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DIGITAL COLLABORATIVE CONSUMPTION IN AN EMERGING MARKET: SOUTH AFRICAN FOOD DELIVERY SERVICES

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A thesis submitted to the Faculty of Commerce, Law and Management, University of the Witwatersrand, Johannesburg, South Africa, in fulfilment of the requirements for the degree of the Doctor of Philosophy (PhD) in Management.

JOHANNESBURG, 2023

DECLARATION

I, **TINAYESHE SHUMBA,** declare that:

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Date: 12 May 2023

DEDICATION

I dedicate this thesis to the three superwomen in my life Remiah Moyo, Netsai Moyo, and Deliwe Moyo (the late), and my uncle Africa Moyo, who taught me to be a hard worker, resilient and faithful to God the Almighty. To my wife, Ireen Mutombwa Shumba, thank you for your encouragement and support throughout the journey. To my two kids, Ryan and Ropafadzo, Dad has shown you that the sky is the limit.

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ABSTRACT

Many consumers have complained about food delivery services. The applications make double payments, and sometimes, the call centres are not easily accessible. Orders get mixed up, and sometimes food is delivered to the wrong addresses. Digital collaborative consumption (DCC) enables consumers to share products and services instead of owning them. A new and rapidly growing class of business models uses digitally mediated platforms to facilitate the DCC of goods and services. Smartphones' development and their rapid spread suggest that these business models could address typical low capital formation and high unemployment in emerging markets (EMs). However, although DCC is integral to daily life in emerging marketplaces, very little is known about DCC business models. The research aimed to evaluate the impact of DCC in the food delivery industry in emerging markets, focusing on South Africa. To achieve this goal, the study specifically aimed at assessing the drivers and deterrents of digital collaborative consumption in the food delivery industry, the impact of the DCC business model and develope a conceptual model which explains and predict consumer attitudes and buying intentions in EMs. Data was collected from 828 participants using validated instruments from South Africa. The theorised relations were assessed simultaneously using structural equation modelling. Models were fit to item covariance matrices using robust maximum likelihood estimation in *Mplus*, version 7. The research advanced the understanding of DCC to make conceptual, methodological, empirical, and practical contributions. *Conceptually*, the study included cognitive response and attitudes as potential mediators of DCC drivers in EMs. *Empirically*, the study brought together variables and relations not previously studied in EMs, including environmental influences and individual differences influencing consumer adoption. *Methodologically*, a new scale measuring DCC was developed from existing scales, assessed rigorously using confirmatory factor analysis, and showed good measurement properties. Home delivery, economic benefits, social benefits and security assurance strongly influenced the intention to continue using the DCC business model, while trust in the platform showed a non-significant relationship. *Practically*, the effect size estimates suggested that home delivery, economic benefits, Perceived Usefulness (PU) and Perceived Ease of Use (PEOU) and security assurance have practical relevance for marketing strategies and reshaping public policy in DCC. The study recommends approaches that the research institutes, government, policymakers and business leaders can use to unlock opportunities and get new guidance on this rapidly growing business model in EMs.

***Keywords*:** DCC, Food delivery, emerging markets, Sharing, Attitudes, South Africa

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LIST OF ABBREVIATIONS AND ACRONYMS

4IR	Fourth Industrial Revolution
DCC	Digital Collaborative Consumption
DCE	Digital Collaborative Economy
EMs	Emerging Markets
HIC	High-Income Countries
ICC	Intention to Consume Collaboratively
LIC	Low-Income Countries
SEM	Structural Equation Modelling
TAM	Technology Acceptance Model
PEU	Perceived Ease of Use
PU	Perceived Usefulness

