research is more structured, often featuring predetermined questions for respondents (Wilson 2019:152). Quantitative research's structured approach yields reliable, generalizable data, paving the way for exploratory studies. The next section will explore exploratory studies.

3.11.1 Exploratory studies

Wiid and Diggines (2022:70) recommend exploratory studies, as the name implies, to delve into subjects that remain largely unexplored. Experimental research becomes necessary when there is a need for additional knowledge and understanding regarding an issue, opportunity, or phenomenon. Gathering information to aid in formulating more insightful research questions is crucial. Exploratory research aims to build upon initial hypotheses or discoveries and provide guidance for subsequent studies. It serves as an early, minimally time- and cost-intensive exploration into a given situation, particularly when there is limited foundational knowledge available. It can be instrumental in assessing the feasibility of conducting further research or defining specific objectives for future marketing research studies (Wilson 2018: 66). The foundation, established through exploratory studies, facilitates a deeper investigation into cause-and-effect relationships, which is the focus of causal research.

3.11.2 Casual research

Causal research aims to identify indications of cause-and-effect interactions. Despite initial presumptions, a formal investigation is necessary to test the accuracy of these causal connections. Similar planning and structure are essential for both causal and descriptive research methodologies. However, descriptive research, while capable of quantifying the strength of associations between variables, is unsuitable for studying causal links. A causal design, which deliberately manipulates the causal or independent factors in a controlled setting is imperative for such enquiries. This controlled environment ensures that additional variables potentially influencing the dependent variable are closely monitored. Subsequently, the impact of these manipulations on one or more dependent variables is measured to establish causality. Experimentation serves as the primary methodology for causal research (Malhotra 2020:101).

Decision-makers often rely on causal research to draw conclusions about how one action may affect another. This inference, known as a causal inference, is a key outcome of a causal investigation. Researchers conducting causal studies are acutely aware of the decision-making context, allowing them to predict the cause-and-effect linkages that the study will explore with a certain degree of certainty (D'Alessandro et al. 2020:23). Causal research identifies cause-and-effect relationships through controlled experiments, while descriptive studies provide a natural depiction of phenomena. The next section will focus on descriptive studies.

3.11.3 Descriptive studies

Malhotra (2020:96) emphasises that the primary objective of descriptive research, a form of conclusive research, is to provide a detailed description of a phenomenon, typically market traits or functions. Much of the research conducted in commercial marketing is predominantly descriptive. Descriptive research proves advantageous when research enquiries seek to characterise a market phenomenon, such as determining purchase frequencies, identifying relationships, or making predictions. Brown et al. (2018: 119) corroborate this perspective, noting that descriptive research often delineates the various characteristics of a group or the relationships among those characteristics. This approach is widely employed, often involving the selection of a sample from a larger population and can be implemented through surveys or by gathering behavioural data.

Descriptive research encompasses surveys and various forms of fact-finding enquiries, with its primary objective being to provide an accurate depiction of a situation as it presently exists. This research method is often referred to as "ex post facto research" in numerous fields of study. One of its fundamental characteristics is that researchers employing this approach lack direct control over the variables and are solely tasked with observing and reporting on current or past events. Researchers may employ diverse techniques within descriptive research, including survey methodology, comparative analysis, and correlational approaches (Mishra and Alok 2019:02).

The primary objective of descriptive research is to obtain data that provides a comprehensive account of the subject under investigation. These studies are often designed to collect extensive information about various attributes of entities, events or situations. Typically, descriptive research employs a quantitative methodology, allowing for the collection of quantitative data such as production statistics, sales figures or demographic information. The use of quantitative methods ensures a rigorous and systematic approach to data analysis and comprehension, thereby enhancing the precision and objectivity of the findings (Sekaran and

Bougie 2019:56). Building on this understanding of descriptive research, the next section will elaborate on the specific research methodology employed in the study.

3.12 RESEARCH METHODOLOGY FOR THE STUDY

There are numerous discussions in social science concerning whether qualitative or quantitative research is better. Qualitative research is more capable of achieving research goals than quantitative research. Quantitative research can achieve goals that qualitative research cannot, but not more truthfully. Objectives are evaluated empirically in quantitative research using numeric measurement and analytical techniques. Quantitative research is much more likely to stand alone because it requires less interpretation. The researcher utilised the quantitative method to administer self-developed identical questionnaires to participants (Babin et al. 2016:111). Malhotra (2013:174) advises that if the sample results are generalised to the population, quantitative data from a sizable, representative sample must be gathered through a survey, as in the open vignette. Survey research provides for a higher capability to represent a large population (Saunders et al. 2019:146).

Quantitative research remains essential for studies requiring empirical validation, statistical generalisability, and structured data analysis (Wiid 2021:101). Unlike qualitative research, which relies on interpretative analysis, quantitative research systematically measures variables and applies numerical data to derive conclusions (McDaniel and Gates 2021:141). The quantitative research approach was considered appropriate for this study, as it facilitates the generalisation of findings to a broader population (Malhotra 2020:97). A structured survey method was employed to collect data from respondents, ensuring a standardised approach to measuring consumer behaviour patterns during the COVID-19 pandemic. This method allows for objective comparisons, thereby reducing the risk of researcher bias and enhancing the reliability of the results (Hair et al. 2023:210). Furthermore, the quantitative paradigm aligns with positivist research principles, which emphasise hypothesis testing and statistical analysis for informed decision-making (Wiid 2021:300).

The survey research method was selected for its efficiency in gathering data from a large, representative sample within a short timeframe (Sekaran and Bougie 2019:222). Structured questionnaires, incorporating both closed-ended and Likert-scale questions, ensured that responses were quantifiable and amenable to statistical analysis (Greenfield and Greener 2016:202). The utilisation of survey-based research in marketing and consumer studies has been well documented, emphasising its effectiveness in capturing trends in purchasing behaviour, particularly during periods of uncertainty, such as the COVID-19 (Babin and Zikmund 2016:67). The collected data was analysed using Statistical Package for the Social Sciences (SPSS) version 28 and IBM SPSS AMOS version 28, which provided robust

statistical outputs, including descriptive statistics, correlations, and regression analyses. These tools are widely accepted in marketing and consumer behaviour research for their ability to manage large datasets and ensure data accuracy (Pallant 2020:15). The study's focus on quantitative data enhances its credibility, as it adheres to a structured and scientifically rigorous methodology. Furthermore, the use of inferential statistics strengthens the study's findings by identifying significant relationships and patterns in consumer behaviour trends across different socio-economic groups (Greenfield and Greener 2016:325). Given the importance of accurately defining the research population, the next section will outline the target population and the sampling methods employed to ensure that the study's findings are representative of consumer behaviour in Durban, South Africa.

3.13 TARGET POPULATION

The term population refers to all individuals or entities that meet specific criteria, forming a larger group, often referred to as population elements within the bill. Defining the population with exceptional clarity and specificity is imperative. Precision in delineating the constituents of a population member is crucial. A more narrowly defined target group facilitates the process of sample selection (Brown et al. 2012:114). It is widely acknowledged that sampling aims to provide insights into the population; hence, correctly and reliably identifying the population at the outset is crucial. Ambiguity in describing the population can lead to ambiguous results. Moreover, incorrect demographic definitions may result in addressing the wrong research question. Consequently, the definition of the target population should include details on the sampling components, sampling units, and coverage area (Aaker et al. 2011:336). According to Sekaran and Bougie (2019:222), a target population is the entire group of people or things from which a researcher intends to choose a sample.

The study questions and objectives should be closely aligned with the population of interest within the chosen sample. Careful selection of this sample facilitated the derivation of insightful findings. Consequently, the researcher may frequently refine the definition of the population to enhance control, delineating a specific segment termed the target population (Saunders et al. 2019:295). In this study, the target population comprised consumers in the greater Durban region. The researcher considered demographic factors such as age, gender, and income, recognising their potential impact on research outcomes. The next section will discuss the sampling techniques used to effectively obtain a representative sample from the defined population, after establishing a clear definition of the target population

3.14 SAMPLING TECHNIQUES

A sample design is a premeditated strategy devised before data collection to procure a representative sample from a larger population. Two fundamental types of sampling techniques exist: probability sampling and non-probability sampling. Probability sampling ensures that each element of the population has a known chance of being included in the sample. Conversely, in non-probability sampling, the researcher cannot ascertain these inclusion probabilities. Probability sampling techniques include simple random, systematic, stratified, and cluster or area sampling. Non-probability sampling relies on strategies such as convenience sampling, judgement sampling, and quota sampling (Singh 2022:30).

According to Burns and Bush (2012:77), marketing research involves selecting a sample from a population to gain insights into its demographics. The population represents the entire group from which the researcher aims to draw conclusions based on the sample data's characteristics. Aaker et al. (2011:335) suggest that sampling can be advantageous when dealing with a sizable population where collecting data would be costly and time-consuming. Sampling techniques are categorised into two types: probability-based and non-probability-based. Given the overview of sampling techniques, the following section will delve into probability sampling, a method that relies on random selection to ensure that each element of the population has a known and predetermined chance of being included in the sample.

3.14.1 Probability sampling

In probability sampling, sampling units are selected randomly, allowing for the possibility of choosing a specific size from the general population, with predetermined likelihoods for each sample. While it is feasible to determine the probability of selecting any sample of a given size, not every potential sample requires the same chance of selection. This approach mandates a comprehensive description of the intended population and a broad characterisation of the sample frame. Probability sampling techniques encompass cluster, stratified, systematic, and random sampling (Malhotra and Dash 2016:346). Having outlined the principles and techniques of probability sampling, the subsequent discussion will focus on stratified sampling, a method that involves dividing the population into distinct subgroups to ensure more accurate and representative sampling across these groups.

- **Random sampling:** A random sample is chosen within each group after segregating the target population into groups based on a shared characteristic in stratified sampling. This method allows for the reduction of some of the errors that might occur in a basic random sample. Investigators ensure that each significant group or sector associated with the distribution includes a substantial proportion of sample units, thus

avoiding the inclusion of too few sample units from each group. Stratified sampling is particularly useful when researchers anticipate variances among different categories of responders (Pride and Ferrell 2016). Given the advantages of stratified sampling in ensuring representative coverage across different subgroups, the following section will address cluster sampling, which provides an alternative approach by focusing on predefined groups or clusters within the population.

- **Cluster sampling:** individual population components are included in the sample only if they belong to a cluster selected for sampling. When calculating standard errors from cluster samples, it is crucial to recognise that the sampling unit may differ from the observation unit, necessitating consideration of both unit sizes in the experimental design (Lohr 2021:22). Given the distinct procedural advantages of cluster sampling, the next section will explore systematic sampling, which offers a practical alternative by simplifying the sampling process while maintaining comparability to random sampling methods.
- **Systematic sampling:** Both systematic sampling and simple random sampling yield nearly identical samples. However, systematic sampling is considered simpler to implement as it does not necessitate the generation of random numbers or tables for selecting potential responses. Similar to simple random sampling, systematic sampling requires a complete population list, though numbering is not necessary. Compared to simple random sampling, creating a systematic sample is much simpler (Wilson 2019:228). While systematic sampling offers a more straightforward implementation compared to random sampling, stratified sampling provides additional benefits by ensuring representation across distinct population segments based on key attributes. This approach further refines the sampling process to address specific research needs and enhance the robustness of the sample.
- **Stratified sampling:** Stratified random sampling, a variation of random sampling, involves dividing the target population into two or more significant strata based on one or more attributes. Many of the advantages and disadvantages associated with systematic or simple random sampling also apply to stratified random sampling (Saunders et al. 2019:311). The following table shows a summary of probability sampling techniques.

Table 3.3: Probability sampling

Sampling Technique	Description	Key Features
Random Sampling	Involves selecting a random sample within each group after dividing the target population into groups based on a shared characteristic (Pride and Ferrell 2016).	Reduces error in basic random samples, ensures each significant group includes a substantial proportion of sample units, useful for anticipating variances.
Cluster Sampling	Includes individual population components in the sample only if they belong to a selected cluster (Lohr 2021).	Recognises the potential difference between sampling and observation units, necessitates consideration of unit sizes.
Systematic Sampling	Produces nearly identical samples to simple random sampling; simpler to implement as it does not require random number generation (Wilson 2019).	Requires a complete population list, does not require numbering, and simpler to create compared to simple random sampling.
Stratified Sampling	Involves dividing the target population into significant strata based on one or more attributes (Saunders et al. 2019).	Similar advantages and disadvantages as systematic or simple random sampling, useful for reducing variance among responders.

Table 3.3 is a summary of probability sampling techniques

3.14.2 Non-probability sampling

Non-probability sampling eliminates the costs and hassle of creating a sample frame and reduces the accuracy with which the information gathered may be presented. The outcomes may have unreported biases and uncertainties, rendering them useless. Non-probability sampling is frequently employed when operational simplicity is necessary, such as during the exploratory phases of a research study, when pretesting the questionnaire, when dealing with a homogeneous population, and when researchers lack statistical competence. It is essential to differentiate between convenience sampling, quota sampling, snowball sampling, and purposeful/judgemental sampling (Aaker et al. 2011:349). The next section will discuss purposive, quota, snowball and convenience sampling.

- **Purposive sampling:** Various purposive sampling methodologies are unified by the consideration of the study's objectives during sampling, ensuring that analysis units are selected according to standards that facilitate answering the research questions. When the criteria for the sample frame of analysis change throughout the research, a purposive sampling strategy becomes necessary (Bell et al. 2019:236). Given the importance of aligning sampling methods with research objectives, the next technique to consider is quota sampling. This method establishes specific quotas for different respondent categories based on demographic or product-use factors, aiming to ensure representation and reduce sampling errors while acknowledging some inherent limitations.
- **Quota sampling:** Quotas are established for each class of respondents based on parameters such as demographics or product use factors. The quota size is determined by the researcher's estimation of the proportion of each type of respondent

in the population. Quota sampling is commonly used to ensure that sample sizes contain the required percentages of various respondent classes, thereby reducing sample selection errors but not eliminating them. However, there will still be individuals in the population who will have no chance of being included in the sample (Burns and Bush 2012:239).

Quota sampling focuses on ensuring that sample sizes reflect specific respondent classes based on demographic or product-use parameters, which helps reduce selection errors but does not completely eliminate biases. Transitioning to another non-probability technique, snowball sampling involves selecting an initial respondent pool at random and then using referrals to expand the sample, which can be particularly useful for estimating uncommon features in a population.

- **Snowball sampling:** In snowball sampling, the initial respondent pool is typically chosen at random. After the interview, these respondents are then asked to identify other members of the target group. Subsequent respondents are selected based on these recommendations, often in waves, as referrals lead to further referrals, creating a snowball effect. While the initial respondents are selected using probability sampling, the final sample is non-probability. Referred individuals are likely to share demographic and psychographic features with those who referred them, rather than being randomly representative of the population. Snowball sampling aims to estimate uncommon features in the population (Malhotra et al. 2020:365). While snowball sampling is valuable for reaching specialised or hard-to-find populations through a network of referrals, it may not ensure representativeness due to its non-random selection process. Conversely, convenience sampling offers a more straightforward method for collecting data by selecting individuals based on ease of access.
- **Convenience sampling:** In convenience sampling, possible respondents are selected based on the researcher's convenience. The researcher typically approaches individuals from the target demographic who are easiest to reach. This may involve stopping people on a retail street, interviewing office workers, questioning clients as they exit a service facility, or selecting names from a business-maintained database (Wilson et al. 2019:231). The following table summarises the non-probability sampling techniques.

Table 3.4: Non-probability sampling

Sampling Technique	Description	Key Features
Purposive Sampling	Unified by study objectives, ensuring analysis units are selected according to standards facilitating research questions (Bell et al. 2019:236).	Selection based on study objectives, necessary when sample frame criteria change.
Quota Sampling	Quotas are set for each respondent class based on demographics or product-use factors (Burns and Bush 2012:239).	Ensures sample sizes contain required percentages of respondent classes, reduces selection errors, but does not eliminate them.
Snowball Sampling	Initial respondent pool chosen at random; subsequent respondents identified based on referrals from initial respondents, creating a snowball effect (Malhotra et al. 2020:365).	Probability sampling for initial respondents; final sample non-probability aims to estimate uncommon population features.
Convenience Sampling	Respondents were selected based on the researcher's convenience, often from the most accessible individuals within the target demographic (Wilson et al. 2019:231).	The convenient selection method may involve stopping people on the streets, interviewing office workers, questioning clients, or selecting from databases.

Table 3.4 is a summary of non-probability sampling

3.15 SAMPLING METHOD CHOSEN FOR THE STUDY

Convenience sampling, a non-probabilistic method, was chosen for its cost-effectiveness and data yield (Saunders et al. 2019:324). It relies on participants' availability, accessibility, and consent (Creswell et al. 2020:219). Deliberate sampling involves purposefully selecting elements from a broader population. These techniques highlight the flexibility and intentionality behind sample selection in research practices. In contrast, convenience sampling involves the selection of samples from a population based on their accessibility (Mishra et al. 2019:9). In response to the challenges posed by the COVID-19 pandemic, the research employed a non-probability convenience sampling approach, selecting voluntary participants. This method was chosen for its suitability amidst social distancing measures and limited physical interactions. To reach a diverse pool of respondents from the broader Durban area, the researcher strategically disseminated the survey questionnaire through popular social media platforms such as Facebook and WhatsApp. Given the constraints of the COVID-19 pandemic and the necessity for a practical approach to participant recruitment, convenience sampling was effectively employed to gather data from a diverse respondent pool in the Durban area. To ensure the relevance and accuracy of the study's findings, the following section delineates the specific inclusion and exclusion criteria used to define the eligible participant pool.

3.16 INCLUSION/EXCLUSION SAMPLING CRITERIA

3.16.1 Inclusion

The study focused on individuals who reside in Durban, South Africa. It specifically targeted participants aged 18 and above who had engaged in online and offline shopping activities during the COVID-19 pandemic.

3.16.2 Exclusion

The researcher excluded individuals under 18 who have not engaged in online and offline shopping in Durban during the COVID-19 pandemic.

3.17 RESEARCH INSTRUMENT: QUESTIONNAIRE

The researcher administered a self-designed questionnaire, employing closed-ended questions to the participants. Respondents were prompted to select the most suitable response to articulate their viewpoints or opinions. Utilising a 5-point Likert scale, the level of disagreement or agreement was gauged.

Three primary justifications support the selection of a sample survey over a complete census.

Cost: Firstly, cost considerations play a pivotal role. Survey samples offer a cost-effective means of obtaining ample and dependable data concerning the target population, particularly when operating within budgetary constraints. Conducting a comprehensive census is often impractical under such financial limitations (Sarstedt and Mooi 2019:42).

Time: Time is another critical consideration. Survey samples facilitate rapid data collection, allowing for swift publishing or availability of results. Unlike in-person interviews, questionnaires offer exceptional cost-effectiveness, especially for research endeavours involving large sample sizes and a global scope. Written questionnaires are particularly advantageous when addressing a diverse array of research inquiries. (Vasuki 2021:12).

Accuracy: Accuracy is another crucial factor. Estimates derived from a meticulously designed and expertly executed survey sample often align more closely with the actual figures compared to results from a haphazardly conducted census. Conducting a census for a large population necessitates significant administrative infrastructure and requires a multitude of fieldworkers to collect data, thereby increasing the likelihood of biases, recording errors, and other inaccuracies. Conversely, data obtained from a survey sample can be gathered by qualified experts adhering to stringent data quality standards. Additionally, utilising proper sampling techniques and sufficiently large sample sizes enables researchers to make claims

and draw conclusions with the requisite level of confidence and precision (Wu and Thompson 2020:07).

Once the fundamental data to be gathered is identified, careful consideration must be given to the administration strategy. Personal interviews, telephone interviews, online surveys, and paper-based surveys are the four primary methods for collecting data through communication. Due to time constraints and cost considerations, online questionnaires were employed via Microsoft Forms and administered on Facebook and WhatsApp social networking platforms. The choice of the data-gathering tool depended on factors such as the number of questions, their wording, the response categories, the sequence in which they were presented, and other relevant factors (Brown et al. 2018:186).

The questionnaire is one of the most favoured methods for data collection during a survey. All respondents were presented with a standardised set of questions to gather responses from numerous participants efficiently before the quantitative analysis. The response rate, alongside the validity and reliability of the collected data, is significantly influenced by the questionnaire's design. Standardised questions prove ideal for questionnaires as they ensure uniform responses from all participants. Consequently, surveys find frequent application in exploratory or descriptive research. Descriptive studies, such as those employing opinion and attitude questionnaires and organisational practice questionnaires, facilitate the recognition and explanation of variability in various occurrences (Saunders et al. 2019:504). The questionnaire's cost-effectiveness, rapid data collection, and standardised questions justify its preference over other methods, ensuring accurate and reliable data collection, especially in exploratory or descriptive research contexts. The use of a self-designed questionnaire, featuring closed-ended questions and a 5-point Likert scale, was strategically chosen to efficiently gather and analyse participants' viewpoints. This method offers significant advantages in terms of cost, time and accuracy, particularly when compared to comprehensive census methods. Consequently, the following section elaborates on the derivation of the questionnaire, focusing on its design to ensure clear, unbiased communication and effective data collection.

3.17.1 Questionnaire derivation

The primary objective of questionnaire design is to minimise noise or distortion in two-way communication, ensuring clarity and understanding between parties. Likert scale questions were utilised in this survey. Closed-ended questions provided respondents with choices, including both multiple-choice and dichotomous questions. Likert scale questions were employed to gauge respondents' levels of agreement or disagreement with a proposition (Wilson 2019:184).

Respondents are required to express their level of agreement or disagreement with various statements about an attitude or object using a Likert scale. Likert scale questions typically range from three to seven points, with the researcher opting for a 5-point Likert scale in this study (Aaker et al. 2013:233). As noted by Saunders et al. (2019:523), rating scale questions are commonly utilised to gather subjective input, often employing the Likert-style assessment method, where respondents rate their agreement or disagreement with a statement or series of assertions. The questionnaire encompassed both multiple-choice questions and Likert scale questions. A pre-test study was conducted to ensure the robustness of the questionnaire and refine its effectiveness. This preliminary step involved a small-scale trial to test the questionnaire on a group of 15 respondents, facilitating the identification and rectification of potential issues before the main study.

SECTION A: Demographic profile of respondents.

SECTION B: Buying patterns during the pandemic.

SECTION C: Reasons for panic buying.

SECTION D: Change in customer service.

3.18 PRE-TEST STUDY

A pre-test study, often referred to as a small-scale research endeavour, involves gathering information from participants similar to the main study, serving as a dry run to fine-tune procedures and minimise the risk of fatal defects in the overall study design that could render the results useless. Pre-test studies, also known as pretests, provide preliminary results intended to inform the design of future studies (Babin et al. 2016:64). Pretesting, the process of evaluating the data collection instrument on a group of respondents, typically between 15 and 30, helps identify and rectify any potential issues, thereby enhancing the quality of the questionnaire. Conducting a pre-test is crucial to refine the questionnaire and assess its content validity before proceeding with the main study (Nunan et al. 2020:228).

The pre-test questionnaire initially underwent a face validity assessment, wherein it was reviewed and evaluated by a supervisor, an expert in the field, alongside a statistician. Following this, a construct validity check was conducted through a pre-test on 08 September 2023, involving 15 respondents who were not part of the target sample. The pre-test revealed no significant changes were required for the questionnaire. Following the pre-test, the questionnaire administered, utilising online social networking platforms (Facebook and WhatsApp) to efficiently reach participants.

The pre-test, facilitated through online social networking platforms, was conveniently administered to 15 respondents who were not part of the target sample. The pre-test questionnaire was distributed via platforms such as Facebook and WhatsApp in September 2023. The researcher achieved a 100% response rate from individuals who participated in the survey. During the questionnaire administration, respondents were provided with an explanation of the research project's nature and purpose. Additionally, a cover letter accompanied the questionnaire, outlining the confidentiality policy, and respondents were assured of both confidentiality and anonymity. Following the completion of the pre-test, a comprehensive review was undertaken to identify any inconsistencies, missing data, or partially addressed questions, thereby ensuring the integrity and reliability of the data collected.

3.19 COLLECTION OF THE PRIMARY DATA

All 15 questionnaires were completed within the allotted time limit. Subsequently, a thorough review was conducted to identify any inconsistencies, missing data, or partially addressed questions. Upon completion of the pre-test, the researcher obtained permission from the Department of Research and Postgraduate Support to proceed with the main study (see appendix A). A link to the questionnaire was then disseminated to respondents who met the study criteria, and the administration of the questionnaire was carried out accordingly.

3.19.1 Ethics clearance

The Department of Research and Postgraduate Support permitted the researcher to conduct the study (see Appendix A). A questionnaire link was sent to respondents who fell within the study sample. The researcher administered the questionnaire to respondents. The following table was utilised to create the questionnaire.

Table 3.4: Questionnaire derivation table (a)

Buying patterns during the pandemic		
Item	Sources	This study tests
2.1. I decreased the number of shopping trips.	(Kempen and Tobias-Mamina 2022: 221).	One sample t- test Factor analysis
2.2. I increased the number of items of the same product that I bought	(Çinar 2020:3870).	One sample t- test Factor analysis
2.3. I bought more products that have a longer shelf life.	(Hajjipoor, Rahbarinejad, Irankhah and Sobhani 2023:2). (Bakalis, Valdramidis, Argyropoulos et al. 2020 and Shahidi, 2020).	One sample t- test Factor analysis
2.4. I did more online purchasing (e-commerce)	Mansour and Hoque (2021:9)	One sample t- test Factor analysis
2.5. I had more of my shopping delivered than before	(Njomane and Telukdarie 2022:07).	One sample t- test Factor analysis
2.6. I looked for outdoor shops/markets to shop at (instead of in a closed building)	(Carlitz and Makhura 2021:02)	One sample t- test Factor analysis
2.7. I bought more locally produced products.	(Tripathi, Smith, Sait, Sallu, Whitfield, Jankielsohn, Kunin, Mazibuko and Nyhodo 2021:08).	One sample t- test Factor analysis
2.8. The total amount I spent on shopping decreased	(Krüger and Meyer 2021:251)	One sample t- test Factor analysis
2.9. I searched for substitute products to reduce my trips to the shops	Weber (2021:4)	One sample t- test Factor analysis
2.10. I shopped at different shops for various reasons (closer to home, those open, less crowded, etc.)	Bauerová and Bracíníková (2021 as cited in Kempen and Tobias-Mamina 2022:224)	One sample t- test Factor analysis
2.11. I bought fewer pre-prepared meals	Kaur and Sharma (2020:3127)	One sample t- test Factor analysis
2.12. I changed the time of day I shopped	(Yildirim 2021:03).	One sample t- test Factor analysis
2.13. My spending on clothes and fashion items decreased	(Kempen et al 2022:221)	One sample t- test Factor analysis
2.14. I prioritised essential items in my shopping	(Naeem 2021:378).	One sample t- test Factor analysis
2.15. My priorities shifted from discretionary spending (travel, holidays, entertainment) to essentials (food, personal care, cleaning products, etc.)	(Debata, Patnaik and Mishra (2020:4)	One sample t- test Factor analysis
2.16. I Spent more on data for communicating/working	(Fischer, Tonder, Gumede and Lalla-Edward 2021:02)	One sample t- test Factor analysis
2.17. I Spent more on health and wellness products like vitamins, supplements, masks, etc	(Nielsen Company, 2020).	One sample t- test Factor analysis
2.18. The amount of prepared food delivered from food outlets increased.	(Rwafa-Ponela, Goldstein, Kruger, Erzse, Karim and Hofman 2022:09).	One sample t- test Factor analysis
2.19. Expenditure on travel, vacations and tourism decreased.	(Gursoy and Chi 2020:527).	One sample t- test Factor analysis
2.20. I was more cautious in my spending and saved more.	(Heerden and Roos 2021:109).	One sample t- test Factor analysis
2.21. I was more aware of striving to get value for money for my purchased goods than before	(Yazdanparast and Alhenawi 2022:818)	One sample t- test Factor analysis
2.22. The proportion of contactless payments (e.g., online payments, mobile e-wallets, etc) increased	(Bongomin, Balunywa, Basalirwa, Ngoma and Ntayi 2023:03)	One sample t- test Factor analysis
Relevant inferential statistics		

Table 3.5: Questionnaire derivation table (b)

Panic buying		
Item	Sources	Test
3.1. Fear and anxiety of product shortages prompted me to buy in bulk	O'Connell, Paula, and Smith (2020:249)	One sample t- test Factor analysis
3.2. Seeing others engaging in panic buying triggered me to do the same	(Eriksson and Stenius 2020:1950)	One sample t- test Factor analysis
3.3 The uncertainty of how long the lockdown would continue caused me to buy in bulk	Leung, Chung, Tisdale, Chiu, and Lim (2021:1)	One sample t- test
3.4. I bought in bulk to reduce the risk of infection by reducing the frequency of shopping trips	Iriani, Nuswantara, Kartika (2021:944)	One sample t- test Factor analysis
3.5. Fear of supply chain disruptions (manufacturing and distribution) causing a scarcity of goods prompted me to buy in bulk	Thakur, Diwekar, Reddy and Niteesh (2020:87)	One sample t- test Factor analysis
3.6. I bought in bulk to relieve my stress and uncertainty of the pandemic	Gawior, Polasik and Olmo (2022:2)	One sample t- test Factor analysis
3.7. I bought in bulk to provide a sense of security and comfort during the pandemic	Ahmed, Streimikiene, Rolle and Duc (2020:8)	One sample t- test Factor analysis
Relevant inferential statistics		

Table 3.6: Questionnaire derivation table(c)

Change in customer service		
Item	Sources	Test
4.1. Personal attention	Valaskova and Durova (2021:4)	One sample t- test Factor analysis
4.2. Sourcing products that you wanted but were not found in the store	Aryani, Nair, Hoo, Hung, Lim, Chandan, Chew and Desai (2021:87)	One sample t- test Factor analysis
4.3. Cleaning and sanitising the store	(Brandtner, Darbanian, Fatatouri and Udolwu 2021:02).	One sample t- test Factor analysis
4.4. The management of queues in the store	(Perlman and Yechiali 2020:01)	One sample t- test Factor analysis
4.5. Payment methods that limit contact	(Puriwat and Tripopsakul 2021:85).	One sample t- test Factor analysis
4.6. Providing apps/ways to enable a customer to browse remotely to assist in virtual shopping	(Thaba, Jacobs and Laby 2023:05)	One sample t- test Factor analysis
4.7. Collection/delivery of goods when ordered online	Valaskova and Durova (2021:4)	One sample t- test Factor analysis
4.8. The ability to contact store employees virtually to limit the need for personal contact	(Knox 2023).	One sample t- test
4.9. The empathy received from retail staff while you shopped	(Brandtner, Darbanian, Fatatouri and Udolwu 2021:02).	One sample t- test Factor analysis
Relevant inferential statistics		

3.19.2 Administration and collection of the questionnaire

The researcher administered three hundred and eighty-four questionnaires, achieving a response rate of one hundred percent. Each questionnaire included information about the nature and objectives of the study, assuring respondents of anonymity and confidentiality. The questionnaires were distributed via a Microsoft Forms link, and responses were collected through the platform. Data collection took place between 10 September 2023 and 17 September 2023 via WhatsApp and Facebook social networking platforms. After completing data collection, the next phase involved data analysis to extract and interpret relevant information.

3.20 DATA ANALYSIS

After collecting the data, an analysis was conducted to obtain pertinent information to address the problem identified in this study. The analysis involved using descriptive statistical techniques, such as graphs, charts, and descriptive statistics, along with appropriate inferential statistics. Data analysis consists of organising freshly acquired data in a manner conducive to analysis to offer insights that facilitate well-informed decision-making (Karaca and Cattani 2018:01). The next section delves into the quantitative data analysis techniques utilised.

The researcher employed SPSS Version 28, a Statistical Package for the Social Sciences, and IBM SPSS AMOS Version 28 to analyse the survey data gathered through Likert scale responses.

Descriptive statistics are typically related to frequency distribution summarising the data shown in the frequency table. Dispersion, central tendency, and form measurements are a few of them (Aaker et al. 2012:387). Using just a few numbers, descriptive statistics can summarise the properties of enormous data sets. Measures of dispersion and measures of central tendency are the two descriptive statistics that are employed most frequently. Calculating the mean, median, mode, and central tendency shows what a set of data's typical values should be. Statistical inferences that aim to generalise population characteristics from sample results are frequently made in marketing research (Wilson et al. 2018:272). This foundational analysis supports further investigation through statistical inference, which allows researchers to draw conclusions about a population based on sample data. The following tests were used to analyse the quantitative data:

Table 3.7: Descriptive statistical tests

Aspect	Description	Description
Descriptive Statistics		Utilised to represent graphs and tables visually
Tables and Charts		Display information regarding averages and variability, showcasing means and standard deviations
Frequencies		Represented in charts and tables

Table 3.7 is a summary of descriptive statistical tests

3.21 INFERENCE STATISTICS

Statistical inference is drawing a population's conclusions from information describing the sample. The sample size enables the researcher to determine the likelihood of reaching random conclusion. Statistical analysis software typically automatically calculates this probability. However, it is crucial to remember that larger absolute-size samples are much more probable to represent the group from which they were drawn than smaller samples, and in particular, the sample mean is more likely to be equal to the mean for the target group, assuming that the samples are not biased (Saunders et al. 2019:300). Typically, the following tests are conducted in inferential statistics.

- The Analysis of Variance (ANOVA) test examined the connection among multiple groups and determined the resulting significance.
- The Kaiser-Meyer-Olkin (KMO) index was employed to assess the suitability of the selected sample.
- Bartlett's test of sphericity was performed to assess the suitability of the analysed data. A significant p-value is indicative of adequacy.
- The t-test evaluates if there are significant differences between the means of two groups on a specific variable, typically assuming normal distribution within each group, making it robust for large sample sizes even with non-normal data.
- Factor analysis is a statistical method used to identify underlying relationships between variables in a dataset by reducing the observed variables into fewer unobserved variables, called factors.

3.21.1 The t-test

The t-test helps determine if there are noteworthy variations in the means of two groups concerning a specific variable. The t-test is a parametric statistical test, assuming that the data are typically distributed within each group compared. When dealing with large samples, the t-test is often considered robust to diverge from normality, which means that even if the data is not normally distributed, the t-test can still provide valid results (Patten and Newhart 2017:236). Additionally, the Anova test is utilised to examine the differences in variances within groups.

3.21.2 Analysis of variance (ANOVA)

Beins (2018:422) suggests that ANOVA serves as a statistical method to identify variations among three or more means by examining differences in variances within and between groups. While ANOVA identifies variations among multiple means by examining differences in

variance, Cronbach's alpha assesses how consistently a set of items measures a single construct, ensuring the reliability of the measurement tools.

3.21.3 Factor analysis

Factor analysis is a widely employed multivariate statistical method in psychology, education and the health professions. It simplifies numerous variables into a reduced set, known as factors. Additionally, it identifies fundamental connections between measured variables and latent constructs, facilitating theory development and refinement. This process also offers evidence of construct validity for self-reporting scales (Politano, Walton and Parrish 2018:351). Factor analysis aids in simplifying variables and validating constructs, while Bartlett's test further evaluates the suitability of the correlation matrix for factor analysis by checking for significant relationships among variables.

3.21.4 Bartlett's test

This statistical test assesses whether the correlation matrix can be considered an identity matrix, suggesting no relationships between items. The null hypothesis assumes a matrix with all 1's on the diagonal and 0's elsewhere. A p-value below 0.05 means that the data deviate from an identity matrix, indicating a significant relationship among the variables analysed in factor analysis (Cleff 2019:433). While Bartlett's test evaluates the adequacy of the correlation matrix for factor analysis, the correlation matrix itself provides a detailed summary of the relationships between variables, highlighting how each variable correlates with others in the analysis.

3.21.5 Correlation matrix

A correlation matrix is a tool that condenses information about how different variables in a scale relate to each other. In the context of factor analysis, the prevalent type of correlation matrix is built on Pearson product-moment correlations, denoted as Pearson r or r_{xy} . This matrix shows the correlations between every pair of variables considered in the factor analysis. Notably, the diagonal elements consistently have a value of one, representing the correlation of each variable with itself (Palmer 2020:294). Following the correlation matrix, the Kaiser-Meyer-Olkin (KMO) test evaluates the adequacy of the sample for factor analysis by measuring the proportion of variance shared among variables.

3.21.6 Kaiser-Meyer-Olkin (KMO)

The Kaiser-Meyer-Olkin test, or KMO, serves as a gauge for sampling adequacy in a study by assessing the correlation coefficients compared to partial ones. Essentially, it measures the

shared variance attributed to the underlying factors. If the KMO value is high (ranging from 0.5 to 1), it suggests that factor analysis is suitable for the data. Conversely, a low value (below 0.5) indicates that factor analysis may not be appropriate for the given data (Cleff 2019:436).

Following the assessment of sampling adequacy through the Kaiser-Meyer-Olkin (KMO) test, the focus shifts to evaluating the reliability of the study to ensure that its findings can be generalised across different contexts and populations.

3.22 RELIABILITY

Cronbach alpha is a measure of internal consistency, which is a component of reliability testing. It involves a set of items that form a scale to measure a single construct, such as intelligence. The alpha coefficient assesses how well these items align in measuring that specific construct without considering whether it accurately captures the intended construct (which pertains to validity) (Cronk 2017:118). Additionally, Cronbach alpha is a metric that evaluates the correlation among the items within a test. Its value ranges from 0 to 1, and a score below 0.6 is considered subpar. A value of 0.7 or higher indicates strong internal consistency and reliability (Bell et al. 2019:278).

The reliability of a study focuses on whether its conclusions can be generalised to other contexts, historical periods, individuals, or societies. Even studies with high levels of construct and internal validity may have low levels of external validity if their findings cannot be applied to different contexts. To enhance external validity, one can use more diverse data to obtain meaningful information and replicate the study in various cultural settings (Bergin 2018:27). Replication and consistency are referred to as reliability by Saunders et al. (2019:213). Conducting a study using the same research strategy and obtaining the same results is considered credible research. After establishing reliability, the study can proceed to structural equation modelling (SEM), which is a method used to test hypotheses about relationships between observed and latent variables. This involves defining, estimating, and evaluating a model to understand variable correlations and maximise the explanation of variance.

The researcher employed the following measures to ensure reliability in the study:

- The questionnaires provided respondents with anonymity.
- A pre-test was undertaken to ensure that all statements and questions were easily understood and relevant to the study.
- The reliability of measurement was ensured by calculating the Cronbach Alpha.

- **Structural equation modelling (SEM)**

SEM is a statistical method to examine hypotheses concerning the connections between observed and latent variables. The process involves five key stages: defining the model, ensuring its identifiability, estimating parameters, evaluating the model, and making necessary modifications. 'Structural' implies a cause-and-effect connection within the framework. The objectives revolve around understanding the correlations or covariances among variables and maximising variance description. The process involves two primary analyses: path analysis, akin to regression, and confirmatory factor analysis (CFA). So, SEM lends itself well to comparing models in data analysis. For this purpose, a sample size ranging from 200 to 400 is considered suitable for SEM (Kyriazo 2018:2207). Following the discussion on SEM, the focus shifts to validity, which assesses the effectiveness and accuracy of the measurement instruments used, ensuring that they appropriately capture the constructs or variables of interest and align with the research objectives.

3.23 VALIDITY

Validity is defined as the suitability of the metrics used, the correctness of the analysis of the results, and the generalisability of the conclusions. The first component of validity, sometimes called measurement validity, is connected to several validity types intended to evaluate this goal (Saunders et al. 2019:214). Validity encompasses how effectively the measuring instrument fulfils its intended function. This aspect underscores the instrument's capacity to accurately capture the constructs or variables under investigation. Essentially, validity gauges the extent to which the instrument aligns with the researcher's objectives and adequately measures what it purports to measure. This definition highlights the critical role of validity in ensuring the reliability and accuracy of research outcomes (Mohajan 2017:58). The two spectrums of validity covered were as follows:

- Face validity, essential for valid variables, concerns whether the variable accurately reflects the researcher's intended measurement. Essentially, a measure possesses face validity if it makes logical sense. Typically, a sample of specialists engages in discussions and reaches a consensus on the level of face validity, evaluating the coherence of the variable with the intended measurement. This process ensures that the measurement instrument aligns with the research objectives and accurately captures the intended constructs (Malhotra et al. 2020:180).
- Face and content validity share a close relationship, albeit with content validity being more structured. Prior to assessing content validity, researchers must articulate their

intended measurements and delineate what falls within and outside the defined scope. Much of the groundwork for content validity is established prior to actual data collection, ensuring clarity and precision in measurement (Babin et al. 2020:288).

The researcher incorporated both face and content validity measures into the study to ensure its robustness:

- The study's objectives served as the foundation for constructing the questionnaire, ensuring alignment with research goals.
- The supervisor further reviewed the questionnaire for validation after statistical analysis established face validity.
- Clear delineation of the study's purposes by the researcher helped maintain focus and relevance throughout the data collection process.
- A pre-test study was conducted to gather feedback from individuals, aiding the researcher in refining the questionnaire based on diverse perspectives and ensuring its effectiveness.

Building on the discussion of validity, the focus now shifts to ethical considerations, which are critical in ensuring that research is conducted responsibly and with respect for participants' rights and confidentiality.

3.24 ETHICAL CONSIDERATIONS

The ethical guidelines outlined by research codes assist researchers in lowering the likelihood of ethical risks. It is understood that ethical decisions for students conducting research will be made in consultation with mentors and other trained researchers familiar with handling these complications. In quantitative research, anonymising data and presenting conclusions that prevent identifying specific persons is often more straightforward. For potential participants to make an educated and free decision regarding their possible engagement, informed consent requires providing adequate details about the study and ensuring no implied or explicit pressure (Bell et al. 2019:404). The DUT Institutional Research Ethics Committee approved the research, as indicated in Appendix A. The participants were given a letter (Appendix B) containing information about the study's purpose and nature. This letter served to inform them and obtain their voluntary consent. Participants were briefed on the data collection procedure, and all ethical protocols were adhered to for this study. The safety and security of participants were prioritised while collecting data.

The study strictly followed ethical guidelines, prioritising participant confidentiality, anonymity, and informed consent. The researcher also implemented sufficient measures to safeguard all

collected data. The data was collected using Microsoft Forms to ensure efficient data collection and confidentiality.

- **Ensuring participants have given informed consent**

The importance of obtaining informed consent from research participants, involves providing them with comprehensive information and assurances regarding their involvement. This enables individuals to fully grasp the implications of their participation and make informed decisions freely, without any undue influence or pressure from the researcher (Saunders et al. 2019:258). Participants received an introductory letter outlining the study's nature before agreeing to take part (refer to Appendix B). They were then invited to indicate their consent to participate, with a clear understanding that their involvement was entirely voluntary, and they retained the right to withdraw from the research at any point. With the principles of informed consent established, the final section of this chapter summarises the study's objectives, methodology, and key findings, highlighting the insights gained regarding consumer behaviour during the COVID-19 lockdown.

3.25 SUMMARY

This chapter aimed to investigate the impact of COVID-19 lockdown regulations on consumer buying behaviour in the greater Durban region, employing a quantitative research approach rooted in positivism. Data was collected from a representative sample utilising structured questionnaire, efficiently analysing it using the Statistical Package for the Social Sciences (SPSS) and aligning it with the study's objectives. By focusing on consumers within the defined region, the research aimed for relevance and accuracy in its findings, emphasising clarity, precision, and alignment with the research objectives throughout the methodology.

Two main types of sampling techniques, probability and non-probability, were outlined, with convenience sampling chosen due to its suitability amidst COVID-19 restrictions. The study meticulously developed and pre-tested the questionnaire to ensure clarity and validity in data collection, emphasising a systematic approach to sampling, instrument development, and data collection to generate reliable insights into pandemic-era consumer behaviour. The comprehensive analysis of buying behaviours, panic buying tendencies, and shifts in customer service revealed notable responses and trends, showcasing the importance of adapting business strategies to meet evolving consumer needs during challenging times, thereby providing valuable insights for businesses and policymakers alike.

CHAPTER FOUR: DATA ANALYSIS AND INTERPRETATION

4.1 INTRODUCTION

Following the review of relevant literature in chapter two and the description of the methodology utilised for the study in chapter three, the current chapter presents data obtained from the study survey and the analysis of the findings. Primary data was collected through a comprehensive survey of 384 respondents. The researcher distributed 400 online questionnaires via Microsoft Forms, yielding 384 completed responses and achieving an overall response rate of 96%. Data was analysed using various statistical techniques, including descriptive and inferential statistical tests, factor analysis, reliability testing (Cronbach's alpha), and SEM. The researcher utilised SPSS Version 28, a Statistical Package for the Social Sciences and IBM SPSS AMOS Version 28, to analyse the survey data collected from Likert scale responses. The SEM was undertaken to determine the relationships between different consumer behaviour constructs and explore the mediating role of changes in customer service in influencing consumer decisions. The relevant descriptive and inferential statistical tests were undertaken. In addition, tests for reliability and validity were also undertaken.

4.2 DEMOGRAPHIC PROFILE OF RESPONDENTS

This section presents the demographic characteristics of respondents, such as age, gender, race and highest level of education.