CHAPTER 1

GENERAL INTRODUCTION TO THE THESIS

1.0 INTRODUCTION

Research in marketing often focuses on marketplace exchanges where consumers gain temporary access to resources such as taxis, accommodation, furniture, and tool rental and experiences, e.g., wilderness hikes and ocean fishing charters, without transferring ownership. These exchanges have a long history, dating back more than 2,000 years. Recent advances in communication and information technology have encouraged considerable innovation in business models focusing on such exchanges, including fast-growing firms like Airbnb, Uber, and Bolt. The collaboration of consumers and firms in emerging markets (EMs) has grown due to many factors. Such factors include flexibility in product delivery to the customer, two-way feedback on service and product quality from customers and service providers, consumer-customised product delivery, monitoring service quality, providing instant customer evaluations and advances in convenience and accountability. The recent upsurge in these business models is now considered a "digital collaborative economy" (Sundararajan, 2014). The digital collaborative economy (DCE) can include all business models offering collaborative product consumption for a fee. The definition of digital collaborative consumption (DCC) in marketing has evolved. With a long research history, backdating to the '70s, DCC relates to "events in which one or more persons consume economic goods or services in the process of engaging in joint activities with one or more others" (Felson & Spaeth, 1978, p. 164). The view emphasises joint activities in consumption, e.g., beer drinking with a buddy, rather than distributing and acquiring a resource. Botsman and Rogers (2010) refine the construct, defining it as "…the traditional sharing, bartering, lending, trading, renting, gifting and swapping" (p. xv), but not differentiating between marketplace gifting and sharing.

Belk (2014) distinguished between collaboration and sharing, noting that both types of exchanges are increasing. According to Belk (2014), *collaborative consumption* refers to the coordination of acquiring, distributing, and using products and resources. These do not exclude monetary and non-monetary exchanges (e.g., bartering, trading, and swapping) where no

ownership transfer exists. *Sharing* is as old as humankind and necessary for human survival (Belk, 2014, 2018). Researchers noted that sharing is pervasive in South Africa and highest among the low socioeconomic classes (Everatt & Solanki, 2008). Sharing in digital collaborative consumption refers to the short-term rental of cars, homes, rooms and rides (Belk, 2018). Other scholars (Belk, 2014) describe sharing commercial ventures as 'pseudo-sharing,' e.g., food delivery, car and accommodation rentals.

The research focuses on a subset of the universal digital collaborative consumption business models. These are virtual peer-to-peer marketplace exchanges of unused space, goods, and skills for a fee. Among other 'sharing' organisations, Mr D, Uber, Airbnb, Bolt, BlaBlaCar and DIDI are well-known examples of these business models. The development and rapid spread of smartphones and reduced data costs suggest that this type of DCC business could address typical low capital formation and high employment in emerging markets. The platform primarily targets smartphone users (Ganapati & Reddick, 2018). Benoit et al. (2017) described *a platform provider* as an actor that supplies the online marketplace for digital collaborative consumption and communicates its value proposition. In addition, platform providers facilitate transactions in the digital collaborative economy (Ganapati & Reddick, 2018). The primary role of the platform provider is to link the parties involved in the transaction. DCC economy exchanges take various forms. *Dyadic exchanges* occur between two parties (the company providing the goods or services and the consumer). Sharing, bartering, and trading are examples of dyadic exchanges. *Triadic exchanges* involve the consumer, platform, and service provider (Benoit et al., 2017).

This new and rapidly growing class of business models uses digitally mediated platforms to facilitate the digital collaborative consumption of assets and services. Referred to as Digital Collaborative Consumption (DCC), these new business models enabled consumers to share products and services instead of owning them. DCC business models are of great value in emerging markets (EMs). Many EMs have excellent cellular communications infrastructure. Although the penetration of smartphones is lower in emerging markets and data costs relatively higher than in high-income countries, these obstacles are rapidly overcome, making DCC products and services more readily available to the masses. Many DCC products and services are started with relatively low capital investments. Firms leverage DCC platform investments at relatively low costs for those that cannot. For example, a small restaurant can expand its

reach by advertising its products for delivery through Mr Delivery, UberEats, OrdeIn and Airbnb. Leveraging platform investments in this manner promotes low-cost job creation and flexible working conditions that benefit certain workers. Collaborative consumption is integral to daily life in emerging marketplaces, especially in the communities where the new urban middle class is emerging.