4.2.1 Age group

Table 4.1: Presents the respondent's age group distribution

Age group	Frequency	Percent
18-29	102	26.6
30-39	117	30.5
40-49	64	16.7
50-59	67	17.5
60-69	27	7
70+	6	1.6
Total	383	100

The data reveals that the age cohort is 30-39 (30.5%), whilst the 18-29 age group constituted (26.6%). The majority of respondents (30.5+26.6=57%) are from ages between 18-39 years old.

Table 4.2: Reflect the gender of respondents

Category	Frequency	Percent
Male	157	40.9
Female	226	58.9
I prefer not to say	1	0.3
Total	384	100.0

The majority of respondents were female (58.9%).

4.2.2 Ethnicity

Table 4.3: Respondents ethnicity

Category	Frequency	Percent
Black	153	39.8
Coloured	51	13.3
Indian	140	36.5
White	39	10.2
Other	1	0.3
Total	384	100

The data reveals that the majority percentage of respondents were Black, comprising 39.8% followed by Indian respondents representing 36.5% of the dataset. The sample represents the ethnicity in Durban, with the majority identifying as Black and Indian (76.3%).

4.2.3 Highest level of education

Table 4.4: Highest level of education attained by respondents

Type of qualification	Frequency	Percent
No formal education	4	1.0
Primary	13	3.4
Secondary	159	41.4
Tertiary	208	54.2
Total	384	100

Table 4.4 represents that the majority of the respondents (54.2%) have a tertiary level of education, while 41.4% have secondary education. Overall, the data indicates that relatively high percentage of respondents (95.6%) possess tertiary and secondary qualifications.

4.2.4 Occupation

Table 4.5: Respondents occupation

Occupation	Frequency	Percent
Student	63	16.4
Employed	192	50
self-employed	45	11.7
Unemployed	58	15.1
Retired	26	6.8
Total	384	100

Table 4.5 indicates that the majority of the respondents (50+11.7=61.7%) is employed.

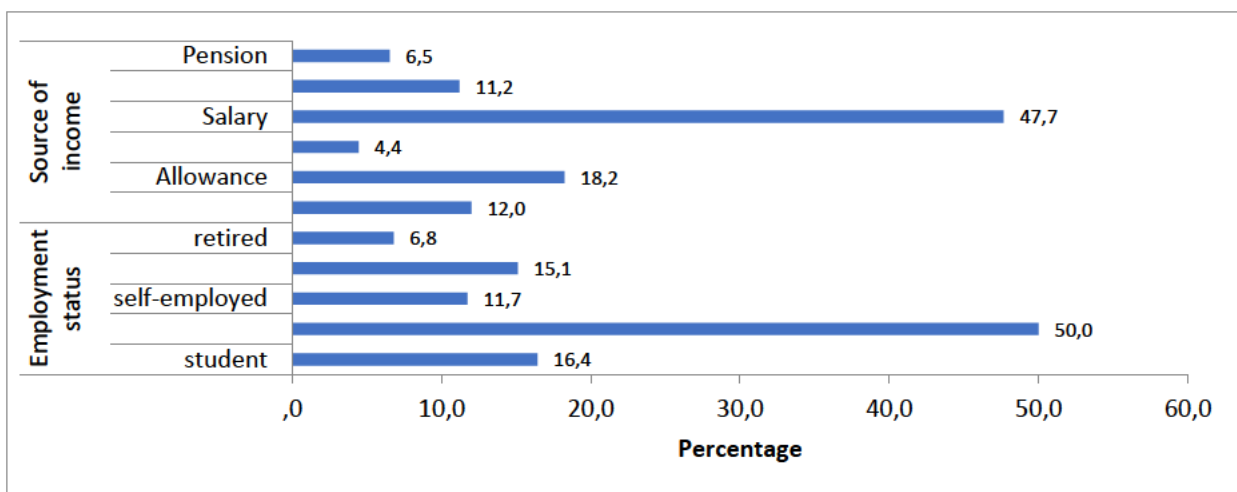


Figure 4.1: Respondents source of income

Figure 4.1 depicts the respondents' income source and occupational type. Most respondents (47.7%) are salary earners, which supports being employed (50%).

Table 4.6: Shopping medium used by respondents

Source	Purchase source (N=384)	
	No	Yes
Online	121 (31.5%)	263 (68.5%)
Offline	93 (24.2%)	291(75.8%)

4.2.5 Shopping medium of respondents

H0: There is a difference in the scores of the age groups, gender, ethnicity and education.

Table 4.6 shows that the p values are less than 0.01. Therefore, H0 is partially accepted. The data reveals that 68.5% of respondents, have used online source for their purchases, which suggests that a substantial majority of the consumers in the study prefer or have experience with online platforms for making purchases. On the other hand, 75.8% of the total have used offline sources for their purchases, including traditional brick-and-mortar stores or other non-online sources. The relatively high percentage in shopping mediums indicates that a significant portion of the individuals in the study still make purchases through offline means. In summary, the data highlights that a considerable portion of the individuals have experience with both online and offline purchase sources. While off and online shopping mediums are popular among the majority, a substantial portion still relies on online sources.

Table 4.7: Demographic profile of sample

	t	df	One- sided p	Two- sided p	Mean difference	Lower	Upper
1.1 Indicate your age group	3.449	383	<.001	<.001	2.523	2.39	2.66
1.2 Indicate your gender	62.983	384	<.001	<.001	1.595	1.55	1.64
1.3 State your ethnicity	39.648	384	<.001	<.001	2.179	2.07	2.29
1.4 Indicate your highest level of education	110.928	384	<.001	<.001	3.488	3.43	3.55
1.5 Indicate your occupation	42.527	384	<.001	<.001	2.457	2.34	2.57
1.6 Your source of income	48.858	384	<.001	<.001	3.475	3.34	3.62
1.7 Indicate what type(s) of purchases you made during the covid-19 pandemic (27 March 2020 to 5 April 2022) (Tick all that apply)	53.544	384	<.001	<.001	2.197	2.12	2.28

Table 4.7 presents the results of a one-sample test conducted on various demographic and purchasing behaviour variables among the study participants. Each row corresponds to a specific variable, such as age group, gender, ethnicity, education level, occupation, source of income, and types of purchases made during the COVID-19 pandemic. The test value represents the hypothesised mean difference, which is set at 0 for comparison. The significance values ($p < .001$) indicate that there are statistically significant differences in all the examined demographic and purchasing variables compared to the hypothesised mean of 0. This suggests that the observed differences in age groups, gender, ethnicity, education, occupation, source of income, and types of purchases made are not due to random chance, but rather reflect meaningful differences in the population.

4.3 BUYING PATTERNS DURING THE PANDEMIC

This section addresses the buying patterns during the pandemic.

Construct	n	Mean	Standard deviation	t	df	p-value
2.1 I decreased the number of shopping trips	384	3.35	1.308	5.266	383	<.001*
2.2 I increased the number of items of the same product that I bought	384	3.51	1.112	8.991	383	<.001*
2.3 I bought more products that have a longer shelf life	384	4.07 (1)	1.098	19.017	383	<.001*
2.4 I did more online purchasing (e-commerce)	384	3.35	1.376	5.005	383	<.001*
2.5 I had more of my shopping delivered than before	384	3.19	1.446	2.541	383	.011*
2.6 I looked for outdoor shops/markets to shop at (instead of in a closed building)	384	2.92	1.225	-1.292	383	.197
2.7 I bought more locally produced products	384	3.22	1.085	3.903	383	<.001*
2.8 The total amount I spent on shopping decreased	384	2.80	1.243	-3.162	383	.002*
2.9 I searched for substitute products to reduce my trips to the shops	384	3.47	1.066	8.566	383	<.001*
2.10 I shopped at different shops for various reasons (closer to home, those open, less crowded, etc.)	384	3.60	1.108	10.689	383	<.001*
2.11 I bought fewer pre-prepared meals	384	3.28	1.191	4.626	383	<.001*
2.12 I changed the time of day I shopped	384	3.38	1.143	6.475	383	<.001*
2.13 My spending on clothes and fashion items decreased	384	3.93 (5)	1.114	16.444	383	<.001*
2.14 I prioritised essential items in my shopping	384	4.03 (2)	1.006	19.983	383	<.001*
2.15 My spending priorities shifted from discretionary spending (travel, holidays, entertainment) to essentials (food, personal care, cleaning products, etc)	384	3.99 (3)	1.000	19.443	383	<.001*
2.16 I Spent more on data for communicating/working	384	3.59	1.159	10.037	383	<.001*
2.17 I Spent more on health and wellness products like vitamins, supplements, masks, etc	384	3.78	1.018	14.942	383	<.001*
2.18 The amount of prepared food delivered from food outlets increased	384	2.83	1.279	-2.633	383	.009*
2.19 Expenditure on travel, vacations and tourism decreased	384	3.99 (3)	1.116	17.332	383	<.001*
2.20 I was more cautious in my spending and saved more	384	3.88	1.023	16.868	383	<.001*
2.21 I was more aware of striving to get value for money for my purchased goods than before	383	3.79	.996	15.538	382	<.001*
2.22 The proportion of contactless payments (e.g., online payments, mobile e-wallets etc) increased	384	3.74	1.309	11.031	383	<.001*

* Significant at 95% level

4.3.1 Level of agreement on buying patterns during the pandemic

Table 4.8 depicts the buying patterns in descending order of the mean value, standard deviation, where the mean value ranged from the maximum of five to zero. The results are based on the factor analysis; only the results of mean values of 3.59 onwards were used and 11 dimensions were identified. The chi-square test is used to indicate whether there is a significant association between two categorical variables ($p < .001$); these variables take on names or labels. In the context of buying patterns, these variables take the labels (strongly disagree, disagree, neutral, agree and strongly agree). The buying patterns identified in descending order indicate that respondents with relatively high mean scores:

- Bought more products that have a longer shelf life (mean 4.07 SD=1.098) and $p < .001^*$
- Prioritised essential items in my shopping (mean 4.03 SD=1.006) and $p < .001^*$
- Spending priorities shifted from discretionary spending to essentials (mean 3.99 SD=1.000) and $p < .001^*$
- Expenditure on travel, vacations and tourism decreased (mean 3.99 SD=1.116) and $p < .001^*$
- Spending on clothes and fashion items decreased (mean 3.93 SD=1.114) and $p < .001^*$
- Cautious in my spending and saved more (mean 3.88 SD=1.023) and $p < .001^*$
- More aware of striving to get value for money for my purchased good than before (mean 3.79 SD=0.996) and $p < .001^*$
- Spent more on health and wellness products like vitamins, supplements, masks, etc. (mean 3.78 SD=1.018) and $p < .001^*$
- Proportion of contactless payments increased (mean 3.74 SD=1.309) and $p < .001^*$
- Shopped at different times for various reasons (mean 3.60 SD=1.108) and $p < .001^*$
- Spent more on data for communicating/working (mean 3.59 SD=1.159) and $p < .001^*$

Furthermore, 9 dimensions were identified; the mean scores were moderate with significant p values ($< .001$). The dimensions depicted below are in descending order:

- Increased the number of items of the same product that I bought (mean 3.51 SD=1.112) and $p < .001^*$
- Searched for substitute products to reduce my trips to the shops (mean 3.47 SD=1.066) and $p < .001^*$
- Changed the time of day shopped (mean 3.38 SD=1.143) and $p < .001^*$
- Did more online purchasing (mean 3.35 SD=1.376) and $p < .001^*$

- Decreased the number of shopping trips (mean 3.35 SD=1.308) and $p < .001^*$
- Bought fewer pre-prepared meals (mean 3.28 SD=1.191) and $p < .001^*$
- Bought more locally produced products (mean 3.22 SD=1.085) and $p < .001^*$
- Had more of my shopping delivered than before (mean 3.19 SD=1.446) and $p < .001^*$
- Number of prepared foods delivered from food outlets increased (mean 2.83 SD=1.279) and $p < .001^*$

One-sample t-tests were undertaken to determine the degree of difference reached on each item measuring the respondent's buying patterns during the pandemic. The average agreement score is tested against the central score of '3' to determine if it differs significantly from '3'. The data in Table 4.7 shows the level of agreement on the statements assessing the respondents' buying patterns during the pandemic.

- For example, respondents showed a moderate decrease in shopping trips (mean = 3.35). The change is statistically significant ($t(383) = 5.266, p < .001^*$), indicating the decrease in shopping trips is meaningful.
- Respondents reported a moderate increase in purchasing multiple items of the same product (mean = 3.51). This increase is highly significant ($t = 8.991, p < .001^*$), suggesting a meaningful behaviour change.
- Respondents reported a significant increase in purchasing products with longer shelf lives (mean = 4.07). This change is significant ($t(383) = 19.017, p < .001^*$), indicating a substantial shift in buying preferences.
- Respondents expressed a moderate increase in online purchasing (mean = 3.35). The change is statistically significant ($t(383) = 5.005, p < .001^*$), suggesting a purposeful increase in online shopping.
- Respondents reported a moderate increase in having shopping items delivered (mean = 3.19). This change is statistically significant ($t(383) = 2.541, p = .011^*$), indicating that the increase in deliveries is meaningful.
- Respondents were slightly inclined to look for outdoor shopping options (mean = 2.92). However, this change is not statistically significant ($t(383) = -1.292, p = .197$), suggesting that there is neither considerable agreement nor significant disagreement that they looked for outdoor shops/markets in the statement measuring the outdoor shopping options.
- Regarding local product purchases, the data revealed that, on average, respondents reported buying more locally produced products (mean = 3.22). This change is statistically significant ($t(383) = 3.903, p < .001^*$), indicating a meaningful deviation

toward local products. However, there was a disagreement that they decreased the total amount spent on shopping (mean = 2.80). The t value shows statistically significant differences ($t = -3.162$, $p = .002^*$), suggesting respondents were in significant disagreement about decreasing the total amount spent on shopping.

- Respondents reported seeking substitute products to reduce shopping trips (mean = 3.47). This change is highly significant ($t = 8.566$, $p < .001^*$), indicating a meaningful shift in behaviour. Also, respondents reported shopping at different shops for various reasons (mean = 3.60). This change is highly significant ($t = 10.689$, $p < .001^*$), suggesting a meaningful diversification in shopping venues.
- Respondents reported buying fewer pre-prepared meals (mean = 3.28). This change is statistically significant ($t = 4.626$, $p < .001^*$), indicating a meaningful shift in meal choices.
- Respondents reported changing the time of day they shopped (mean = 3.38). This change is statistically significant ($t = 6.475$, $p < .001^*$), suggesting a meaningful alteration in shopping timing. Respondents reported decreased spending on clothes and fashion items (mean = 3.93). This change is highly significant ($t = 16.444$, $p < .001^*$), indicating a substantial reduction in fashion-related expenditures.
- Respondents reported prioritising essential items in their shopping (mean = 4.03). This change is highly significant ($t = 19.983$, $p < .001^*$), indicating a substantial shift towards essential purchases. Respondents reported a shift from discretionary spending to essentials (mean = 3.99). This change is highly significant ($t = 19.443$, $p < .001^*$), signifying a substantial shift in spending priorities.
- Respondents reported increased spending on data for communication and work (mean = 3.59). This change is highly significant ($t = 10.037$, $p < .001^*$), indicating a meaningful increase in data-related expenses.
- Furthermore, respondents reported spending more on health and wellness products (mean = 3.78). This change is highly significant ($t = 14.942$, $p < .001^*$), signifying a notable increase in health-related expenditures.
- Respondents reported a minor increase in prepared food delivery from food outlets (mean = 2.83). This change is statistically significant ($t = -2.633$, $p = .009^*$), suggesting a moderate shift in this behaviour.
- Respondents reported decreased expenditure on travel, vacations, and tourism (mean = 3.99). This change is highly significant ($t = 17.332$, $p < .001^*$), significantly reducing travel-related spending.

- Respondents reported being more cautious about spending and saving (mean = 3.88). This change is highly significant ($t = 16.868$, $p < .001^*$), signifying a considerable increase in savings behaviour.
- Respondents reported heightened awareness of getting value for money (mean = 3.79). This change is highly significant ($t = 15.538$, $p < .001^*$), indicating a significant shift in this awareness.
- Respondents reported an increase in contactless payments (mean = 3.74). The change is significant ($t = 11.031$, $p < .001^*$), signifying a considerable increase in the use of contactless payment methods.

In summary, the data from the survey provides valuable insights into the buying behaviour of respondents in the context of changing consumer habits and preferences. The findings indicate that the respondents have made significant adjustments in their shopping behaviour and demonstrated high adaptability in response to various mediating factors. Respondents are strongly inclined to purchase locally produced items and products with longer shelf lives. Additionally, there is a consensus that respondents have increased their online shopping activities, diversified their shopping venues, and prioritised essential items.

Moreover, respondents have shown a remarkable reduction in spending on discretionary items such as clothing and fashion. Due to the remote work and regulations spending priorities towards essential purchases, reflecting an evident change in consumer preferences. Additionally, there is a consensus that respondents have become more cautious in spending, actively seeking value for money, and saving more.

- Furthermore, respondents have demonstrated increased reliance on contactless payment methods, indicating a shift towards digital payment technologies. Although not all changes have been universally agreed upon. There is no significant consensus regarding the preference for outdoor shopping options, suggesting that this behaviour may not be prevalent among all respondents.

Table 4.9: Kaiser-Meyer-Olkin Measure of Sampling Adequacy (KMO) and Bartlett's test for the construct buying pattern during pandemic

KMO and Bartlett's Test			
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.			.905
Bartlett's Test of Sphericity	Approx. Chi-Square		5154.428
	df		231
	Sig.		.000

4.3.2 Assessing the reliability of buying patterns during the pandemic.

Table 4.10: Variance extracted in the construct buying pattern during pandemic

Total Variance Explained							
Factor	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings ^a
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total
1	9.030	41.047	41.047	8.597	39.078	39.078	7.081
2	2.271	10.322	51.369	1.877	8.533	47.611	6.102
3	1.681	7.643	59.012	1.159	5.268	52.879	5.829
4	1.221	5.548	64.561				
5	.965	4.388	68.949				
6	.752	3.417	72.365				
7	.722	3.280	75.645				
8	.618	2.808	78.454				
9	.554	2.520	80.973				
10	.539	2.449	83.422				
11	.512	2.326	85.748				
12	.430	1.954	87.702				
13	.385	1.751	89.452				
14	.365	1.661	91.114				
15	.348	1.580	92.694				
16	.318	1.443	94.137				
17	.292	1.327	95.464				
18	.272	1.237	96.701				
19	.260	1.181	97.882				
20	.191	.868	98.750				
21	.150	.680	99.429				
22	.126	.571	100.000				

Extraction Method: Principal Axis Factoring.

a. When factors are correlated, sums of squared loadings cannot be added to obtain a total variance.

Table 4.9 shows the Kaiser-Meyer-Olkin Measure of Sampling Adequacy (KMO) of 0.905 score which is a significant Bartlett's test score indicating that the data was adequate for successful and reliable extraction (Table 4.9). The rotation converged in 7 iterations. Factor analysis with Promax rotation was applied to these 22 items. Three factors were extracted, which account for 52.88% of the variance in the data (Table 4.10).

To explore the data structure, when a construct is measured using several items and reduced to a small number of latent variables, factor analysis with Promax rotation is applied to the set of items in the construct. During the process, some items may be dropped because they do

not load strongly enough onto any factor or cross-load onto multiple factors. The reliability of combining the items into a single latent variable is tested using Cronbach's alpha. An alpha value of at least 0.7 is considered adequate. If items do not correlate strongly enough with the other items in the construct and negatively affect the reliability, they may be dropped. The factor extraction is deemed successful if the Kaiser-Meyer-Olkin Measure of Sampling Adequacy (KMO) exceeds 0.6 and Bartlett's test of sphericity is significant. The test in table 4.9 showed that the score was greater than 0.6.

Table 4.11: Buying patterns during the pandemic- factor loadings

	Factor		
	1	2	3
2.15 My spending priorities shifted from discretionary spending (travel, holidays, entertainment) to essentials (food, personal care, cleaning products, etc)	.835		
2.14 I prioritised essential items in my shopping	.777		
2.13 My spending on clothes and fashion items decreased	.746		
2.20 I was more cautious in my spending and saved more	.738		
2.21 I was more aware of striving to get value for money for my purchased goods than before	.715		
2.19 Expenditure on travel, vacations and tourism decreased	.657		
2.3 I bought more products that have a longer shelf life	.537		
2.17 I Spent more on health and wellness products like vitamins, supplements, masks, etc	.498		
2.5 I had more of my shopping delivered than before		.940	
2.4 I did more online purchasing (e-commerce)		.892	
2.22 The proportion of contactless payments (e.g., online payments, mobile e-wallets etc) increased		.629	
2.2 I increased the number of items of the same product that I bought		.627	
2.16 I Spent more on data for communicating/working		.431	
2.1 I decreased the number of shopping trips		.378	
2.10 I shopped at different shops for various reasons (closer to home, those open, less crowded, etc.)			.612
2.7 I bought more locally produced products			.592
2.8 The total amount I spent on shopping decreased			.590
2.6 I looked for outdoor shops/markets to shop at (instead of in a closed building)			.585
2.9 I searched for substitute products to reduce my trips to the shops			.512
2.11 I bought fewer pre-prepared meals			.491
2.18 The amount of prepared food delivered from food outlets increased			.466
2.12 I changed the time of day I shopped			.404

The data structure showing factor loadings (Table 4.11) shows the items have been grouped into these three factor groupings that result from the analysis. Overall, three factors were extracted from the data.

Table 4.12: Reliability of buying patterns during the pandemic

Factor	Construct	Items included	Variance extracted	Cronbach's alpha
1	Spending priorities (SP)	3, 13-15, 17, 19-21	39.1	0.904
2	Reduced contact (RC)	1, 2, 4, 5, 16, 22	8.5	0.852
3	Products and shops (PS)	6-12, 18	5.3	0.828

The grouping of items into three factors and constructs is displayed in table 4.11. Factor one, categorised as **Spending Priorities (SP)**, is composed of items that reflect an individual's preferences and choices regarding their spending habits. Items 3, 13-15, 17, 19-21 capture various aspects of how a person allocates their financial resources. The factor explains a considerable amount of the data's total variance, accounting for approximately 39.1% of the variance. The Cronbach's alpha coefficient of 0.904 indicates the factor's considerably high internal consistency. The data suggests that the items in this factor are closely related and reliably measure the concept of spending priorities. In practical terms, individuals who score higher on this factor are likely to have well-defined and consistent preferences when it comes to spending their money.

Factor two, categorised as **Reduced Contact (RC)**, encompasses different items that pertain to reducing or limiting social interactions and contact. The items in this factor (items 1, 2, 4, 5, 16, 22) indicate a preference or behaviour related to reducing or controlling the level of contact with others. Furthermore, it is apparent the factor accounts for a smaller proportion of the total variance in the data and explains approximately 8.5% of it. The factor demonstrates good internal consistency, as reflected in Cronbach's alpha coefficient of 0.852. The data suggests that the included items effectively measure the construct of reducing contact. Individuals with higher scores on this factor may be more inclined to limit their social interactions or maintain a certain distance from others.

Factor three, categorised as **Products and Shops (PS)**, focuses on items related to consumer preferences and behaviours associated with products and shopping. The items in this factor (items 6-12, 18) collectively account for a smaller portion of the variance, approximately 5.3%. The factor demonstrates reasonable internal consistency, with a Cronbach's alpha coefficient of 0.828. The included items effectively measure the concept of products and shops, though to a lesser extent than the other factors. Individuals scoring higher on this factor may have distinct preferences and behaviours when selecting and purchasing products. However, factors 2.1, 2.11, 2.12, 2.16, 2.17, and 2.18 exhibited factor loadings below the recommended threshold of 0.5. Nevertheless, their inclusion contributed to the overall validity and reliability

of the study by offering valuable contextual insights and facilitating a more comprehensive interpretation of the data.

These three factors help us understand the different aspects of respondents' buying patterns during the pandemic. The "Spending Priorities" factor reflects how people prioritise their spending, the "Reduced Contact" factor reveals their tendencies regarding social interactions, and the "Products and Shops" factor provides insights into their consumer preferences. These factors and their associated variance explained, and internal consistency provide valuable insights into consumer buying patterns during the pandemic.

4.3.3 Assessing the agreement level on the extracted constructs for buying patterns during the pandemic.

Table 4.13: Respondent's level of agreement on the extracted constructs for buying pattern during pandemic

Construct	n	Mean	Standard deviation	t	df	p-value
Spending priorities (SP)	384	3.93	.812	22.469	383	<.001
Reduction in personal contact (RC)	384	3.46	.979	9.118	383	<.001
Products and shops (PS)	384	3.19	.788	4.636	383	<.001

Composite variables are formed by calculating the average agreement scores for all items included in a variable (Table 4.13). A one-sample t-test was applied to determine the degree of difference to these three composite variables. A significant agreement indicates that the pandemic caused a shift in spending priorities such that consumers were more likely to spend their money ($M = 3.93$; $SD = 0.812$; $t(383) = 22.469$; $p < 0.001$). A significant agreement showed that the pandemic caused a reduction in personal contact, indicating an inclination to lessen or control their social interactions ($M = 3.46$; $SD = 0.979$; $t(383) = 9.118$; $p < 0.001$). On average, respondents had moderately positive attitudes or behaviours regarding products and shopping, indicating a certain level of preference for specific consumer choices. The t-test indicates their attitudes or behaviour regarding products and shopping was statistically significant ($M = 3.19$; $SD = 0.788$; $t(383) = 4.636$; $p < 0.001$).

In summary, the data in Table 4.11 suggests that spending priorities ($M = 3.93$) were the most significant change in consumer buying patterns during the pandemic, while products and shopping were the least ($M = 3.19$). This implies that consumers were more cautious about spending priorities than they were with product and shop preferences.

4.4 PANIC BUYING

Table 4.14 represents results of the statements measuring panic buying behaviour during the pandemic.

Table 4.14: Respondents level of agreement on statements measuring panic buying

Reasons for panic buying	n	Mean	Standard deviation	t	df	p-value
3.1 Fear and anxiety of product shortages prompted me to buy in bulk	384	3.76	1.039	14.391	383	<.001
3.2 Seeing others engaging in panic buying triggered me to do the same	384	3.76	1.277	11.585	383	<.001
3.3 The uncertainty of how long the lockdown would continue caused me to buy in bulk	384	3.73	1.066	13.450	383	<.001
3.4 I bought in bulk to reduce the risk of infection by reducing the frequency of shopping trips	384	3.84	1.038	15.781	383	<.001
3.5 Fear of supply chain disruptions (manufacturing and distribution) causing a scarcity of goods prompted me to buy in bulk	384	3.89	1.097	15.961	383	<.001
3.6 I bought in bulk to relieve my stress and uncertainty of the pandemic	384	3.86	1.107	15.311	383	<.001
3.7 I bought in bulk to provide a sense of security and comfort during the pandemic	384	3.93	1.156	15.797	383	<.001

Table 4.14 depicts panic buying patterns of respondents in descending order of the mean value, standard deviation and T score, where the mean value ranged from the maximum of five to a minimum one. The chi-square test is used to indicate whether there is a significant association between two categorical variables ($p = <.001$), these variables take on names or labels. In the context of panic buying, these liker scale measured (strongly disagree, disagree, neutral, agree and strongly agree). The panic buying patterns identified in descending order indicate that respondents:

- Bought in bulk to provide a sense of security and comfort during the pandemic (mean 3.93 SD = 1.156) and $p = <.001$.
- Fear of supply chain disruption causing a scarcity of goods prompted me to buy in bulk (mean 3.89 SD = 1.097) and $p = <.001$.
- Bought in bulk to relieve my stress and uncertainty of the pandemic (mean 3.86 SD = 1.107) and $p = <.001$.
- Bought in bulk to reduce the risk of infection by reducing the frequency of shopping trips (mean 3.84 SD = 1.038) and $p = <.001$.

- Fear and anxiety of product shortages prompted me to buy in bulk (mean 3.76 SD = 1.039) and $p = <.001$.
- Seeing others engaging in panic buying triggered me to do the same (mean 3.76 SD 1.277) and $p = <.001$
- The uncertainty of how long the lockdown would continue caused me to buy in bulk (mean 3.73 SD 1.066) and $p = <.001$.

4.4.1 Level of agreement on statements measuring panic buying

The level of agreement on statements measuring panic buying during the pandemic is presented in this section. A one-sample t-test was done to determine the degree of difference with each item measuring the respondents' buying patterns during the pandemic. The average agreement score is tested against the central score of '3' to determine if it differs significantly from '3'. The data in Table 4.14 highlights the level of agreement on the statements assessing the respondents' panic buying behaviour during the pandemic. On average, the mean value measured for all the items was greater than 4, indicating significant agreement. According to the one-sample test, there is considerable agreement that they did practice panic buying.

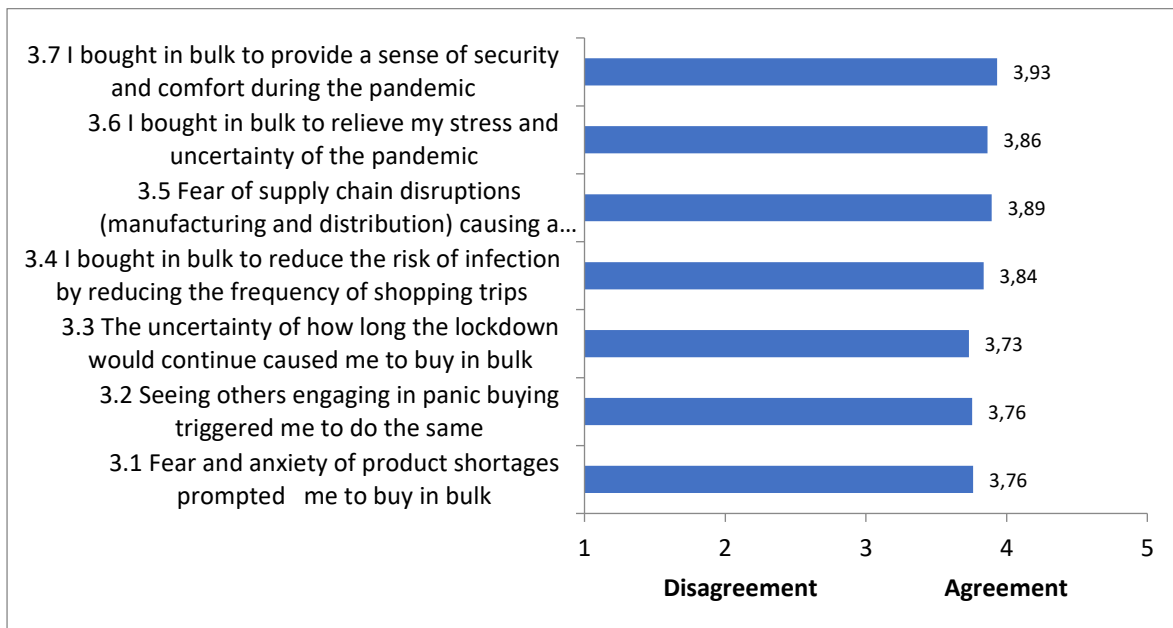


Figure 4.2: Mean value showing the level of agreement on panic buying

Figure 4.2 further illustrates the level of agreement on statements measuring panic buying. It was evident that the mean values were above 3 in all the statements.

4.4.2 Ranking of the reason for panic buying

Table 4.15: Ranking of the reasons for bulk buying

Reason for bulk buying	Average agreement score
3.7 I bought in bulk to provide a sense of security and comfort during the pandemic	3.93
3.5 Fear of supply chain disruptions (manufacturing and distribution) causing a scarcity of goods prompted me to buy in bulk	3.89
3.6 I bought in bulk to relieve my stress and uncertainty of the pandemic	3.86
3.4 I bought in bulk to reduce the risk of infection by reducing the frequency of shopping trips	3.84
3.1 Fear and anxiety of product shortages prompted me to buy in bulk	3.76
3.2 Seeing others engaging in panic buying triggered me to do the same	3.76
3.3 The uncertainty of how long the lockdown would continue caused me to buy in bulk	3.73

The ranking of the reasons for panic buying is given in Table 4.15. These are detailed below:

I bought in bulk to provide security and comfort during the pandemic (Average Score: 3.93): This statement received the highest average agreement score among respondents, with an average rating of 3.93. It indicates that a significant proportion of the individuals in the study expressed purchasing items in bulk during the pandemic, which provided them with a sense of security and comfort. The mean scores suggest that stockpiling goods was a way to cope with the uncertainties and anxieties associated with the pandemic for most respondents.

Fear of supply chain disruptions (manufacturing and distribution) causing a scarcity of goods prompted me to buy in bulk (Average Score: 3.89): The second-highest average agreement score was given to this statement with an average rating of 3.89. It suggests that concerns about disruptions in the supply chain, which could lead to shortages of essential products, played an important role in motivating individuals to engage in bulk buying during the pandemic.

I bought in **bulk to relieve my stress and uncertainty** of the pandemic (Average Score: 3.86). This reason received an average agreement score of 3.86. It indicates that many individuals turned to bulk buying to alleviate their stress and uncertainties related to the pandemic. The mean scores suggest that shopping in bulk provided a sense of control and reassurance.

I bought in bulk to reduce the **risk of infection** by reducing the frequency of shopping trips (Average Score: 3.84). For this reason, the average agreement score is 3.84. It implies that a

significant number of respondents believed purchasing items in bulk helped minimise the risk of infection by reducing the need for frequent visits to stores or public places.

Fear and anxiety of **product shortages** prompted me to buy in bulk (Average Score: 3.76): This reason received an average agreement score of 3.76. It suggests that concerns about product shortages, likely driven by media reports and public discourse, influenced some individuals to buy bulk during the pandemic. Seeing others engaging in panic buying triggered me to do the same (Average Score: 3.76). This reason also received an average agreement score of 3.76. It indicates that the behaviour of others, explicitly witnessing panic buying, had an impact on prompting some individuals to participate in bulk buying themselves. The uncertainty of how long the lockdown would continue caused me to buy in bulk (Average Score: 3.73). For this reason, the average agreement score is 3.73. It suggests that the uncertainty surrounding the duration of lockdowns and restrictions led some individuals to stockpile goods in anticipation of extended periods of limited store access.

In short, these average agreement scores provide insights into the various motivations and factors that drove individuals to buy bulk during the pandemic. It highlights the complex interplay of emotions, fears, and external influences contributing to this behaviour.

4.4.3 Assessing the reliability of the construct panic buying.

Table 4.16: Panic buying –factor loadings

	Factor
	1
3.7 I bought in bulk to provide a sense of security and comfort during the pandemic	0.903
3.5 Fear of supply chain disruptions (manufacturing and distribution) causing a scarcity of goods prompted me to buy in bulk	0.885
3.3 The uncertainty of how long the lockdown would continue caused me to buy in bulk	0.874
3.1 Fear and anxiety of product shortages prompted me to buy in bulk	0.872
3.6 I bought in bulk to relieve my stress and uncertainty of the pandemic	0.863
3.4 I bought in bulk to reduce the risk of infection by reducing the frequency of shopping trips	0.843
3.2 Seeing others engaging in panic buying triggered me to do the same	0.776

Factor analysis was applied to determine if there were any specific groupings of these seven items. They all loaded onto a single factor (KMO = 0.926), which accounts for 74.01% of the variance in the data. The factor loadings are shown in Table 4.16. These items are combined into a reliable variable (Cronbach's alpha =0 .950), PB.

4.4.4 Assessing the level of agreement on the extracted constructs for panic buying.

Table 4.17: Overall evidence of panic buying among the respondents

Panic buying	n	Mean	Standard deviation	t	df	p-value
PB	384	3.83	0.978	16.536	383	p<0.001

A one-sample t-test was applied to sign agreement/disagreement with the variable. On average, there is significant agreement that the pandemic caused panic buying behaviour among the respondents (M = 3.83; SD = 0.978; t (383) = 16.536; p<0.001), as appeared in Table 4.17.

4.5 CHANGE IN CUSTOMER SERVICE

A one-sample t-test was done to determine if there is significant agreement/disagreement with each item measuring the change in customer service during the pandemic. The average agreement score is tested against the central score of '3' to determine if it differs significantly from '3' in table 4.18.

Table 4.18: Respondent's level of agreement on change in customer service during pandemic

Change in customer service	n	Mean	Standard deviation	t	df	p-value
4.1 Personal attention	384	3.37	1.064	6.765	383	p<0.001
4.2 Sourcing products that you wanted but were not found in the store	384	3.17	1.286	2.540	383	0.011
4.3 Cleaning and sanitising the store	384	3.95	1.050	17.744	383	p<0.001
4.4 The management of queues in the store	384	3.27	1.279	4.068	383	p<0.001
4.5 Payment methods that limit contact	384	3.93	1.049	17.466	383	p<0.001
4.6 Providing apps/ways to enable a customer to browse remotely to assist in virtual shopping	384	4.01	1.062	18.644	383	p<0.001
4.7 Collection/delivery of goods when ordered online	384	4.13	1.120	19.824	383	p<0.001

Table 4.18 depicts changes in customer service for respondents in descending order of the mean value, standard deviation, and T score, where the mean value ranged from the maximum of five to one. The chi-square test is used to indicate whether there is a significant association between two categorical variables (p = <.001), these variables take on names or labels. The customer service patterns identified in descending order indicate that respondents:

- More so, respondents rated the **"Collection/delivery of goods"** when ordered online very positively, with a mean score of 4.13. The standard deviation of 1.120 indicates some variability in responses. The t-test yielded a highly significant t-value of 19.824 with 383 degrees of freedom and a p-value of less than 0.001, meaning that customers valued this service highly.
- Furthermore, the mean rating for **"Providing Apps/Ways for Remote Browsing"** is 4.01, indicating high satisfaction with this aspect of customer service. The standard deviation of 1.062 suggests some variability in responses. The measured t-test value means a highly significant difference, indicating that customers overwhelmingly appreciated this service ($t(383) = 18.644$; $p < 0.001$).
- The data indicates that, on average, the respondents rated the **store's efforts in cleaning and sanitising** very positively, with a mean score of 3.95. The standard deviation of 1.050 suggests that some responses varied. The t-test indicated a highly significant level of agreement ($t(383) = 17.744$; $p < 0.001$). The mean scores suggest that customers overwhelmingly perceived a positive change in this aspect of customer service.
- The result for **"Payment Methods That Limit Contact"** reveals that respondents, on average, rated the availability of payment methods limiting contact positively, with a mean score of 3.93. The standard deviation of 1.049 suggests some variability in responses. The t-test showed a highly significant t-value of 17.466 with 383 degrees of freedom and a p-value of less than 0.001, indicating that customers primarily appreciated this change in payment methods.
- The mean rating for **"Personal Attention"** is 3.37, indicating that, on average, customers perceived a moderate level of personal attention in stores. The standard deviation of 1.064 suggests that there was some variability in responses. The t-test value indicates a highly significant difference, meaning that customers' perceptions of personal attention varied significantly across the sample ($t(383) = 6.765$; $p < 0.001$).
- The mean rating for **"Management of Queues in the Store"** is 3.27, indicating moderate satisfaction with how queues were handled. The standard deviation of 1.279 indicates a relatively high degree of response variability. The t-test value measured indicates a statistically significant difference in perceptions of queue management ($t(383) = 4.068$; $p < 0.001$).

- The mean rating for **"Sourcing Products Not Found in the Store"** is 3.17, indicating a moderate agreement with the store's ability to source desired products. The standard deviation of 1.286 suggests a relatively higher degree of response variability. The t-test value indicates a statistically significant difference ($t(383) = 2.540$; $P = 0.011$).

In short, the above data provide insights into how customers perceived various changes in customer service during the pandemic. While some aspects, like cleaning and sanitising and remote browsing options, received high average ratings and were highly significant, others, like sourcing products not found in the store, received lower ratings and were less effective. These findings can inform businesses about the effectiveness of different customer service changes and areas for improvement.

4.5.1 Assessing the reliability of change in customer service.

Table 4.19: Change in customer service –factor loadings

Item	Factor
	1
4.5 Payment methods that limit contact	.843
4.6 Providing apps/ways to enable a customer to browse remotely to assist in virtual shopping	.816
4.7 Collection/delivery of goods when ordered online	.789
4.3 Cleaning and sanitising the store	.740
4.4 The management of queues in the store	.615
4.1 Personal attention	.547

Factor analysis was applied to determine if there were any specific groupings of these seven items. The result reveals that they all loaded onto a single factor ($KMO = .861$), accounting for 50.25% of the variance in the data. These items are combined into a reliable variable (Cronbach's alpha = .864), CCS. The factor loadings are shown in Table 4.19.

4.5.2 Assessing the agreement level on the extracted constructs for change in customer service

Table 4.20: Summary of change in customer service during the pandemic

Change in customer service	N	Mean	Standard deviation	t	df	p-value
CCS	384	3.69	0.841	16.062	383	$p < 0.001$

A one-sample t-test was applied for significant agreement/disagreement with a variable. The data in Table 4.20 suggests that, on average, there was a substantial change for the better in customer service during the pandemic ($M = 3.69$; $SD = 0.841$; $t(383) = 16.062$; $p < 0.001$).

4.6. BIVARIATE ANALYSIS ON THE DEMOGRAPHIC VARIABLES AND CONSTRUCTS

4.6.1 Association between age, education level and reducing contact

Table 4.21: Spearman's correlation between age, education and reducing contact

			Age group	Highest level of education
Spearman's rho	Reducing contact	Correlation Coefficient	-.108*	0.227**
		Sig. (2-tailed)	0.034	<.001
		N	384	385
**. Correlation is significant at the 0.01 level (2-tailed). *. Correlation is significant at the 0.05 level (2-tailed).				

Spearman's correlation is applied to test the association between age and reducing contact on the one hand and education and reducing contact on the other hand. The results in Table 4.21 suggest a weak negative correlation between age and RC (reducing contact), $\rho = -.108$, $p = 0.034$. Age is associated with less agreement that they practiced behaviours that reduced personal contact. There is a weak positive relationship between the level of education and RC (reducing contact), $\rho = .227$, $p < .001$. A higher level of education is associated with more agreement that they practiced behaviours that reduced personal contact.

4.6.2 Relationship between gender, race, and constructs

Table 4.22: Relationship between race, gender and the extracted constructs

Demographics	Reducing contact (RC)		Spending priorities (SP)		Panic buying (PB)		Change in customer service (CSS)	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
Gender								
Male	3.27	1.00	3.98	.83	3.86	.89	3.67	.79
Female	3.59	.94	3.92	.76	3.81	1.03	3.70	.87
<i>t</i> value	-3.154		0.796		0.523		-0.329	
Sig.	0.002		0.427		0.601		0.743	
Race								
Black	3.37	1.10	4.00	.67	4.07	.86	3.64	.82
Coloured	3.67	.82	4.14	.74	3.96	.83	3.98	.49
Indian	3.48	.92	3.77	.92	3.57	1.05	3.60	.97
White	3.49	.86	4.08	.67	3.67	1.07	3.84	.68
Other	3.00	.			3.00	.	3.00	.
F ratio	1.002		3.499		5.646		2.561	
Sig.	0.409		0.009		0.001		0.038	

Table 4.26 depicts the independent samples. A t-test was applied to test the difference between the gender (Male and female) and the level of agreement on the extracted constructs (Reducing contacts, spending priorities, panic buying, and change in consumer service). The results show that females (mean = 3.59, SD=0.94) agree significantly more than males (mean = 3.27) that they practice behaviours that reduce personal contact, $t(381) = -3.154$, $p = .002$.

The statistical findings highlight the significance of considering demographic factors when assessing consumer behaviour and responses during crisis events, such as the COVID-19 pandemic. Gender differences in reducing contact may indicate varying perceptions of health risks or differing responsibilities during the pandemic. Racial differences in spending priorities, panic buying, and perceived changes in customer service further demonstrate how socio-economic, cultural, and community-specific factors influence consumer behaviour.