DCC in the food delivery industry enhances customer satisfaction and positive e-word of mouth (De Cicco et al., 2020; Saha et al., 2022). Many firms have responded to the preference of engaging in DCC by increasing new channels and digital touchpoints to improve customer experience (Reinartz et al., 2019). Accepting such innovative touchpoints is a new norm, and the DCC platform is no exception. Innovation has become a critical factor in diversifying the delivery service emerging marketplace. Research has shown that this form of business model is initiated and implemented by companies, e.g., business to business (b2b), business to consumer (b2c) by consumers (c2c) or by communities (de Oliveira et al., 2022). Business strategies aiming at improving food delivery services require the use of resources in the process of satisfying the needs of consumers. Concerning the food delivery industry, Uber was the first company to position itself on a business-to-consumer model (de Oliveira et al., 2022; Pollio, 2019). DCC is therefore described as person-to-person consumption activity based on giving or sharing access to goods and services through a digital platform (Hamari et al., 2016). Literature note-sharing is old as humanity, whilst DCC was born during the internet era (Belk, 2014). Digital collaborative consumption allows private holders of resources, e.g., cars, to make them available to others. The novelty component of DCC is the possibility of sharing resources with strangers Münzel et al. (2019), thereby enabling the development of trust. The research noted that DCC allows platform providers to monetise business operations through mediation technologies, networks and assets (Pollio, 2019). Studies note the benefits of DCC to be both economic, environmental and social (Sastre-Centeno & Inglada-Galiana, 2018). Benoit et al. (2017) found that DCC realise economic benefits through access capacity and cost-benefit ratio improvement. Environmental benefits stem from the efficient allocation of resources (de Oliveira et al., 2022). The other benefits noted by Sastre-Centeno and Inglada-Galiana (2018) include the creation of social bonds among DCC consumers.

Many consumers and businesses need to be aware of the attractiveness of DCC products and services in emerging markets. Prior learning from high-income countries may not necessarily

apply for several reasons. Most importantly, EM institutions differ remarkably from Western, educated, industrialised, prosperous, and democratic markets in which most research on DCC has been conducted (Burgess & Steenkamp, 2006; Burgess & Steenkamp, 2013; Henrich et al., 2010). Unfortunately, the effects of environmental influences and individual differences on DCC adoption have yet to be the subject of much research. This is unfortunate because DCC business models represent a significant opportunity to create employment and address the typical socioeconomic challenges of the economy.

1.2 BACKGROUND TO THE STUDY

Digital collaborative consumption business models offer several advantages to consumers in emerging markets, for example, finding temporary employment, generating extra income, increasing reciprocity, enhancing social interaction and accessing unattainable resources (Dillahunt & Malone, 2015). Digital collaborative consumption has improved efficiency in the marketplace through lower transaction costs, reduced information symmetry, matching demand and supply, enhanced production efficiency, and creating millions of jobs in the new sector. For example, Didi in China has 13 million drivers connected to their platform (Zhang & Chen, 2019). The DCC exists in virtual space and can be rolled out quickly, leapfrogging the inefficiencies of traditional infrastructure constraints. Zhang and Chen (2019) argued that DCC had shaped the market structure through the disintermediation of the distribution in the supply chain, where products and services are linked with consumers and suppliers. Digital collaborative consumption promotes economic rebalancing through digital applications that promote service industries' development, including entertainment, education, dining, health, accommodation, and transport. DCC often highlights service quality shortcomings, economic inefficiencies, and other disruptive service deficits that negatively impact traditional business models. This is an essential practical concern for industry and government policymakers. On the one hand, DCC offer an incredible opportunity for rapid advancements and positive social and economic benefits. It may threaten investments in less efficient technologies, e.g., Airbnb vs traditional hotels, Mr D vs traditional restaurants.

The food market in emerging markets is valued at 2.7 billion dollars, and research has shown that it will reach 4.9 billion by 2026, achieving a compound annual growth rate of 7.9% (Thomas & Deshmukhi, 2019). The South African food market is one of the biggest in sub-Saharan Africa. The food market has had a mix of local and multinational restaurants enabling

the segment's growth. The food delivery industry has chicken, burgers, pizza, and processed meat topping the market and having high demand. Many customers have complaints about fast food delivery services. The applications have been perceived to run double payments. The call centres have been perceivably inaccessible, mixing up orders and delivering food wrong addresses. Using the app, recovering the login details, and browsing the menu is difficult. These issues affected the adoption of the digital collaborative consumption business models in emerging markets, hence the study's need. The study's research question is "What are the drivers of digital collaborative consumption in the food delivery industry in emerging markets?" The researcher uncovered exciting findings, which are discussed later in the report.