4.7 THEORETICAL CONTRIBUTION AND HYPOTHESIS TESTING

4.7.1 Principal component analysis of the measurement model

Rotated Component Matrix ^a					
	Component				
	PB	SP	CC S	RC	PS
3.3 The uncertainty of how long the lockdown would continue caused me to buy in bulk	.823				
3.5 Fear of supply chain disruptions (manufacturing and distribution) causing a scarcity of goods prompted me to buy in bulk	.813				
3.6 I bought in bulk to relieve my stress and uncertainty of the pandemic	.809				
3.1 Fear and anxiety of product shortages prompted me to buy in bulk	.803				
3.7 I bought in bulk to provide a sense of security and comfort during the pandemic	.801				
3.4 I bought in bulk to reduce the risk of infection by reducing the frequency of shopping trips	.800				
3.2 Seeing others engaging in panic buying triggered me to do the same	.788				
2.15 My priorities shifted from discretionary spending (travel, holidays, entertainment) to essentials (food, personal care, cleaning products, etc.)		.757			
2.14 I prioritised essential items in my shopping		.744			
2.13 My spending on clothes and fashion items decreased		.731			
2.20 I was more cautious in my spending and saved more		.690			
2.19 Expenditure on travel, vacations and tourism decreased		.656			
2.17 I Spent more on health and wellness products like vitamins, supplements, masks, etc.		.589			
2.21 I was more aware of striving to get value for money for my purchased goods than before		.560			
4.5 Payment methods that limit contact			.803		
4.3 Cleaning and sanitising the store			.788		
4.7 Collection/delivery of goods when ordered online			.711		
4.6 Providing apps/ways to enable a customer to browse remotely to assist in virtual shopping			.707		
4.4 The management of queues in the store			.695		
4.1 Personal attention			.509		
2.5 I had more of my shopping delivered than before				.858	
2.4 I did more online purchasing (e-commerce)				.830	
2.2 I increased the number of items of the same product that I bought				.645	
2.22 The proportion of contactless payments (e.g., online payments, mobile e-wallets, etc.) increased				.584	
2.3 I bought more products that have a longer shelf life				.539	
2.8 The total amount I spent on shopping decreased					.727
2.6 I looked for outdoor shops/markets to shop at (instead of in a closed building)					.653
2.11 I bought fewer pre-prepared meals					.645
2.9 I searched for substitute products to reduce my trips to the shops					.529
Extraction Method: Principal Component Analysis. Rotation Method: Varimax with Kaiser Normalization. Variance = 68.58% Kaiser-Meyer-Olkin Measure of Sampling Adequacy = 0.932 Bartlett's Test of Sphericity = (p<0.001; X ² = 8337.486; df = 406)					
a. Rotation converged in 7 iterations.					
Panic buying (PB), Spending priorities (SP), Change in customer service (CCS), Reduced contact (RC), Products and shops (PS)					

The conceptual model and proposed research hypotheses were tested using structural equation modelling (SEM). The data was tested to see if it achieved reliability and validity

before the measurement model (MM) analyses. Exploratory factor analysis using principal component analysis (PCA) was performed on all the reliable constructs explained above. The data converged into five factors (Panic buying (PB), Spending priorities (SP), Change in customer service (CCS), Reduced contact (RC), Products and shops (PS)). The PCA results suggest that the five components explain a significant portion of the variance (68.58%) in the data, indicating that they are meaningful and capture essential aspects of consumer behaviour during the pandemic. The high score Kaiser-Meyer-Olkin Measure of Sampling Adequacy (0.932) and the significance of Bartlett's Test of Sphericity further support the robustness of the factor analysis results (Table 4.23).

Regarding discriminant validity, the construct items PS (0.529), RC (0.539 and 0.584), and CCS (0.509) were thoroughly evaluated. Although these factor loadings are relatively low and slightly below the commonly accepted threshold of 0.6, their retention was justified by their conceptual significance and contribution to the overall reliability of the constructs. The items PS (0.529) and CCS (0.509), despite their marginal loading strength, provided valuable insights into consumer behaviours related to product selection and changes in customer service during the COVID-19 pandemic. Similarly, the RC items (0.539 and 0.584) closely aligned with the theoretical framework and captured essential aspects of the reduced physical contact construct. The decision to retain these items reflects a careful balance between statistical rigor and theoretical depth, ensuring that the constructs remain both valid and contextually relevant within the scope of the study.

4.7.2 Measurement model: scale reliability and construct validity

Table 4.24: Discriminant, convergent and composite reliability of the measurement model (MM)

	CR	AVE	MSV	MaxR(H)	CCS	RC	SP	PS	PB
Change in customer service (CCS)	0.872	0.540	0.396	0.901	0.735				
Reduced contact (RC)	0.839	0.510	0.615	0.841	.629	0.714			
Spending priorities (SP)	0.898	0.557	0.466	0.903	.624	.670	0.746		
Products and shops (PS)	0.743	0.496	0.615	0.785	.385	.784	.664	0.705	
Panic buying (PB)	0.951	0.734	0.468	0.954	.558	.684	.683	.459	0.857

Confirmatory factor analysis (CFA) was then applied to confirm the measurement model (MM) by evaluating convergent and discriminant validity. Table 4.24 reflects the composite reliability (CR), convergent and discriminant validity of the MM. Hair, Page, Brunsveld, Merkle and Cleton (2023:265) described convergent validity as the extent to which a measure correlates positively with alternative measures of the same construct. Criteria used to assess convergent

validity include standardised loadings, composite reliability and the average variance extracted (AVE). The CR measures the internal consistency or reliability of the latent factors in the SEM. All composite reliability values range from **0.743 to 0.951**, which suggests acceptable reliability. The composite reliability for CCS is 0.872, which exceeds the recommended threshold of 0.70. The reliability test indicates that the items within the CCS construct are highly consistent and reliable in measuring the intended concept of changes in customer service. The composite reliability for RC is **0.839**, also exceeding the 0.70 threshold. The composite suggests that the items measuring remote and contactless shopping behaviours are reliable and internally consistent. The composite reliability for **spending priorities** is 0.898, comfortably surpassing the 0.70 threshold. The composite reliability indicates that the items assessing the shift in spending priorities during the pandemic are highly reliable and consistent. The composite reliability for **products and shops** is 0.743, which falls slightly above the 0.70 threshold but still indicates reasonable reliability. The composite reliability for PB is excellent at 0.951, suggesting that the items measuring motivations for pandemic-related bulk buying are highly reliable and consistent.

On the other hand, the Average Variance Extracted represents the amount of variance captured by the construct relative to the amount of variance due to measurement error. It is a measure of convergent validity. **For some constructs (CCS, RC, SP, PB), the AVE values are above the recommended threshold of 0.50, indicating good convergent validity.** The AVE means that a substantial proportion of the variance in each construct is due to the actual underlying concept rather than measurement error. Although the AVE value for **PS** did not meet the recommended threshold, the construct remained acceptable due to its composite reliability of 0.743. As noted by Fornell and Larcker (1981:39), if the AVE falls below the recommended threshold of 0.50 while the composite reliability exceeds 0.60, the construct can still be considered to demonstrate adequate convergent validity.

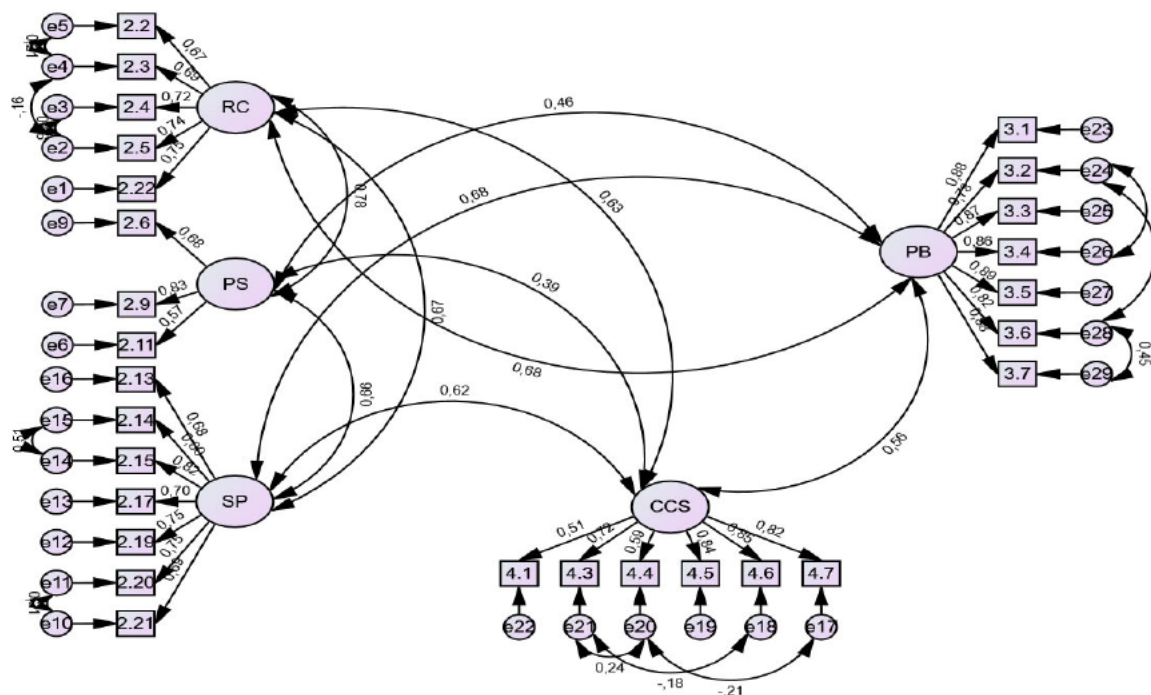
The MSV (maximum shared variance) measures the discriminant validity of a scale or a construct. It represents the maximum correlation between a construct and any other construct in the model (Bushmakina and Cappelleri 2022:232). Values below AVE are desirable. The value of the AVE for each construct is more significant than MSV values (except CCS and PS), which suggests adequate discriminant validity (Allen 2017:1821). Maximum Correlation with Heterotrait) (MaxR(H), which measures the discriminant validity of a scale or a construct, represents the maximum correlation between a construct and any other construct in the model that is different from the target construct. Values below 0.7 are considered acceptable. All constructs have MaxR(H) values above 0.7, supporting discriminant validity.

4.7.3 Fitness of the model

Figure 4.3 depicts the fitness of the model measurement where the factors depicted in 4.24. The numbers indicate the questionnaire items.

Table 4.25: Fitness model key

BUYING THEMES	
RC	Reduced contact (2.2, 2.3, 2.4, 2.5, 2.22)
PS	Product and shops (2.6, 2.9, 2.11)
SP	Spending priorities (2.13, 2.14, 2.15, 2.17, 2.19, 2.20, 2.21)
CCS	Change in customer service (4.1, 4.3, 4.4, 4.5, 4.6, 4.7)
PB	Panic buying (3.1, 3.2, 3.3, 3.4, 3.5, 3.6, 3.7)



- 2.2 I increased the number of items of the same product that I bought (0.67).
- 2.3 I bought more products that have a longer shelf life (0.69)
- 2.4 I did more online purchasing (e-commerce) (0.72).
- 2.5 I had more of my shopping delivered than before (0.74)
- 2.6 I looked for outdoor shops/markets to shop at (instead of in a closed building) (0.68).
- 2.22 The proportion of contactless payments (e.g., online payments, mobile e-wallets etc) increased (0.75).
- 2.9 I searched for substitute products to reduce my trips to the shops (0.83).
- 2.11 I bought fewer pre-prepared meals (0.57).
- 2.13 My spending on clothes and fashion items decreased (0.68).
- 2.14 I prioritised essential items in my shopping (0.80).
- 2.15 My spending priorities shifted from discretionary spending (travel, holidays, entertainment) to essentials (food, personal care, cleaning products etc) (0.82).
- 2.17 I spent more on health and wellness products like vitamins, supplements, masks etc (0.70).
- 2.19 Expenditure on travel, vacations and tourism decreased (0.75).

- 3.1 Fear and anxiety of product shortages prompted me to buy in bulk (0.88).
- 3.2 Seeing others engaging in panic buying triggered me to do the same (0.78).
- 3.3 The uncertainty of how long the lockdown would continue caused me to buy in bulk (0.87).
- 3.4 I bought in bulk to reduce the risk of infection by reducing the frequency of shopping trips (0.86).
- 3.5 Fear of supply chain disruptions (manufacturing and distribution) causing a scarcity of goods prompted me to buy in bulk (0.89).
- 3.6 I bought in bulk to relieve my stress and uncertainty of the pandemic (0.82).
- 3.7 I bought in bulk to provide a sense of security and comfort during the pandemic (0.88).
- 4.1 Personal attention (0.51).
- 4.3 Cleaning and sanitising the store (0.72).
- 4.4 The management of queues in the store (0.59).
- 4.5 Payment methods that limit contact (0.84).
- 4.6 Providing apps/ways to enable a customer to browse remotely to assist in virtual shopping (0.85).
- 4.7 Collection/delivery of goods when ordered online (0.82).

Figure 4.3: Fitness of the measurement model (MM)

Table 4.26: Model fitness indices for the measurement model (MM)

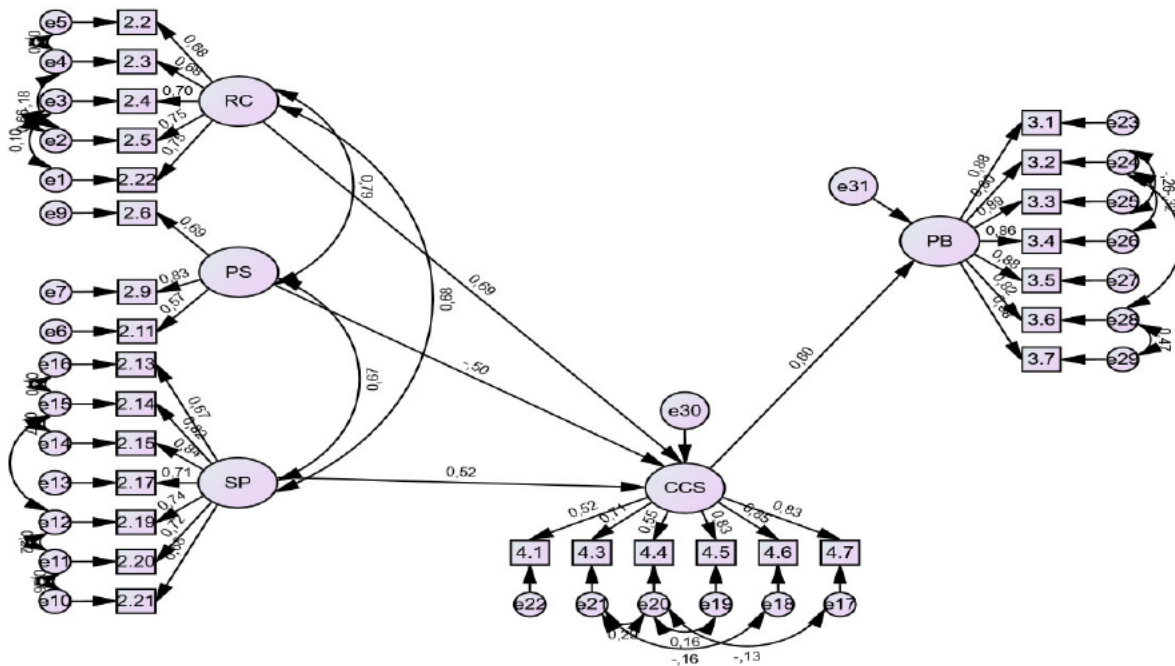
Fit Indices	Fit values	Criteria
χ^2 / df (p-value)	3.379(<.001)	<5
IFI	0.903	>.9
CFI	0.903	>.95
RMSEA	0.079	<.08

The model's overall fit was assessed by multiple fit criteria given in Table 4.26. The goodness of fitness indices are as follows: chi-square = 1111.542, df = 329, $p < .001$, $\chi^2 / df = 3.379$, which is the ratio to the degree of freedom of the fit model. The incremental fit index (IFI) = 0.903, measuring the proportional improvement of the model's fit compared to the null model. The comparative fit index (CFI) = 0.903 indicates that the data fits the model well, with a score higher than 0.9, lying within the acceptable threshold. The final assessment of the model is accomplished by utilising the root mean square error of approximation (RMSEA) = 0.079. The RMSEA further measures how well the model fits with the covariance matrix of the data measured; the indices (0.079) are less than the cut-off of 0.08, indicating the model is a good fit for the data observed. In line with Verma and Verma (2023:07), all criteria met the recommended values of the measurement model, which suggests that the MM has acceptable fitness.

4.7.4 Structural equation model (hypotheses testing)

Table 4.27: Path model key

BUYING THEMES	
RC	Reduced contact (2.2, 2.3, 2.4, 2.5, 2.22)
PS	Product and shops (2.6, 2.9, 2.11)
SP	Spending priorities (2.13, 2.14, 2.15, 2.17, 2.19, 2.20, 2.21)
CCS	Change in customer service (4.1, 4.3, 4.4, 4.5, 4.6, 4.7)
PB	Panic buying (3.1, 3.2, 3.3, 3.4, 3.5, 3.6, 3.7)



2.2 I increased the number of items of the same product that I bought (0.68).
 2.3 I bought more products that have a longer shelf life (0.68).
 2.4 I did more online purchasing (e-commerce) (0.70).
 2.5 I had more of my shopping delivered than before (0.75).
 2.6 I looked for outdoor shops/markets to shop at (instead of in a closed building) (0.69).
 2.22 The proportion of contactless payments (e.g., online payments, mobile e-wallets etc) increased (0.75).
 2.9 I searched for substitute products to reduce my trips to the shops (0.83).
 2.11 I bought fewer pre-prepared meals (0.57).
 2.13 My spending on clothes and fashion items decreased (0.67).
 2.14 I prioritised essential items in my shopping (0.82).
 2.15 My spending priorities shifted from discretionary spending (travel, holidays, entertainment) to essentials (food, personal care, cleaning products etc) (0.84).
 2.17 I Spent more on health and wellness products like vitamins, supplements, masks etc (0.71).
 2.19 Expenditure on travel, vacations and tourism decreased (0.74).
 2.20 I was more cautious in my spending and saved more (0.72).
 2.21 I was more aware of striving to get value for money for my purchased goods than before (0.68).

3.1 Fear and anxiety of product shortages prompted me to buy in bulk (0.88).
 3.2 Seeing others engaging in panic buying triggered me to do the same (0.80).
 3.3 The uncertainty of how long the lockdown would continue caused me to buy in bulk (0.89).
 3.4 I bought in bulk to reduce the risk of infection by reducing the frequency of shopping trips (0.86).
 3.5 Fear of supply chain disruptions (manufacturing and distribution) causing a scarcity of goods prompted me to buy in bulk (0.88).
 3.6 I bought in bulk to relieve my stress and uncertainty of the pandemic (0.82).
 3.7 I bought in bulk to provide a sense of security and comfort during the pandemic (0.88).

4.1 Personal attention (0.52).
 4.3 Cleaning and sanitising the store (0.71).
 4.4 The management of queues in the store (0.55).
 4.5 Payment methods that limit contact (0.83).
 4.6 Providing apps/ways to enable a customer to browse remotely to assist in virtual shopping (0.85).
 4.7 Collection/delivery of goods when ordered online (0.83).

Figure 4.4: Path model

The measurement model (MM) model was then converted into a path model showing the relationship between the latent variables. An SEM was applied to test all the hypothesised relationships among the latent variables. The resulting SEM with estimated standardised relationships is given in Figure 4.6. The goodness of fitness indices are as follows: chi-square = $\chi^2 = 1175.023$, $df = 326$, $p < .001$, $\chi^2 / df = 3.604$, CFI = 0.895, IFI = 0.895, RMSEA = 0.083, which suggests that the measurement model is acceptable. There is a relationship between RC, PS, SP and CCS, as shown in Figure 4.4. Also, CCS is inversely related to PB.

4.7.5 Structural equation modelling

SEM plays a crucial role in modelling by illustrating the connections between latent variables. It aids in assessing the measurement properties and validating theoretical relationships through a unified technique. SEM comprises both a measurement model and a structural model. The latent variables were RC, PS, SP, CCS and PB. After completing (CFA), the data underwent a two-step SEM approach. The initial step focused on scrutinising the measurement model to delineate the connections between latent variables and their corresponding observed indicators. The subsequent step involved analysing the proposed structural model. The items within the scale served as indicators in both the measurement and structural models (Civelek 2018:09). SEM provides a practical way for researchers to test hypotheses and conceptual models empirically. It goes by various names, like path analysis and structural or causal models. The study's model affirmed the significance of all item loadings ($p < .001$), and all indices surpassed the threshold, validating the model's reliability. These indices serve as indicators, revealing whether the SEM accurately represents the data or if poor results cast doubt on the findings (Kumar 2023:137).

4.7.6 Direct and indirect analysis

Table 4.28: Direct effects of variables measuring buying patterns, change in customer services and panic buying during the pandemic

Hypotheses	Dependent variable (DV)		Independent Variable (IV)	Standardised coefficient β	S.E.	Critical Ratio. (CR)	P	Decision
H1	CCS	<---	RC	0.689	0.067	5.588	<0.001	Supported
H2	CCS	<---	PS	-0.496	0.133	-3.959	<0.001	Supported
H3	CCS	<---	SP	0.522	0.110	6.341	<0.001	Supported
H4	PB	<---	CCS	0.603	0.137	11.555	<0.001	Supported

The direct effect of the independent variables on the dependent variables is given in Table 4.28. **Hypothesis 1** suggests a relationship exists between reducing in-person contact (RC)

and changes in customer services (CCS). The positive standardised coefficient ($\beta = 0.689$; $p < 0.001$) **indicates a significant positive relationship between individuals who reduced in-person contact during the pandemic and suggests individuals were more likely to experience a change in customer service provided.** The p-value of less than 0.001 confirms the statistical significance of this relationship, supporting Hypothesis 1, which suggests that as in-person contact decreased, changes in customer services increased. H1 is therefore partially accepted.

Hypothesis 2 assesses the relationship between products and shops (PS) and CCS. The negative standardised coefficient ($\beta = -0.496$; $p < 0.001$) indicates an inverse relationship, suggesting **individuals who changed their product choices and shopping behaviours were more likely to experience changes in customer services.** The p-value of less than 0.001 confirms the statistical significance of this relationship, supporting Hypothesis 2, suggesting that as product choices and shopping behaviours changed, customer services also changed in response.

Hypothesis 3 examines the relationship between shift in spending priorities (SP) and CCS. The positive standardised coefficient ($\beta = 0.522$; $p < 0.001$) indicates a significant positive relationship. The findings **suggest individuals who shifted their spending priorities during the pandemic were more likely to experience changes in customer service.** The p-value of less than 0.001 confirms the statistical significance of this relationship, supporting **Hypothesis 3, which indicates that as spending priorities shifted, customer services also changed in response.**

Hypothesis 4 investigates the relationship between changes in customer services (CCS) and panic buying (PB). The results suggest that individuals who experienced changes in customer service were more likely to engage in panic buying during the pandemic. This relationship is statistically significant and strongly supported, with a positive standardised coefficient ($\beta = 0.603$; $p < 0.001$). In other words, as **customer services changed, individuals were more motivated to engage in panic buying behaviour.**

In short, the results of these hypotheses tests provide strong evidence for the relationships proposed in the study. **The findings support the notion that changes in in-person contact, product choices, spending priorities, and customer services were all interrelated and influenced behaviours like panic buying.** These findings contribute to a better understanding of the factors influencing consumer behaviour during the pandemic.

Hypothesis 1 suggests a relationship exists between reducing in-person contact (RC) and CCS

Hypothesis 2 assesses the relationship between products and shops (PS) and CCS

Hypothesis 3 examines the relationship between shift in spending priorities (SP) and CCS

Hypothesis 4 investigates the relationship between changes in customer services (CCS) and panic buying (PB).

Table 4.29: The indirect effects of buying pattern on panic buying

Hypotheses	Path	Indirect Effects	Confidence interval		P value	Total effects	Mediation	Mediation (%)	Decision
			Low	High					
H5	SP->CCS->PB	0.420	0.250	0.554	0.014	0.420	Full	100	Supported
H6	PS->CCS->PB	-0.404	-0.665	-0.246	0.009	-0.404	Full	100	Supported
H7	RC->CCS->PB	0.389	0.240	0.617	0.030	.0.389	Full	100	Supported

Note: Unstandardised coefficients reported. Bootstrap sample 5,000 with replacement

The indirect effects of spending priorities (SP), reduced contact (RC), and products and shops (PS) through change in customer service (CCS) as a mediator on panic buying (PB) are given in Table 4.29. **Hypothesis 5** posited a mediation model where spending priorities (SP) indirectly influence panic buying (PB) through changes in customer services (CCS). The results support this hypothesis with an indirect effect of 0.420, a statistically significant p-value of 0.014, and a confidence interval that does not include zero. **Notably, the mediation percentage is 100%, indicating that change in customer service (CCS) fully mediate the relationship between spending priorities (SP) and panic buying (PB).**

Hypothesis 6 proposed a mediation model where products and shops (PS) indirectly affect PB through CCS. The results support this hypothesis with an indirect effect of -0.404, a statistically significant p-value of 0.009, and a confidence interval that does not include zero. The mediation percentage is 100%, indicating that **change in customer service (CCS) fully mediates the relationship between products and shops (PS) and panic buying (PB).**

Hypothesis 7 proposed a mediation model where reducing in-person contact (RC) indirectly influences PB through CCS. The results support this hypothesis with an indirect effect of 0.389, a statistically significant p-value of 0.030, and a confidence interval that does not include zero. Like the other hypotheses, the mediation percentage is 100%, indicating that **change in customer service (CCS) fully mediates the relationship between reduced contact (RC) and panic buying (PB).**

All three hypotheses (H5, H6, H7) are strongly supported. It is justified that the indirect effects of the independent variables (SP, PS, RC) on the dependent variable PB through the mediator CCS are fully mediated, with a percentage of 100% in each case. These findings highlight the significant role of CCS in explaining the relationships between these variables and PB.

4.8 DISCUSSION OF RESULTS

The discussion of results focuses on a thorough examination of the respondents' demographic profiles, the study's primary objectives, the developed conceptual model, and the tested hypotheses. By analysing demographic factors such as age, gender, income, and occupation, a contextual framework is established to enhance the understanding of shifts in consumer behaviour during the COVID-19 pandemic.

4.8.1 Demographic profile

This study the demographic variables investigated included age, gender, ethnicity, education level, occupation and source of income, the majority of the respondents (58.9%) being female. It is worth noting that a quantitative study carried out in South Africa in 2022 found similar results, where most respondents were female (Corbishely, Mason and Dobblesstein 2022:51). However, a study in India revealed that the majority were male (58.4%) (Kaur and Sharma 2020:3132). According to a census conducted by Statistics South Africa (Stats SA 2022) there are more females (372,490 or 51.5%) than males (351,173 or 48.5%) in Durban. Therefore, the findings used in this study concurs with the population demographics of Durban.

Most of the respondents that participated in the study are aged between 18-39, which concurs with the age cohort of under 35 accounting for 63% of the population of Durban. The study found that respondents have a tertiary education (54.2%) and secondary education (41.4%). With regard to employment status of respondents, altogether (61.7%) were employed. During the pandemic, only essential services remained open; the majority were unemployed. In addition, most businesses had to shut down operations, with small businesses being the most affected. According to statistics from Durban, 22.6% of the labour force was unemployed in Durban.

Table 4.6 revealed that respondents engaged in both online (68.5%) and offline (75.8%) purchases during the COVID-19 pandemic; this was a multiple-option question indicating respondents' online and offline purchasing habits. A literature study by Naeem (2021:378) concurs with the findings of this study, indicating a shift in consumer purchasing habits and

the inclination towards online purchasing in conjunction with conventional shopping preferences.

The one-sample test results reveal statistically significant differences across all examined demographic and purchasing behaviour variables, such as age, gender, ethnicity, education, occupation, income source, and types of purchases during the COVID-19 pandemic. These differences, with $p < .001$, indicate that the observed variations are meaningful and not due to random chance.

4.8.2 To ascertain the extent to which the lockdown restrictions influenced consumer buying patterns during the pandemic

- **Reduced contact**

The COVID-19 pandemic has fundamentally altered consumer behaviour across various regions, with significant shifts in purchasing patterns and payment methods. Most respondents in the study strongly agreed with the statement 2.3, "I bought more products that have a longer shelf life," with a mean of 4.07 (SD = 1.098, $p < .001$). This finding suggests a notable shift in purchasing behaviour as participants adapted to the challenges posed by the pandemic. In Iran, for instance, the COVID-19 pandemic and subsequent restrictions adversely affected participants' physical activity, diet, and sleep patterns. Reduced shopping frequency led to a decline in the consumption of fresh foods, while items with extended shelf lives, such as frozen and canned goods, became more prevalent in participants' purchases. Interestingly, staple food items like bread and dairy maintained relatively stable consumption levels during this period (Hajipoor et al. 2023:2). A study by Stanca, Dabija and Câmpian (2025:02) further corroborates these findings, indicating that consumers adapted their purchasing habits to prioritise non-perishable goods during health crises.

Moreover, a significant shift towards bulk purchasing behaviour was observed, with most respondents agreeing with the statement 2.2, "I increased the number of items of the same product that I bought," which had a mean of 3.51 (SD = 1.112, $p < .001$). This behaviour was particularly pronounced in Iran, where vendor-specific vulnerabilities, particularly concerning fashion items, combined with limited stock availability and attractive pricing, drove consumers to engage in in-store hoarding. The restricted production of goods heightened concerns over future availability, compelling many participants to purchase additional items out of apprehension regarding potential shortages (Çınar 2020:3870).

In addition to changes in product selection and purchasing volumes, the pandemic also catalysed a significant shift towards digital payment methods. Most respondents strongly agreed with the statement 2.22, "The proportion of contactless payments (e.g., online

payments, mobile e-wallets, etc.) increased," with a mean of 3.74 (SD = 1.309, $p < .001$). This trend was mirrored in Uganda, where the adoption of contactless digital payments, including mobile money, facilitated merchant transactions while promoting social distancing by reducing cash reliance and minimising in-person interactions along the supply chain (Bongomin et al. 2023:03).

Additionally, online shopping behaviour experienced a marked increase, with most respondents agreeing with the statement 2.4, "I did more online purchasing (e-commerce)," yielding a mean of 3.35 (SD = 1.376, $p < .001$). In Vietnam, the pandemic redefined the omnichannel commerce landscape, disrupting established shopping practices. Notably, showrooming, a strategy where consumers inspect products in-store before purchasing online, faced significant challenges due to health restrictions and safety concerns, limiting participants' ability to browse in-store effectively (Mansour and Hoque 2021:09). A study by Afonso, Carneiro and Azevedo (2024:03) indicates that the pandemic resulted in a structural shift in the retail market, characterised by a significant increase in the share of online consumption across various product categories

Finally, the reliance on delivery services surged, as reflected in the statement 2.5, "I had more of my shopping delivered than before," with a mean of 3.19 (SD = 1.446, $p < .001$). In South Africa, the introduction of Checkers' on-demand mobile application, Sixty60, which gained significant traction during the COVID-19 lockdown in March 2020, exemplifies this shift. Although launched prior to the pandemic, Sixty60's popularity soared, with subscription rates increasing as it guaranteed client's delivery within 60 minutes and provided a wide range of products (Njomane and Telukdarie 2022:07). This trend underscores the growing reliance on delivery services among consumers as a direct response to the pandemic. A study by Bashar, Nyagadza, Ligaraba and Maziriri (2024:586) highlights these changes, demonstrating how consumers have adapted their purchasing habits in response to evolving market conditions and external uncertainties. This transformation highlights the broader impact of the pandemic on consumer decision-making, reflecting an increased sensitivity to product availability, pricing, and convenience-driven purchasing behaviours.

- **Products and shops**

The COVID-19 pandemic has had a lasting impact on consumer behaviour related to product selection and shopping locations, as individuals adapted to new health concerns and restrictions. In the context of Statement 2.9, "I searched for substitute products to reduce my trips to the shops," respondents showed strong agreement with a mean of 3.47 (SD = 1.066, $p < .001$). In South Africa, the shift toward online and omnichannel purchasing introduced both advantages and challenges, particularly in rural areas with limited internet access and

infrastructure. The pandemic accelerated a global shift in retail practices, with many consumers opting for safer online alternatives even after lockdown restrictions were lifted. This shift suggests that COVID-19 significantly influenced consumer habits, encouraging a long-term reduction in physical store visits (Weber 2021:04). Similarly, major e-commerce markets like Germany, the United Kingdom, and France were at the forefront, while newer and emerging markets also showed promise. Key trends that shaped this landscape included consumers' growing reliance on mobile devices for shopping, the rise of omnichannel retail strategies, and the demand for faster delivery times (Abdinazar 2025:215).

The impact of these behavioural changes is further supported by Statement 2.11, "I bought fewer pre-prepared meals," which also received strong agreement (mean = 3.28, SD = 1.191, $p < .001$). A quantitative study in India found that sudden supply chain disruptions during the pandemic spurred consumers to stockpile essentials like soap, toothpaste, and bakery items. The demand for fast-moving consumer goods (FMCG) surged, as individuals sought to secure staple items in the face of potential scarcity. To meet this demand, home delivery services expanded rapidly, allowing consumers to access essential products without leaving their homes (Kaur and Sharma 2020:3127). This shift suggests that consumers prioritized products with a longer shelf life over pre-prepared meals, which may also reflect a desire to minimize both store visits and reliance on items with limited storage capacity.

- **Spending priorities**

The COVID-19 pandemic prompted consumers worldwide to re-evaluate their shopping habits and spending priorities. Most respondents agreed strongly with the statement 2.14, "I prioritised essential items in my shopping," showing a significant shift toward essential goods with a mean score of 4.03 (SD = 1.006, $p < .001$). This shift is echoed in the United Kingdom, where consumers increasingly focused on emergency supplies during the pandemic. As restrictions eased, consumers in the UK adapted to the "new normal," showing behavioural shifts such as a heightened reliance on online shopping and delivery services to limit physical contact (Naeem 2021:378). During the COVID-19 lockdowns, in-person shopping was predominantly limited to essential retail outlets, including supermarkets, petrol stations, and pharmacies. Conversely, businesses focused on discretionary spending, such as fashion boutiques, jewellery stores, furniture retailers, and restaurants, were required to close (Verhoef, Noordhoff and Sloot 2023:275).

Similarly spending was observed in the statement 2.15, where most respondents agreed that "My spending priorities shifted from discretionary spending (travel, holidays, entertainment) to essentials (food, personal care, cleaning products, etc.)," with a mean of 3.99 (SD = 1.000, $p < .001$). This trend was particularly pronounced in India, where COVID-19 restrictions resulted

in reduced foot traffic at malls and cinemas, with some retailers halting operations, leaving employees' jobs in jeopardy. These strict lockdowns and movement restrictions led to increased time spent at home and a surge in demand for fast-moving consumer goods (FMCG), such as groceries and hygiene products, as consumer spending shifted towards necessities (Debata et al. 2020:04). The outbreak of the COVID-19 pandemic had a considerable impact on travel activities and behaviours. Previous studies on infectious diseases have demonstrated that travel restrictions are vital in controlling the initial spread of such diseases. Consequently, numerous countries and regions implemented travel restrictions and promoted only "essential travel" (Yang, Wan, Yuan, Zhou and Sun 2023:02).

The pandemic's impact on discretionary spending extended to the fashion sector, as reflected in the statement 2.13, "My spending on clothes and fashion items decreased," with a mean of 3.93 (SD = 1.114, $p < .001$). A study across South Africa and Germany found that consumer motivation to reduce fashion purchases was influenced by social and personal norms. The pandemic led to widespread closures of establishments like restaurants and pubs, with strict lockdown stages prohibiting sales of non-essential items, such as alcohol and cigarettes. In South Africa, one of the strictest lockdowns globally saw temporary closures of clothing stores, reinforcing consumer caution around non-essential spending (Dobbelstein and Naidoo 2019:70).

In parallel, a decline in expenditures on travel, vacations, and tourism was evident, as highlighted by the statement 2.19, "Expenditure on travel, vacations, and tourism decreased," with a mean of 3.99 (SD = 1.116, $p < .001$). In South Africa, many restaurants operated with only take-out options, and travel restrictions led to sharply reduced hotel occupancy rates and revenues. Although dine-in services were later reinstated with strict safety protocols, consumer hesitancy and restrictions on domestic and international travel continued to suppress tourism and hospitality industries (Gursoy and Chi 2020:527).

The pandemic also prompted a more cautious approach to spending and savings, as shown in statement 2.20, "I was more cautious in my spending and saved more," with a mean of 3.88 (SD = 1.023, $p < .001$). In South Africa, respondents were reported to have reallocated portions of their income to savings as a defence against possible income losses resulting from the pandemic's economic fallout. This shift reflects a broader behavioural pattern of increased savings and reduced non-essential spending (Heerden and Roos 2021:109).

In addition to being cautious about spending, consumers displayed a heightened focus on obtaining value for money. This was captured in statement 2.21, "I was more aware of striving to get value for money for my purchased goods than before," with a mean of 3.79 (SD = 0.996, $p < .001$). A study in China concurs, showing that households became more financially

conservative and conscious of value in light of the pandemic's economic uncertainty. This behaviour likely reflects a global trend as consumers weighed purchases more carefully, emphasising cost-effectiveness amidst concerns over job security (Yazdanparast and Alhenawi 2022:818).

Finally, respondents demonstrated an increased investment in health and wellness products, as indicated in statement 2.17, "I spent more on health and wellness products like vitamins, supplements, masks, etc.," which garnered a mean of 3.78 (SD = 1.018, $p < .001$). This trend aligns with findings from Romania, where consumers exhibited heightened health awareness, focusing on hygiene practices and preventive health measures. The pandemic triggered shifts in shopping behaviour, with fewer physical store visits and more cautious engagement with services, whether online or in-store (Untaru and Han 2021:02).

Similarly, Statement 2.6, "I looked for outdoor shops/markets to shop at (instead of in a closed building)," received moderate support from respondents, with a mean of 2.92 (SD = 1.225, $p < .001$). This finding aligns with a South African study that investigated the effects of the national lockdown measures, which included stringent social distancing requirements. Restrictions aimed at reducing COVID-19 transmission led consumers to seek open-air shopping environments, as enclosed spaces were perceived as riskier. South Africans adapted to these mandates by opting for outdoor markets, although these gatherings were still restricted to a maximum of one hundred individuals to reduce infection risks (Carlitz and Makhura 2021:02).

Table 4:11 illustrates the factor loadings for buying patterns during the pandemic, identifying three key factors that influenced consumer behaviour: Factor one shows a shift in **spending priorities** from discretionary items **to essentials**, with high loadings such as "*My spending priorities shifted from discretionary spending to essentials*" (.835) and "*I prioritised essential items in my shopping*" (.777). Factor two highlights **a rise in online shopping** and the use of contactless payments, evidenced by loadings like "*I had more of my shopping delivered than before*" (.940) and "*I did more online purchasing*" (.892). Factor three reflects changes in shopping practices, including shopping at different locations or times and buying more locally produced products, with loadings such as "*I shopped at different shops for various reasons*" (.612) and "*I bought more locally produced products*" (.592). These factors collectively illustrate the pandemic's impact on consumer behaviour, driving a focus on essentials, a shift to digital shopping, and adaptations in shopping habits (Table 4.11).

4.8.3 To determine why consumers engaged in panic buying during the lockdown.

- **Panic buying**

The COVID-19 pandemic induced significant behavioural changes among consumers, particularly regarding bulk purchasing as a response to fear and uncertainty. A notable finding is captured in statement 3.7, where participants strongly agreed with the statement, "I bought in bulk to provide a sense of security and comfort during the pandemic," achieving a mean score of 3.93 (SD = 1.156, $p < .001$). This aligns with research from Pakistan, which highlighted that the pandemic caused severe disruptions in global economies and healthcare systems, generating widespread fear and uncertainty. Consequently, panic buying became prevalent as lockdowns were enforced, leading to empty store shelves and impulsive buying behaviour as consumers sought to stockpile essential items like toiletries and frozen foods (Islam et al. 2021:02). A recent study by Lim, Kalantari and Perera (2024:2201) highlights how external crises, such as the COVID-19 pandemic, trigger panic buying among consumers due to concerns about supply disruptions, scarcity, and uncertainty.

Similarly, statement 3.5, "Fear of supply chain disruptions (manufacturing and distribution) causing a scarcity of goods prompted me to buy in bulk," showed strong agreement, with a mean of 3.89 (SD = 1.097, $p < .001$). A quantitative study in the United Kingdom corroborated this behaviour, revealing that panic buying surged as consumers sought to secure essential goods amid fears of supply disruptions and demand-driven shortages. Retailers implemented purchase limits, while regulatory bodies adapted to the pressures created by consumer behaviour during this crisis (Gazali 2020:86; O'Connell et al. 2020:249). Moreover, statement 3.6, "I bought in bulk to relieve my stress and uncertainty of the pandemic," received strong agreement with a mean of 3.86 (SD = 1.107, $p < .001$). This reflects findings from Pakistan that indicated panic buying emerged as a common reaction to the disruptions caused by COVID-19. The ensuing fear and uncertainty led consumers to engage in compulsive purchasing behaviour to alleviate anxiety, resulting in shortages of essential products (Islam et al. 2021:02).

In terms of health concerns, most respondents agreed with statement 3.4, "Bought in bulk to reduce the risk of infection by reducing the frequency of shopping trips," which yielded a mean of 3.84 (SD = 1.038, $p < .001$). A study in Indonesia indicated that impulsive buying behaviour were often triggered by specific stimuli, such as the fear of infection, prompting consumers to minimize shopping frequency by purchasing in larger quantities (Iriani et al. 2021:944). Furthermore, statement 3.1, "Fear and anxiety of product shortages prompted me to buy in bulk," achieved a mean of 3.76 (SD = 1.039, $p < .001$). Research in Singapore found that

misperceptions regarding the supply chain heightened consumer anxiety, leading to significant panic buying behaviour. Disruptions in food inventories heightened fears about product availability, prompting consumers to engage in impulsive purchases as they sought to secure necessary supplies (Chua et al. 2021:01).

Additionally, the influence of social behaviour on purchasing was evidenced by statement 3.2, "Seeing others engaging in panic buying triggered me to do the same," which resulted in a mean of 3.76 (SD = 1.277, $p < .001$). A qualitative study in Finland noted that many consumers reacted to the COVID-19 crisis by participating in panic buying, influenced by the visibility of others' behaviour during this unprecedented situation (Eriksson and Stenius 2020:1950). Finally, statement 3.3, "The uncertainty of how long the lockdown would continue caused me to buy in bulk," garnered strong agreement, achieving a mean of 3.73 (SD = 1.066, $p < .001$). A study conducted in the United States indicated that rapid pandemic developments led to increased impulsive purchases as consumers faced heightened fears of shortages amid prolonged lockdown conditions (Ahmed et al. 2020:09). Furthermore, research conducted by Cakirkaya (2024:143) indicates that the pandemic resulted in shifts in consumer's life orientations, with emotions such as stress, anxiety, and uncertainty prompting panic buying behaviour.

Table 4:16 illustrates the factor loadings for panic buying behaviour during the pandemic, identifying a single key factor that influenced this behaviour: Factor one reflects the primary motivations behind bulk buying during the pandemic. The high loadings indicate that the behaviour was largely driven by a combination of fear, anxiety, and a desire for security. Key loadings include *"I bought in bulk to provide a sense of security and comfort during the pandemic"* (.903) and *"Fear of supply chain disruptions causing a scarcity of goods prompted me to buy in bulk"* (.885). The factor also encompasses the impact of uncertainty, as evidenced by loadings like *"The uncertainty of how long the lockdown would continue caused me to buy in bulk"* (.874) and *"Fear and anxiety of product shortages prompted me to buy in bulk"* (.872). Additionally, *"I bought in bulk to relieve my stress and uncertainty of the pandemic"* (.863) and *"I bought in bulk to reduce the risk of infection by reducing the frequency of shopping trips"* (.843) highlight practical and emotional motivations. The influence of observing others engage in similar behaviour is also noted with a loading of *"Seeing others engaging in panic buying triggered me to do the same"* (.776).

4.9.4 To establish whether customer service changed during the lockdown.

- **Change in customer service**

The COVID-19 pandemic has prompted notable shifts in customer service practices, particularly in retail and e-commerce environments, as businesses adapted to meet consumer demands for safety, convenience, and hygiene. Respondents demonstrated strong agreement with statement 4.7, "Collection/delivery of goods when ordered online," which achieved a mean score of 4.13 (SD = 1.120, $p < .001$). A quantitative study conducted in Slovakia underscored that many retailers transitioned from traditional in-store operations to online platforms, enhancing customer service quality to retain their consumer base. Services such as free delivery, promotional offers, and curbside pickup became significant factors encouraging consumers to favour online shopping options, thereby facilitating a positive consumer shift toward digital purchasing (Valaskova et al. 2021:04).

Similarly, statement 4.6, "Providing apps/ways to enable a customer to browse remotely to assist in virtual shopping," showed strong agreement with a mean of 4.01 (SD = 1.062, $p < .001$). This preference aligns with statement 4.2, "Sourcing products that you wanted but were not found in the store," which received a mean of 3.17 (SD = 1.286, $p < .001$). In South Africa, a qualitative study indicated that effective customer service was critical for business continuity amid the pandemic. As demand for online services grew, businesses developed innovative technological solutions to support virtual shopping, allowing customers to browse remotely, access diverse product information, and receive a seamless online shopping experience (Thaba et al. 2023:05).

Hygiene and cleanliness became essential components of customer service, as reflected in statement 4.3, "Cleaning and sanitising the store," which received a mean of 3.95 (SD = 1.050, $p < .001$). A quantitative study conducted in Saudi Arabia highlighted that customer satisfaction, particularly concerning hygiene standards, was a significant predictor of repeat purchase intentions. Enhanced cleanliness protocols within physical retail spaces fostered customer loyalty and built trust, which further reinforced consumers' willingness to engage in both in-store and online shopping (Al-Ghraibah 2020:2466). Similarly, during the COVID-19 pandemic, consumers prioritised safe shopping by adhering to hygiene practices. Retailers implemented social distancing measures, established sanitisation stations, and minimised contact points. These shifts in shopping behaviour were influenced by stay-at-home orders, social distancing requirements, and an increased awareness of hygiene (Sehgal, Khanna, Malviya and Dubey 2023:605)

Contactless payment methods, as captured in statement 4.5, "Payment methods that limit contact," also showed high agreement, with a mean score of 3.93 (SD = 1.049, $p < .001$). A quantitative study in Thailand illustrated that contactless payments gained widespread adoption during the pandemic, providing consumers with a safer payment method that minimized the need for physical interactions. This shift aligned with the heightened demand for health-conscious payment options, as consumers sought to limit exposure to potential transmission risks (Puriwat and Tripopsakul 2021:85).