1.3 CONTEXT OF THE STUDY

The researcher recognised that institutional context, e.g., socioeconomic variables, must be acknowledged when developing theories. Cross-national generalisability implies that two different latent variables are the same in both countries. Evidence suggests that empirical generalisation may be realistic in the High-Income Countries (HIC) context (Gielens & Steenkamp, 2007; Hanushek, 2021). Questions still exist among researchers if the findings are different in emerging markets. The presence of high ethnic diversity in emerging markets affects social communication and innovation. The three pillars of institutions in society comprise regulative, cultural, and socioeconomic systems (North, 1999; Scott, 2001). Table 1 makes a comparison of these institutional systems found in society.

Table 1: Comparison of institutional sub-system

Institutional subsystems	Emerging Markets	High-Income Countries
Socioeconomic subsystem Dynamics	Rapid social, political, and economic change.	Moderate social, political, and economic change.
Demographics	Young, growing, a large pool of under-educated	Older, stagnant, well-educated
Diversity	Extreme differences in household size and income, living standards, access to human development resources	Smaller differences in household size and income, living standards, access to human development resources
Cultural subsystem		
Hierarchy vs egalitarianism	Hierarchy emphasised	Egalitarianism emphasised
Embeddedness vs autonomy	Embeddedness emphasised	Autonomy emphasised
Regulative subsystem		
Rule of law	Moderate abuse of public office for private gain, moderate reliance on legal rights enforced in courts of law, investor rights lower, legal outcomes more unlikely	Low abuse of public office for private gain, high reliance on legal rights enforceable in courts of law, legal outcomes more likely
Stakeholder influence on corporate governance	Government, civil society, and supply chain stakeholders influence high.	Government, civil society, and supply chain stakeholders influence moderate.

Source: Adapted from Burgess and Steenkamp (2006).

The *socioeconomic systems* are evidenced in different regions of South Africa. They include social problems like high unemployment, social welfare, crime and migration, and economic and ecological development (Ginevicius, 2019). The socioeconomic system was distinguished into dynamic, demographic, and diverse. Economically, the increase in domestic product growth is higher in high-income countries than in emerging markets. Socio-politically, environments in emerging markets, e.g., Zimbabwe, South Africa and China, are moving from centrally controlled to market-driven. Scholars noted that consumers now embrace modern lifestyle values because of the fourth industrial revolution (4IR). The mass market in emerging markets needed more skills and limited opportunities in the formal sector.

1.3.1 Cultural system

To understand the cultural system of society, there is a need to emphasise the value system. Culture describes the daily lifestyle and the generalised beliefs consumers and every other country's citizens hold about themselves, including spiritual and social beliefs. Hofstede (1994, p. 1) describe culture as "the collective programming of the mind which distinguishes the members of one category of people from another." Various classifications of cultural values are quoted in various sources (Hofstede, 1986, 2011; Schwartz, 1992; Schwartz et al., 2017);

Sharma et al. (2017). Hofstede (2011: 2) proposed culture variation five dimensions of "power distance, individualism or collectivism, masculinity or feminism, uncertainty avoidance, and long-term orientation". These five dimensions carry strong predictive traits to the organisational context (Rattrie et al., 2020). The culture of the consumers in the study was seen as varying along how tight or loose the members adhered to societal expectations.

1.3.2 Regulative system

The regulative system is the rules and regulations governing a country's economic, social and cultural systems (Wu & Deng, 2020). The other concern in emerging markets is the rule of law. The main concern of the rule of law is corruption, where public officials abuse public funds for their gains at the expense of the general population. Corruption is high in low-income countries and results in slowing economic growth by creating inefficiencies.

1.4 PROBLEM STATEMENT

Digital collaborative consumption enables consumers' access to various products and services. Food delivery service customers benefit from customisation, fast food delivery, and instant communication in real-time. Keeble et al. (2020) found that food delivery services were present in 13 countries by 2020. The researcher noted that there needs to be more understanding of the impact of DCC in the food delivery industry in emerging markets. Few researchers noted that convenience and choice of food outlets were potential drivers of online food delivery services, supporting findings from Malaysia and Indonesia (Yeo et al., 2017). The sociodemographic and the intentions to consume collaboratively have not been investigated in South Africa, making it difficult for marketers to understand the DCC consumers. Considering the ever-changing marketing environment, a complete understanding of these consumers helps establish a baseline against which future customers can be compared. In the study, the researcher aims to investigate the drivers of DCC in the food delivery industry of South Africa.