Although personalized service, as reflected in statement 4.1, "Personal attention," received moderate support (mean = 3.37, SD = 1.064, $p < .001$), it underscored the value consumers place on tailored interactions. A study in Slovakia found that during economic uncertainties caused by the pandemic, personal attention within service interactions played a crucial role in reassuring customers and supporting essential spending behaviour. The emphasis on health and hygiene essentials illustrated a consumer shift in priorities, as individuals increasingly valued responsive, customised service to address their specific concerns during this period (Valaskova, Durana and Adamko 2021:01).

Lastly, statement 4.4, "The management of queues in the store," was moderately supported (mean = 3.27, SD = 1.279, $p < .001$). A quantitative study in Israel noted that retail management worldwide implemented various strategies to control customer flow during the pandemic. Measures such as limiting store capacity and enforcing social distancing protocols were employed to ensure consumer safety. However, balancing these health measures with customer satisfaction posed ongoing challenges for store managers, who were required to navigate new compliance requirements while striving to maintain a positive customer experience (Perlman and Yechiali 2020:01).

Table 4:19 assesses the reliability of changes in customer service, highlighting how various factors have influenced the customer experience: Factor one captures key aspects of changing customer service during the pandemic. High factor loadings include "*Payment methods that limit contact*" (.843), "*Providing apps/ways to enable a customer to browse remotely to assist in virtual shopping*" (.816), and "*Collection/delivery of goods when ordered online*" (.789). These items emphasise the importance of contactless payment options, virtual shopping aids, and efficient delivery services. Additionally, the factor includes "*Cleaning and sanitising the store*" (.740), "*The management of queues in the store*" (.615), "*Personal attention*" (.547), and "*Sourcing products that you wanted but were not found in the store*" (.542), reflecting other significant changes in customer service aimed at enhancing safety and convenience. This factor highlights how improvements in various service aspects have been crucial in adapting to new customer needs and expectations during the pandemic.

4.9. CONCEPTUAL MODEL AND HYPOTHESIS TESTING

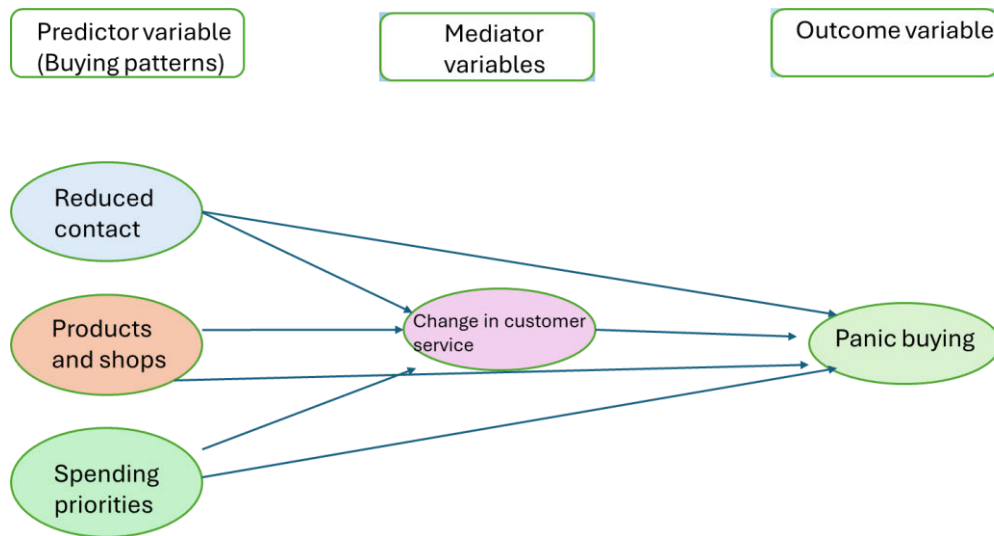


Figure 4.5: Conceptual model

4.9.1 Mediated Relationship Model of Panic Buying During COVID-19

Figure 4.5 illustrates a mediated relationship framework that explains how consumer behaviour, particularly panic buying, was influenced by several predictor variables during the COVID-19 pandemic. This model encapsulates how shifts in consumer buying patterns directly and indirectly led to heightened levels of panic buying. The inclusion of a mediator variable change in customer service adds complexity and depth to understanding these behaviours within the pandemic context.

4.9.2 Predictor Variables (Buying Patterns)

The predictor variables include, reduced contact, products and shops, and spending priorities represent key changes in buying behaviour that emerged during the pandemic. The pandemic created an environment where physical contact was minimised (reduced contact), where the availability of products and access to shops was constrained (products and shops), and where spending priorities shifted due to economic uncertainty (spending priorities). These factors directly contributed to the outcome variable, panic buying.

- The reduced contact theme refers to the decreased physical interaction between consumers and retailers due to lockdowns, social distancing measures, and the shift toward online purchasing. This phenomenon limited consumer's ability to physically access goods, leading to increased uncertainty, which influenced panic buying.

- The products and shops concept refer to the scarcity or perceived scarcity of essential goods and the closure of non-essential retail outlets. These supply-side constraints heightened consumer anxiety, resulting in behaviours aimed at stockpiling goods.
- Spending priorities shifted drastically as consumers faced economic uncertainty. Prioritising essential goods over non-essential items reinforced panic buying tendencies as consumers focused their resources on securing necessities.

4.9.3 Mediator Variable: Change in Customer Service

The change in customer service serves as a mediating variable that shapes how predictor variables influenced panic buying. Retailers were forced to adapt rapidly to the new market dynamics by enhancing online service offerings, improving delivery systems, and altering their communication strategies with customers. These changes often attempted to alleviate consumer concerns but, in many cases, also reinforced panic-buying behaviour by highlighting scarcity or promoting emergency purchasing through marketing strategies.

The mediation suggests that while the predictor variables had direct effects on panic buying, the changes in customer service either amplified or mitigated these effects. For instance, customer service efforts that emphasised product availability and secure purchasing could reduce panic, whereas those that highlighted shortages or encouraged bulk purchases might have intensified panic buying.

4.9.4 Outcome Variable: Panic Buying

The outcome of this interplay is panic buying, a consumer behaviour characterised by the impulsive acquisition of goods in anticipation of shortages. This behaviour was most evident during the early stages of the COVID-19 pandemic but persisted in various forms throughout the pandemic's duration. Understanding the triggers of panic buying—whether through direct effects of reduced contact and product scarcity or through the mediation of customer service changes—is critical for future crisis management.

4.9.5 HYPOTHESIS

The researcher has formulated four hypotheses based on the conceptual model and the research objectives of the study (Figure 4.5).

- H1: suggests a relationship exists between reducing in-person contact (RC) and changes in customer services (CCS).

- H2: assesses the relationship between products and shops (PS) and changes in customer services (CCS).
- H3: examines the relationship between shift in spending priorities (SP) and changes in customer services (CCS).
- H4: investigates the relationship between changes in customer services (CCS) and panic buying (PB).
- Hypothesis 5: The change in customer service (CCS) mediates the relationship between spending priorities (SP) and panic buying (PB).
- Hypothesis 6: The change in customer service (CCS) mediates the relationship between products and shops (PS) and panic buying (PB).
- Hypothesis 7: The change in customer service (CCS) mediates the relationship between reduced contact (RC) and panic buying (PB).

4.10 SUMMARY

The study aimed to understand the dynamics of consumer behaviour during the COVID-19 pandemic. Factors such as spending priorities, reducing contact, panic buying, and changes in customer service were considered. The study utilised data collected from a survey of 384 respondents and employed various statistical techniques to analyse the relationships between these constructs. Both descriptive and inferential statistics were applied to analyse the collected data. Factor analysis identified five reliable constructs namely: Spending Priorities (SP), Reducing Contact (RC), PB, Products and Shops (PS), and CCS. These constructs demonstrated good internal.

Furthermore, the one-sample test shows that respondents agreed significantly on changes in spending priorities, reducing personal contact, and panic buying during the pandemic. **Changes in customer service were perceived positively, with high agreement.** The bivariate analysis shows that **age and education** level were weakly associated with reducing personal contact, with older respondents and more education tend to engage in buying behaviour that reduced contact. Gender and race influenced agreement on constructs, with females and certain racial groups showing distinct agreement patterns.

The proposed hypotheses were tested using SEM. The SEM supported the hypothesised relationships between the constructs, highlighting significant relationships namely:

- Reducing personal contact positively influenced changes in customer services.
- Changes in product choices and shopping behaviours were negatively related to changes in customer services.
- Shifting spending priorities positively affected changes in customer service.

- Changes in customer service positively influenced panic buying.

The mediation analysis further indicates that **changes in customer services (CCS)** fully mediated the relationships between **spending priorities (SP)**, **product choices (PS)**, **reducing contact (RC)**, and **panic buying (PB)**.

The analysis of the study revealed that changes in **customer service (CCS)** fully mediated the relationships between **spending priorities (SP)**, **product choices** and **shopping behaviours**, and **reduced contact (RC)** with **panic buying (PB)** during the COVID-19 pandemic. As consumers adjusted their spending priorities or shopping patterns, or reduced personal contact for safety reasons, these changes significantly influenced their perceptions of customer service. This, in turn, affected their panic buying behaviour. The findings highlighted the critical role of customer service in shaping consumer responses, as negative service experiences or perceived scarcity led to an increase in panic buying, as consumers sought to secure essential goods.

The above analyses provide valuable insights into consumer behaviour during the COVID-19 pandemic. It reveals that changes in spending priorities, product choices, and reduced personal contact were associated with alterations in customer services, which, in turn, influenced panic buying behaviour.

CHAPTER FIVE: CONCLUSION AND RECOMMENDATIONS

5.1 INTRODUCTION

The previous chapters focused on the primary and secondary data in order to achieve the goal of the study. The aim of the study is to determine the COVID-19 lockdown regulations that affected respondent buying behaviour within the greater Durban region. This chapter will finalise the study by presenting a summary of the key research findings in light of the study's aims and objectives, as well as its significance and contributions. In addition, it will address the study's limitations and offer recommendations for future research and practical applications.

5.2 SUMMARY OF THE STUDY

Chapter One

Chapter one outlines the study's background and contextual foundation, addressing the research problem focused on respondent buying behaviour amid the pandemic. It also provides an overview of the research methodology, along with a discussion of the study's limitations and delimitations

Chapter Two

Chapter Two examines relevant secondary data sources, including scholarly articles, to explore the implications of the lockdown on respondent buying patterns. This analysis contributes to the development of a conceptual framework.

Chapter Three

Chapter Three details the research process, covering the research design, sampling criteria, research instrument, and methods for data collection and analysis. It also includes an overview of the questionnaire administration and discusses the study's validity and reliability.

Chapter Four

Chapter Four presents the analysis and interpretation of the quantitative data collected, offering insights into the primary data. The discussion of the findings is further contextualized by comparing them with previous studies.

5.3 ADDRESSING THE STUDY'S OBJECTIVES

This section interprets the empirical findings from Chapter Four in relation to the previous research presented in Chapter Two. It aligns the results with existing literature, highlighting areas of agreement and divergence. This contextualisation emphasises the study's contributions and offers insights into emerging patterns within the examined constructs.

5.3.1 Conclusion in line with the objective one: to ascertain the extent to which the lockdown restrictions influenced respondent buying patterns during the pandemic.

The findings in table 4.8 showcase a notable shift in respondents buying behaviour. There was a surge in online shopping, a decrease in shopping trips and a growing preference for purchasing locally manufactured products. The lockdown measures prompted respondents to adapt to changes in the frequency of shopping, an increase in health and wellness products and a preference for products with a longer shelf life. The need for safer shopping alternatives gave rise to a shift towards online shopping and contactless payment. Furthermore, the pandemic significantly influenced respondents buying behaviour, reshaping preferences, spending priorities and shopping habits. Respondents showed high resilience and adaptability during unprecedented challenges.

The findings of this study align with research conducted in Iran, which demonstrated that lockdown restrictions in South Africa significantly influenced respondents' purchasing behaviours during the COVID-19 pandemic. The imposition of these restrictions led to a notable surge in online purchasing activity, indicating that the lockdown measures acted as a catalyst for a shift in consumer payment patterns. This transition facilitated the adoption of new trends in digital transactions, highlighting the growing reliance on e-commerce platforms during the pandemic (Hajipoor et al. 2023:2). Additionally, concerns over the potential scarcity of goods during the lockdown prompted many consumers to engage in stockpiling behaviours. Heightened apprehensions regarding future product availability led to an increase in the purchase of additional items as a precautionary measure against perceived shortages (Çınar, 2020:3870). This reaction underscores the psychological impact of the pandemic, where uncertainty about the future drove more cautious and anticipatory purchasing behaviours.

A parallel shift was observed in Uganda, where the adoption of contactless digital payments, such as mobile money solutions, significantly supported merchant transactions and enhanced compliance with social distancing measures. This transition reduced reliance on cash and minimised in-person interactions throughout the supply chain, promoting safer and more efficient commerce practices (Bongomin et al. 2023:03). Similarly, respondents in this study indicated that the frequency of shopping trips declined as they sought substitute products to

minimise physical store visits. This shift was particularly evident in rural areas, where online and omnichannel shopping provided both opportunities and challenges, as noted by Weber (2024). Furthermore, the expansion of home delivery services was a notable trend during the lockdown, as highlighted by Kaur and Sharma (2020), which allowed consumers to meet their purchasing needs while adhering to health and safety guidelines. Notably, respondents' spending priorities were restructured, with a focus on essential goods. Restrictions on travel, holidays, and entertainment activities significantly influenced this shift, leading to a reduction in discretionary spending. As noted by Debata, Patnaik and Mishra (2020:04), the pandemic played a pivotal role in reshaping consumer spending behaviour, highlighting the prioritisation of necessity over luxury during times of uncertainty.

In conclusion, the study highlights a significant shift in consumer behaviour during the COVID-19 lockdown, characterised by increased reliance on online and contactless purchasing methods, stockpiling behaviours, and a shift in spending priorities toward essential items. These changes reflect broader global trends that underscore the impact of health and safety restrictions on consumer decision-making. Furthermore, the accelerated adoption of digital payments and home delivery services demonstrates the lasting influence of the pandemic on consumer purchasing patterns, which may continue to shape post-pandemic commerce practices.

5.3.2 Conclusion in line with the objective two: to determine why consumers engaged in panic buying during the lockdown.

The findings in table 4.14, depicted the heightened fear and anxiety experienced by respondents played a pivotal role in their panic buying behaviour. Media exposure of product shortages amplified respondent's fears, prompting bulk purchases as a coping mechanism. The perceived threat of supply chain disruptions further fuelled respondents panic buying as respondents anticipated shortages of essential goods. Moreover, the influence of family members and peers on respondents' purchasing behaviour underscored the social aspects of panic buying. Panic buying was a multifaceted response to unprecedented challenges arising from the pandemic, reflecting respondents attempts to navigate and cope with the associated disruptions.

In accordance with the objective of determining why consumers engaged in panic buying during the lockdown, research conducted in various contexts highlights the multifaceted drivers behind this phenomenon. In Pakistan, the enforcement of lockdown measures triggered widespread panic buying, leading to empty store shelves and a marked increase in impulsive purchasing behaviour. Consumers, motivated by the desire to stockpile essential

goods such as toiletries and frozen foods, responded to uncertainties about product availability and potential future restrictions (Islam et al. 2021:02).

Similarly, a study conducted in Indonesia found that fear of infection was a primary trigger for impulsive buying during the lockdown period. This heightened anxiety prompted consumers to reduce the frequency of shopping trips by making bulk purchases, reflecting an overarching attempt to limit exposure and comply with perceived health and safety protocols (Iriani et al. 2021:944). Research in Singapore demonstrated that heightened consumer anxiety was fuelled by misperceptions regarding supply chain stability, resulting in intensified panic buying behaviour. Concerns over perceived disruptions in food inventories exacerbated fears about product availability, driving consumers to engage in impulsive purchases in an effort to secure access to essential supplies (Chua et al. 2021:01).

In the United States, the rapid progression of the pandemic significantly magnified consumer fears related to potential product shortages, particularly under prolonged lockdown measures. This elevated state of anxiety led to a surge in impulsive purchasing behaviour as individuals sought to pre-emptively stockpile essential goods in anticipation of scarcity (Ahmed et al. 2020:09).

Drawing on findings from this study, as well as related research conducted in Pakistan, the United States, Singapore, and Indonesia, it is evident that lockdown restrictions engendered heightened fear and anxiety, which contributed to widespread panic buying. The behaviour was primarily driven by consumer concerns regarding product availability, culminating in stockpiling, particularly for essential goods like toiletries. As a result, it is recommended that retailers prioritize the consistent availability of such essential products to alleviate panic-driven purchasing behaviour and maintain supply stability during crisis periods.

5.3.3 Conclusion in line with the objective three: to establish whether customer service changed during the lockdown.

Table 4.18 showed that it became evident that the lockdown and associated regulations significantly influenced the customer service landscape, prompting the shift from traditional brick-and-mortar stores to online shopping platforms. There was an emphasis on personal attention, sanitising of stores and social distancing which attributed to a comfortable shopping experience. The successful transition to online alternatives was marked by a focus on excellent virtual customer service, which played a crucial role in facilitating online purchases. The desire for reduced physical contact and increased safety saw a global increase in the adoption of contactless payment methods. Respondents expressed strong support for delivery services offered by e-commerce retail companies, which boosted online sales. In adapting to

lockdown restrictions, respondents sought safety, satisfaction and convenience in online retailing. The pandemic prompted respondents to reevaluate traditional practices, leading to a substantial shift towards online retailing.

The findings of this study are consistent with those of a similar investigation conducted in Slovakia, which identified service enhancements such as free delivery, promotional offers, and curbside pickup as key drivers motivating consumers to transition to online shopping. These initiatives significantly contributed to the adoption of digital purchasing methods, reflecting broader global trends during the pandemic (Valaskova et al. 2021:04). Similarly, research in Saudi Arabia highlighted the critical role of customer satisfaction, particularly concerning hygiene standards, as a determinant of repeat purchase intentions. The introduction of enhanced cleanliness protocols within physical retail spaces not only promoted customer loyalty but also fostered trust, encouraging consumers to engage in both in-store and online shopping activities (Al-Ghreibah 2020:2466).

In addition to these service enhancements, measures such as limiting store capacity and enforcing social distancing protocols were implemented to safeguard consumer health. However, these health and safety measures posed challenges for store managers, who had to balance new compliance requirements with maintaining a positive customer experience. This tension required careful navigation, as ensuring consumer safety while preserving satisfaction remained a delicate task for retailers (Perlman and Yechiali 2020:01).

In conclusion, the studies collectively demonstrate how the pandemic prompted retailers to implement significant changes in service delivery, ranging from hygiene protocols to new shopping options such as curbside pickup. These changes played a central role in reshaping consumer behaviour, encouraging the widespread adoption of digital and contactless shopping methods. While the immediate focus was on health and safety, the long-term impact on consumer loyalty and engagement suggests that these measures will continue to influence both in-store and online shopping experiences in the future. Ultimately, retailers who successfully balanced safety with customer satisfaction were able to foster loyalty and retain consumer trust, illustrating the lasting effects of the pandemic on retail practices.

5.4 LIMITATIONS OF THE STUDY

While this study offers valuable insights into shifts in consumer behaviour during the COVID-19 pandemic in the Durban region, limitations must be acknowledged to contextualise the findings and inform future research. Firstly, the study primarily relies on quantitative data, facilitating broad generalisations and statistical rigor. However, this approach may not sufficiently capture the complex emotional, psychological, and behavioural factors that

influence consumer decision-making. Incorporating qualitative methods, such as in-depth interviews or ethnographic studies, could provide deeper insights into individual motivations and coping strategies during the pandemic.

Secondly, while the sample was designed to reflect Durban's diverse demographic and economic landscape, it may not adequately account for variations in purchasing behaviour among smaller, marginalised, or niche consumer segments. For instance, informal traders, individuals without internet access, or those with distinctive cultural spending patterns may not be fully represented, which could affect the generalisability of certain findings.

Another limitation arises from the cross-sectional nature of the study, which captures consumer behaviour at a specific moment in time. Given the rapidly evolving nature of the pandemic and its economic consequences, consumer preferences and digital adoption rates may have continued to shift beyond the data collection period of the study. A longitudinal approach could provide deeper insights into whether the observed changes were temporary adaptations or long-term shifts in behaviour.

Finally, the study focuses on Durban, providing valuable insights into the local retail landscape. However, its findings may not be entirely generalisable to other South African provinces or global markets. Different regions have encountered distinct economic challenges and unique consumer adaptations, which may influence behaviours in ways not addressed in this study. Expanding the research to encompass a broader national or comparative international context could further enhance the findings.

5.5 RECOMMENDATIONS FOR FUTURE RESEARCH

Since this study primarily focused on changes in consumer behaviour in Durban, future research would greatly benefit from comparing these findings with those from other South African provinces, particularly those with diverse socio-economic, cultural, and infrastructural contexts. Provinces such as Gauteng, the Western Cape, and the Eastern Cape each serve as distinct economic hubs characterised by varying levels of digital accessibility, income distribution, and retail environments, making them suitable candidates for comparative analysis.

A longitudinal study approach should be considered to monitor whether the consumer behaviour patterns observed during the pandemic persist in the long term. While the pandemic served as a catalyst for accelerated digital adoption, the sustainability of these changes remains uncertain. Tracking consumer trends over time will provide insight into whether digital purchasing behaviours become permanent habits or if consumers revert to pre-pandemic shopping patterns as in-store experiences normalise. This approach will also facilitate the

assessment of how external factors, such as economic recovery, technological advancements, and policy interventions, influence long-term consumer decisions.

Additionally, future research should examine provincial disparities in digital infrastructure and their impact on online shopping behaviour, particularly the contrast between Gauteng's advanced technological ecosystem and the Eastern Cape's limited digital penetration and logistical challenges. Understanding factors such as infrastructure availability and mobile commerce accessibility can inform policies designed to bridge the digital divide and promote inclusive e-commerce growth.