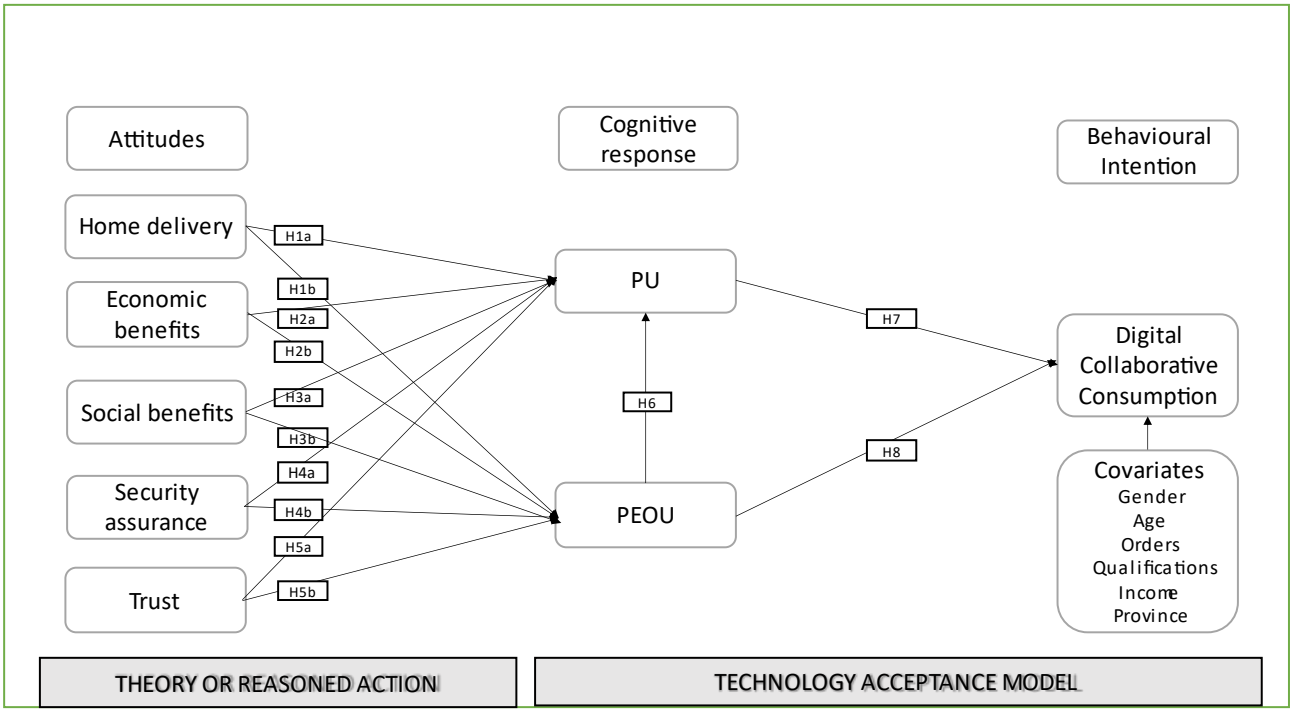
COVID-19 caused many countries to impose social distancing measures (Qian & Jiang, 2020). Many restaurants could not survive under lockdown as many customers were no longer dining in restaurants (Gursoy & Chi, 2020; Koay et al., 2022). The global food delivery industry was estimated at 130,2 billion in 2022 and is expected to reach 223,7 billion US dollars (Coppola, 2022). The USA was found to have the fastest-growing rate of 123%, followed by Russia and Canada. China's *wai mai* had a revenue of 14 billion in 2020 (Koay et al., 2022). In South

Africa, the food delivery industry still needs to be developed. Many restaurants need to sell their products online, and they lose much revenue. Ramos (2021) noted a growing demand for food delivered online due to social isolation and staying at home during the covid-19 pandemic. Extant studies were conducted to understand consumer satisfaction towards online delivery (Alalwan et al., 2020; Wen et al., 2021; Zhuang et al., 2021). The drivers of DCC have never been examined. Existing studies conceptualise online food delivery based on service quality scales (Yusra & Agus, 2020). Most extant studies focus on the service quality of online food delivery ordering apps but neglect other attributes derived from consumers and service providers, e.g., delivery drivers (Annaraud & Berezina, 2020; Suhartanto et al., 2019; Yusra & Agus, 2020).

The study thus assessed the drivers of DCC in the food delivery industry in an emerging market. Digital collaborative consumption is present in transportation, e.g., Uber; lodging, e.g., Airbnb; tourism, e.g., Couchsurfing; entertainment, e.g., Spotify and online food delivery, which is called DCC in the current study. Despite the popularity of online platforms, their connection with DCC remains neglected. The word digital collaborative consumption has been missing in recent papers. The lack of connection among the constructs is a concern. The study's approach posits the relevance of evaluating drivers of DCC in the food delivery industry. The study extends the existing consumer behaviour models, e.g., TAM and TRA, by including new constructs to understand buying behaviour in the food delivery industry

1.5 PROPOSED RESEARCH MODEL

The study seeks to determine the drivers of DCC in the food delivery industry in an emerging market. Drawing from the literature review, with particular attention to empirical and theoretical literature, the study conceptualises a research model. The conceptualised model has attitudes adapted from the theory of reasoned action: economic benefits, social benefits, security assurance and trust in the platform. The predictors of the model have perceived usefulness and perceived ease of use, which are from the technology acceptance model. Intention to continue using Digital collaborative consumption is the outcome variable. Covariates moderate DCC construct. The proposed model has one directional causal effect.



Key: PU – Perceived usefulness; PEOU – Perceived ease of use

Figure 1: Proposed research model

Source: Drawn from extant literature

Based on the conceptual framework, the researcher proposed several hypotheses for the study, as follows:

H1a: Home delivery positively influences perceived usefulness.

H1b: Home delivery passively influences perceived ease of use.

H2a: Economic benefits positively influence perceived usefulness.

H2b: Economic benefits positively influence perceived ease of use.

H3a: Social benefits positively influence perceived usefulness.

H3b: Social benefits positively influence perceived ease of use

H4a: Security assurance positively influences perceived usefulness.

H4b: Security assurance positively influences perceived ease of use.

H5a: Trust positively influences perceived usefulness.

H5b: Trust positively influences perceived ease of use.

H6: Perceived ease of use positively influences perceived usefulness.

H7: Perceived usefulness positively influences the intention to continue using digital collaborative consumption.

H8: Perceived ease of use positively influences the intention to continue using digital collaborative consumption.

The complete discussion of the proposed framework and the hypotheses are presented in chapters 2 and 4 of the write-up.

1.6 RESEARCH QUESTIONS

- What are the drivers of DCC in the South African food delivery industry?
- What are the deterrents of DCC in the food delivery industry?

1.7 PURPOSE AND OBJECTIVES OF THE STUDY

The research aimed to evaluate the drivers and deterrents of digital collaborative consumption in the food delivery industry in emerging markets. To achieve this goal, the research explored the South African food delivery industry to understand the consumers' attitudes and behavioural responses. DCC improve service delivery and reduces high unemployment levels in emerging markets. The researcher divided the research objectives into primary, theoretical, and empirical.

1.7.1 The primary objective

The researcher set the primary objective to investigate the influence of drivers and deterrents of DCC in the food delivery industry.

1.7.2 Theoretical objectives

A rigorous literature review analysis informed the basis of establishing the theoretical objectives. For the current study, the theoretical objectives articulated were as follows:

- To conduct a literature review on attitudes toward digital collaborative consumption, economic benefits, social benefits, security assurance and trust in the platform.
- To conduct a literature review on cognitive response variables (beliefs), i.e., perceived usefulness and perceived ease of use, towards DCC.
- To conduct a literature review on digital collaborative consumption.
- To conduct a literature review on innovation.

1.7.3 The empirical objectives of the study

Soanes and Stevenson (2004) found that empirical objectives are concerned with or verifiable by observation or experience rather than theory or pure logic. Empirical studies provide concrete evidence for testing the theory (Chen & Hirschheim, 2004). The relationships between the variables in the study formed the basis for setting the empirical objectives. The following empirical objectives were posited:

- To investigate the influence of economic benefits on perceived usefulness and perceived ease of use in the South African food delivery industry.
- To investigate the influence of social benefits on perceived usefulness and perceived ease of use.
- To investigate the influence of security assurance on perceived usefulness and perceived ease of use in the South African food delivery industry.
- To investigate the influence of trust in the platform on perceived usefulness and perceived ease of use.
- To investigate the effect of perceived usefulness on DCC in the South African food delivery industry.
- To investigate DCC's perceived ease of use in the South African food delivery industry.
- To establish the impact of covariates, i.e., age, gender, qualifications, and province, on DCC.