5.6 RECOMMENDATIONS FOR POLICY AND PRACTICE

Policymakers should consider region-specific strategies that address the varying levels of infrastructure, digital literacy, and consumer behaviour across South Africa's provinces. Given the disparities in digital penetration, targeted interventions are essential to bridge the digital divide and enhance economic participation in the digital marketplace. In provinces with lower digital penetration, such as Limpopo and the Eastern Cape, it is essential for policies to prioritise investments in digital infrastructure. This includes expanding broadband connectivity and subsidising internet access for underserved communities. These initiatives should be complemented by digital literacy programmes that equip consumers and small businesses with the necessary skills to navigate e-commerce platforms and leverage digital financial services. Furthermore, the integration of digital payment solutions within local businesses, particularly in informal sectors, should be actively encouraged to promote financial inclusion and enhance economic resilience.

Additionally, rural provinces require targeted strategies to enhance local supply chains and distribution networks. The COVID-19 pandemic highlighted vulnerabilities in supply chain logistics, resulting in disruptions that caused shortages and panic buying. To mitigate these risks in the future, policy interventions should promote local manufacturing and warehousing initiatives aimed at reducing dependence on external suppliers. Incentivising partnerships between local producers, logistics providers, and e-commerce platforms can contribute to the development of more resilient and self-sufficient supply chains.

Furthermore, policymakers should establish regulatory frameworks that support equitable access to digital marketplaces. This includes ensuring that small and medium-sized enterprises (SMEs) receive adequate support to compete with larger retailers in the online space. Financial incentives, such as tax breaks or grants, could assist local businesses in adopting digital tools and expanding their online presence. Additionally, consumer protection policies must be strengthened to safeguard online shoppers from fraud and ensure

transparency in digital transactions. By implementing regionally tailored policies that enhance digital infrastructure, strengthen local supply chains, and support SMEs, South Africa can achieve a more equitable and sustainable digital economy. These measures will not only facilitate economic recovery but also prepare the nation for future disruptions by fostering a more inclusive and resilient consumer market.

5.7 IMPLICATIONS FOR THEORY

Consumer decision-making models should be expanded to incorporate customer service as a key element within situational variables, given its substantial influence on consumer behaviour. Traditionally, situational variables have focused on factors such as time constraints, physical surroundings, and purchase occasions; however, the role of customer service in both physical and digital retail environments has become increasingly significant. The quality, responsiveness, and accessibility of customer support can directly affect consumer trust, satisfaction, and purchasing decisions, particularly in online shopping contexts where personal interactions are limited. By integrating customer service into decision-making models, scholars can better account for the ways in which service-related experiences shape consumer preferences and brand loyalty.

Furthermore, the inclusion of fear and anxiety as components within environmental variables is essential, reflecting their significant impact on consumer choices, particularly during crises. Traditional consumer behaviour models have largely treated environmental influences as external factors, such as economic conditions, social trends, and cultural norms. However, the COVID-19 pandemic demonstrated that psychological states, including fear of scarcity, health concerns, and financial uncertainty, can profoundly alter consumer decision-making. Consumers under stress often exhibit behaviours such as panic buying, stockpiling, and shifting to safer, more familiar brands. Expanding theoretical frameworks to incorporate these emotional and psychological dimensions will enable a better understanding of crisis-driven consumer behaviour and assist in predicting responses to future disruptions.

Additionally, these models must integrate online purchasing as a critical variable, recognising its growing importance in shaping contemporary consumer decision-making processes. The rise of e-commerce, accelerated by the pandemic, has fundamentally altered consumer interactions with brands, product information, and purchasing channels. Traditional models, such as the Engel-Blackwell-Miniard (EBM) model, primarily focus on physical retail environments and do not fully capture the complexity of digital consumer journeys, including online search behaviour, digital peer influence, and the impact of algorithm-driven recommendations. Incorporating online purchasing into decision-making frameworks will

provide a more comprehensive representation of modern consumer behaviour, acknowledging the role of convenience, personalisation, and digital trust in shaping purchase decisions.

5.8 CONCLUSION OF THE STUDY

Buying patterns during the COVID-19 pandemic were significantly influenced by lockdown restrictions, the necessity to minimise physical contact, shifting spending priorities, and alterations in the retail environment. Consumers prioritised essential goods, often engaging in panic buying, while discretionary spending declined due to economic uncertainty. These shifts disrupted traditional retail operations and required rapid adaptations in customer service to address heightened consumer concerns and maintain trust.

In response, customer service shifted from in-person interactions to digital and remote support solutions. Retailers increasingly relied on AI-powered chatbots, live chat, and social media platforms to offer real-time assistance and address consumer inquiries. This transition to digital service channels not only enabled businesses to manage the surge in demand but also established new expectations for accessibility, efficiency, and responsiveness in customer engagement.

The pandemic highlighted the importance of omnichannel customer service strategies that integrate email, chat, social media, and mobile applications to enhance consumer experiences. Businesses that adeptly adapted to these changes gained a competitive advantage, reinforcing digital customer support as a vital component of the modern retail landscape. These transformations emphasise the ongoing necessity for businesses to align their service models with evolving consumer behaviours, ensuring sustained engagement and satisfaction in an increasingly digital marketplace.

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APPENDIX A: ETHICS APPROVAL LETTER



Institutional Research Ethics Committee
Research and Postgraduate Support DDUT-IRECtorate
2nd Floor, Berwyn Court
Gate 1, Steve Biko Campus
Durban University of Technology

P O Box 1334, Durban, South Africa, 4001

Tel: 031 373 2375 Email:
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http://www.dut.ac.za/research/institutional_research_ethics

www.dut.ac.za

7 September 2023

Mr K Achary
78 Greendale Road
Silverglen
Chatsworth
Durban
4092

Dear Mr Achary

Consumer buying behaviour during the COVID-19 pandemic in the greater Durban region
Ethical Clearance number IREC 299/22

The DUT-Institutional Research Ethics Committee acknowledges receipt of your final data collection tool for review.

We are pleased to inform you that the data collection tool has been approved. Kindly ensure that participants used for the pilot study are not part of the main study.

Please note that **FULL APPROVAL** is granted to your research proposal. You may proceed with data collection.

Any adverse events [serious or minor] which occur in connection with this study and/or which may alter its ethical consideration must be reported to the DUT-IREC according to the DUT-IREC Standard Operating Procedures (SOP's).

Please note that any deviations from the approved proposal require the approval of the DUT-IREC as outlined in the DUT-IREC SOP's.

It is compulsory for a student or researcher to apply for recertification on an annual basis. The failure to do so will result in withdrawal of ethics clearance. It is the responsibility of the researcher and the supervisor to apply for recertification.

Please note that you are required to submit a Notification of Completion of Study form together with an abstract to the DUT-IREC office on completion of your study.

Yours Sincerely

Prof J K Adam
Chairperson: DUT-IREC

APPENDIX B: TRAINING CERTIFICATE- INTRODUCTION TO RESEARCH ETHICS



**Zertifikat
Certificat**

**Certificado
Certificate**

Promouvoir les plus hauts standards éthiques dans la protection des participants à la recherche biomédicale
Promoting the highest ethical standards in the protection of biomedical research participants

Certificat de formation - Training Certificate
Ce document atteste que - this document certifies that

Krishendran Achary
a complété avec succès - has successfully completed
Introduction to Research Ethics
du programme de formation TRREE en évaluation éthique de la recherche
of the TRREE training programme in research ethics evaluation

Release Date: 2021/05/24
CID: sp21/Tach75

Professeur Dominique Sprumont
Coordonateur TRREE Coordinator

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APPENDIX C: LETTER OF INFORMATION



LETTER OF INFORMATION

Title of the Research Study: Consumer buying behaviour during the COVID-19 pandemic in the greater Durban region

Principal Investigator/s/researcher: Mr Krishendran Achary, Bachelor of Technology in Marketing.

Co-Investigator/s/supervisor/s: Dr Mandusha Maharaj, DComm

Brief Introduction and Purpose of the Study: COVID-19 has brought with its lifestyle changes. Consumers have been experiencing anxiety and stress, eliciting panic buying behaviour. South Africa has implemented different stages of lockdown, which meant that consumers were homebound, restricting gatherings and ultimately affecting buying behaviour. Businesses have been forced to restructure their operations to make way for online alternatives. The pandemic has affected the economy and has facilitated erratic and panic buying behaviour. The primary aim of the study is to determine how COVID-19 lockdown regulations affected consumer buying behaviour within the greater Durban region. A quantitative descriptive study will be adopted using the convenience sampling method. The researcher will administer a self-designed online questionnaire to 400 respondents on social networking sites (Facebook, LinkedIn, and WhatsApp).

Greeting: Hello, I trust that you are well.

Introduce yourself to the participant: I am a student at the Durban University of Technology currently researching my Master of Management Sciences specialising in Marketing.

Invitation to the potential participant: I would like to invite you to participate in the research project titled: Consumer buying behaviour during the COVID-19 pandemic in Durban. Participation involves the voluntary completion of the online questionnaire.

What is Research: Research is the systematic analysis and study of materials to establish facts and draw conclusions.

Data will be collected from respondents living in Durban by clicking the link to complete the questionnaire online. You may ask me any questions related to the study. You are entitled to discuss the study with your family and friends and are under no obligation to commit at this stage. For this purpose, a copy of the Letter of Information document is given to you, a potential participant.

Outline of the Procedures: The study's primary aim is to determine how COVID-19 lockdown regulations affected consumer buying behaviour within the greater Durban region. A link will be sent to you; once you click on the link, you will be directed to the questionnaire. You are expected to complete the questionnaire. The expected duration of your commitment is approximately twenty to twenty-five minutes to complete the questionnaire. The questionnaire will reach approximately four-hundred respondents.

Risks or Discomforts to the Participant: By taking part in this reach study, you will not be exposed to any mental or physical harm.

Explain to the participant the reasons he/she may be withdraw from the Study: You are participating in this study voluntarily and may withdraw at any point in time. There will be no consequences if you decide to withdraw from the research study.

Benefits: Not applicable

Remuneration: Not applicable

Costs of the Study: None

Confidentiality: You will not be asked to divulge any personal information; no individual questionnaires will be made public.

Results: The study will be made available via the Durban University of Technology student repository once completed; the public may access the study online.

Research-related Injury: Not applicable

Storage of all electronic and hard copies including tape recordings: The statistical software (SPSS) for capturing data will be utilised to capture data. Data will be stored on a flash drive and kept in a lock-up cupboard for five years. The contents of the flash drive will be deleted after five years. Only the researcher and supervisor will have access to the data. All hard copies of data will be shredded, and electronic copies will be deleted after five years.

Persons to contact in the Event of Any Problems or Queries: Please contact the researcher Mr Krishendran Achary on 0679239255 or 21210183@dut4life.ac.za, the supervisor Dr Mandusha Maharaj on 031 373 6453 or maharam@dut.ac.za or the Institutional Research Ethics Administrator on 031 373 2375. Complaints can be reported to the Director: Research and Postgraduate Support on 031 373 2577 or researchdirector@dut.ac.za.

APPENDIX D: LETTER OF CONSENT



Letter of CONSENT

Full Title of the Study: Consumer buying behaviour during the COVID-19 pandemic in the greater Durban region.

Names of Researcher/s: Krishendran Achary

Statement of Agreement to Participate in the Research Study:

I hereby confirm that I have been informed by the researcher,
Krishendran Achary

, about the nature, conduct, benefits, and risks of this study - Research Ethics Clearance

Number: IREC 299/22,

I have also received, read, and understood the above written information (Participant Letter of

Information) regarding the study.

I am aware that the results of the study, including personal details regarding my sex, age, date of birth, initials and diagnosis will be anonymously processed into a study report.

In view of the requirements of research, I agree that the data collected during this study can be processed in a computerised system by the researcher.

I may, at any stage, without prejudice, withdraw my consent and participation in the study.

I have had sufficient opportunity to ask questions and (of my own free will) declare myself prepared to participate in the study.

I understand that significant new findings developed during this research which may relate to my participation will be made available to me.

_____	_____	_____	_____
Full Name of Participant	Date	Time	Signature / Right
Thumbprint			

I, Krishendran Achary herewith confirm that the above participant has been fully informed about the nature, conduct and risks of the above study.

Krishendran Achary	21 August 2023	
_____	_____	_____
Full Name of Researcher	Date	Signature

_____	_____	_____
Full Name of Witness (If applicable)	Date	Signature

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

APPENDIX E: DERIVATION TABLE

	#	Item	Sources
Buying patterns during the pandemic	2.1	I decreased the number of shopping trips	(Kempen and Tobias-Mamina 2022: 221). (Koster, van Ommeren, Ang, Bras 2022:03) (Yamamoto 2021:1).
	2.2	I increased the number of items of the same product that I bought	(Çinar 2020:3870). (Lin, Yan, Zhou, Kaluri 2020:198).
	2.3	I bought more products that have a longer shelf life	(Hajipoor, Rahbarinejad, Irankhah and Sobhani 2023:2). (Bakalis, Valdramidis, Argyropoulos, et al. 2020 and Shahidi, 2020).
	2.4	I did more online purchasing (e-commerce)	Mansour and Hoque (2021:9) (Hartono, Ishak, Abdurrahman, Astuti, Marsasi, Ridanasti, Roostika, and Muhammad 2021; Retail customer experience 2020).
	2.5	I had more of my shopping delivered than before	(Njomane and Telukdarie 2022:07). (Fortuin 2023:05).
	2.6	I looked for outdoor shops/markets to shop at (instead of in a closed building)	(Carlitz and Makhura 2021:02)
	2.7	I bought more locally produced products	(Tripathi, Smith, Sait, Sallu, Whitfield, Jankielsohn, Kunin, Mazibuko and Nyhodo 2021:08). (Verma and Naveen 2021: 27,30).
	2.8	The total amount I spent on shopping decreased	(Krüger and Meyer 2021:251) (Pappalardo, Selvaggi, Pittalà and Bellia 2022: 07).
	2.9	I searched for substitute products to reduce my trips to the shops	Weber (2021:4)
	2.10	I shopped at different shops for various reasons (closer to home, those open; less crowded; etc)	Bauerová and Bracíníková (2021 as cited in Kempen and Tobias-Mamina 2022:224)
	2.11	I bought fewer pre-prepared meals	Kaur and Sharma (2020:3127)
	2.12	I changed the time of day I shopped	(Yildirim 2021:03). De Witt (2020 as cited by Mathekgga 2022:09).
	2.13	My spending on clothes and fashion items decreased	Dobbelstein and Naidoo (2019:70)
	2.14	I prioritised essential items in my shopping	(Naeem 2021:378). (Galhotra and Dewan 2020:861).
	2.15	My spending priorities shifted from discretionary spending (travel, holidays, entertainment) to essentials (food, personal care, cleaning products etc)	(Debata, Patnaik and Mishra (2020:4)
	2.16	I Spent more on data for communicating/working	(Fischer, Tonder, Gumede and Lalla-Edward 2021:02) (De, Pandeyb and Pal 2020:03).
	2.17	I Spent more on health and wellness products like vitamins, supplements, masks etc	(Nielsen Company, 2020).(Untaru and Han 2021:02).
	2.18	The amount of prepared food delivered from food outlets increased	(Rwafa-Ponela, Goldstein, Kruger, Erzse, Karim and Hofman 2022:09). (JP Morgan 2020).
	2.19	Expenditure on travel, vacations and tourism decreased.	(Gursoy and Chi 2020:527). (Dube 2021:270)
	2.20	I was more cautious in my spending and saved more	(Heerden and Roos 2021:109). (Yazdanparast and Alhenawi 2022:818)
	2.21	I was more aware of striving to get value for money for my purchased goods than before	(Yazdanparast and Alhenawi 2022:818) (Heerden and Roos 2021:109).
	2.22	The proportion of contactless payments (e.g., online payments, mobile e-wallets etc) increased	(Bongomin, Balunywa, Basalirwa, Ngoma and Ntayi 2023:03) Ooi and Tan (2022:937)

	#	Item	Sources
Panic buying	3.1	Fear and anxiety of product shortages prompted me to buy in bulk	(Leung, Chung, Tisdale, Chiu, and Lim 2021:1). (Chua, Yuen, Wang, and Wong 2021:1)
	3.2	Seeing others engaging in panic buying triggered me to do the same	Eriksson and Stenius (2020:1950)
	3.3	The uncertainty of how long the lockdown would continue caused me to buy in bulk	Ahmed et al. (2020:09) Leung, Chung, Tisdale, Chiu, and Lim (2021:1)
	3.4	I bought in bulk to reduce the risk of infection by reducing the frequency of shopping trips	Iriani, Nuswantara, Kartika (2021:944)
	3.5	Fear of supply chain disruptions (manufacturing and distribution) causing a scarcity of goods prompted me to buy in bulk	(O'Connell, Paula, and Smith 2020:249). Chua, Yuen, Wang, and Wong
	3.6	I bought in bulk to relieve my stress and uncertainty of the pandemic	(Islam, Pitafi, Arya, Wang, Akhtar, Mubarak and Xiabei 2021:2).
	3.7	I bought in bulk to provide a sense of security and comfort during the pandemic	Harahap, Ferine, Irawati, Nuraila and Amanah (2021:225) Ahmed, Streimikiene, Rolle and Duc (2020:8)

	#	Item	Sources
Change in customer service	4.1	Personal attention	Valaskova, Durona and Adamko (2021:4)
	4.2	Sourcing products that you wanted but were not found in the store	Valaskova, Durona and Adamko (2021:4)
	4.3	Cleaning and sanitising the store	(Al-Ghraibah 2020: 2466)
	4.4	The management of queues in the store	(Perlman and Yechiali 2020:01)
	4.5	Payment methods that limit contact	(Puriwat and Tripopsakul 2021:85).
	4.6	Providing apps/ways to enable a customer to browse remotely to assist in virtual shopping	(Thaba, Jacobs and Laby 2023:05)
	4.7	Collection/delivery of goods when ordered online	Valaskova, Durona and Adamko (2021:4)

APPENDIX F: QUESTIONNAIRE

Please mark with an (x) where appropriate. The questions below are for research purposes only.

SECTION A: DEMOGRAPHIC PROFILE OF RESPONDENTS

1.1 Indicate your age group.

18-29	30-39	40-49	50-59	60-69	70+

1.2 Indicate your gender.

Male	Female	I prefer not to say

1.3 State your Ethnicity.

Black	Coloured	Indian	White	Other

1.4 Indicate your highest level of education.

No formal education	Primary	Secondary	Tertiary

1.5 Indicate your occupation.

Student	Employed	Self-employed	Unemployed	Retired

1.6 Your source of income

Government grant	Allowance	Stipend	Salary	Wage	Pension

1.7 Indicate what type(s) of purchases you made during the COVID-19 pandemic (27 March 2020 to 5 April 2022) (Tick all that apply)

1.7.1 Online	
1.7.2 Offline	

SECTION B: BUYING PATTERNS DURING THE PANDEMIC

2. Indicate your level of agreement that the following changes occurred in your buying patterns/habits during the lockdown (27 March 2020 to 5 April 2022)

	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
2.1 I decreased the number of shopping trips					
2.2 I increased the number of items of the same product that I bought					
2.3 I bought more products that have a longer shelf life					
2.4 I did more online purchasing (e-commerce)					
2.5 I had more of my shopping delivered than before					
2.6 I looked for outdoor shops/markets to shop at (instead of in a closed building)					
2.7 I bought more locally produced products					
2.8 The total amount I spent on shopping decreased					
2.9 I searched for substitute products to reduce my trips to the shops					
2.10 I shopped at different shops for various reasons (closer to home, those open; less crowded; etc)					
2.11 I bought fewer pre-prepared meals					
2.12 I changed the time of day I shopped					
2.13 My spending on clothes and fashion items decreased					
2.14 I prioritised essential items in my shopping					
2.15 My spending priorities shifted from discretionary spending (travel, holidays, entertainment) to essentials (food, personal care, cleaning products etc)					
2.16 I Spent more on data for communicating/working					
2.17 I Spent more on health and wellness products like vitamins, supplements, masks etc					
2.18 The amount of prepared food delivered from food outlets increased					
2.19 Expenditure on travel, vacations and tourism decreased.					
2.20 I was more cautious in my spending and saved more					
2.21 I was more aware of striving to get value for money for my purchased goods than before					
2.22 The proportion of contactless payments (e.g., online payments, mobile e-wallets etc) increased					

SECTION C: PANIC BUYING

3. Indicate your level of agreement with the following statements

	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
3.1 Fear and anxiety of product shortages prompted me to buy in bulk					
3.2 Seeing others engaging in panic buying triggered me to do the same					
3.3 The uncertainty of how long the lockdown would continue caused me to buy in bulk					
3.4 I bought in bulk to reduce the risk of infection by reducing the frequency of shopping trips					
3.5 Fear of supply chain disruptions (manufacturing and distribution) causing a scarcity of goods prompted me to buy in bulk					
3.6 I bought in bulk to relieve my stress and uncertainty of the pandemic					
3.7 I bought in bulk to provide a sense of security and comfort during the pandemic					

SECTION D: CHANGE IN CUSTOMER SERVICE

4. Indicate the type and level of change you experienced in the following aspects of customer service during the pandemic

	Much worse	A bit worse	No change	A bit better	Much better
4.1 Personal attention					
4.2 Sourcing products that you wanted but were not found in the store					
4.3 Cleaning and sanitising the store					
4.4 The management of queues in the store					
4.5 Payment methods that limit contact					
4.6 Providing apps/ways to enable a customer to browse remotely to assist in virtual shopping					
4.7 Collection/delivery of goods when ordered online					

THANK YOU FOR YOUR TIME

APPENDIX G: TURNITIN REPORT

K Achary 21210183 - Thesis

ORIGINALITY REPORT

13%	9%	6%	8%
SIMILARITY INDEX	INTERNET SOURCES	PUBLICATIONS	STUDENT PAPERS

PRIMARY SOURCES

1	Submitted to Durban University of Technology Student Paper	2%
2	openscholar.dut.ac.za Internet Source	1%
3	R. Thakur, S.C. Onwubu. "Household waste management behaviour amongst residents in an informal settlement in Durban, South Africa", Journal of Environmental Management, 2024 Publication	<1%
4	Submitted to University of KwaZulu-Natal Student Paper	<1%
5	repository.nwu.ac.za Internet Source	<1%
6	dokumen.pub Internet Source	<1%
7	www.mdpi.com Internet Source	<1%

APPENDIX I: STATISTICIANS CERTIFICATE

Gill Hendry B.Sc. (Hons), M.Sc. (Wits), PhD (UKZN)
Mathematical and Statistical Services

Cell: 083 300 9896
Email: gillhendrystats@gmail.com

14 October 2024

Re: Statistical assistance

Please be advised that I assisted Krishendran Achary (Student number 21210183), who is currently studying for a Masters in Management Sciences: Marketing at the Durban University of Technology, with the statistical aspects of his study including questionnaire alignment and the data analysis.

Yours sincerely

Dr Gill Hendry
Private Consulting Statistician