1.8 RESEARCH DESIGN

The quantitative research design was used in the study by the researcher. Proctor and Capaldi (2008) note that quantitative research design is a scientific investigation that includes experiments and systematic methods that emphasise control and quantified performance measures. Measurement and statistics were found to be central to research design as they connect empirical observations and mathematical expression of relations (Hoy & Adams, 2015, p. 1). Agostini and van Zomeren (2021) noted that quantitative research seeks to answer specific research questions. Du Plessis et al. (2007) view quantitative research as obtaining information from participants openly and directly. The results were used to test the hypotheses as compared to qualitative research.

1.9 LITERATURE REVIEW

Babbie (2020) noted that conducting a literature review helps strengthen the procedure used in the study, restricts data collection to latent variables and assists in data verification. A literature review assists in summarising post-studies and identifying gaps due to inconsistencies in findings (Alasuutari et al., 2008). The study uses various academic sources for the study. The literature review helps to summarise past findings and enables investigations into areas previously neglected. Kraus et al. (2021) noted that it is crucial to grasp the current state of search in a given area to craft each section of any manuscript, but t avoid wasting time duplicating previous studies. Literature review helps build logic on previous studies' findings by reviewing studies, reconciling conflicting findings and identifying research gaps that assist in finding new direction (Pittaway et al., 2015). The study will provide a new direction in digital collaboration consumption. Various sources like articles, books and pieces will be examined to get an insight into the concept under study and how they influence each other.

1.10 EMPIRICAL STUDIES

As previous researchers recommended, the following methodological sections formed part of the empirical study.

1.11 METHODOLOGY

The researcher followed the steps recommended by the research onion model of Saunders et al. (2019a) to conduct the empirical study. Ahmad et al. (2018) described an empirical study as an appropriate method for gathering self-reporting data from many respondents using specific techniques. Data for empirical study can be from qualitative or quantitative research methods.

1.11.1 Sampling design technique

According to the work of Hair Jr and Sarstedt (2021) as well as Hair Jr et al. (2017), sampling techniques are either probability or nonprobability. The current start used the non-probability sampling technique. Probability sampling is any technique that gives all participants an equal opportunity to be included in the study Sharma (2017), how ever the researcher could not proceed with probability sampling because the sample frame was not available. Convenience non-probability sampling is the technique employed by the researcher in selecting participants from the South African population with access to the Internet. The convenience sampling

method was considered because it was easy to assemble the sample. However, the sample is biased as it does not represent the whole population (Etikan & Babtope, 2019; Rahman et al., 2022; Sharma, 2017). Every participant in the population had zero and non-zero probability of being selected for this study (Etikan et al., 2016). The convenience sampling procedure enabled the selection of DCC participants who buy food online using generic apps.

1.11.2 Sample

The researcher used past studies to determine the sample of the study. The sample size was determined following Krejcie and Morgan's (1970) sample size determination calculator, as confirmed by the Research Advisors (2006). The researcher had a sample of 828 participants selected using convenience sampling from the DCC consumers who have access to the Internet and buy online. The sample size was considered adequate for the study.

1.11.3 Method of data collection

The researcher shared the link to a self-administered questionnaire created on Wits Qualtrics. The link was shared on various platforms to reach DCC consumers who buy food online using the generic platforms. A web-based self-administered questionnaire was considered because it produced high-quality data because of the automatic skip and warning messages for omitted questions (Braekman et al., 2018). The questionnaire was completed by members of the public at least eighteen years old.

1.11.4 Measuring instrument

The measuring tool was developed from existing scales used in previous consumer behaviour studies. A five-point Likert scale was used with strongly disagree, denoted by 1 and strongly agree, denoted by 5. The Likert scale was used as it gave an equal opportunity for every item on the scale (Kumar et al., 2018). Eight constructs are presented in the study, which are in three categories:

(1) Attitude, i.e., home delivery, economic benefits, social benefits, security assurance and trust
(2) The cognitive response is measured by two constructs perceived usefulness and perceived ease of use
(3) The behavioural intention is the intention to continue using a digital collaborative consumption business model

The study incorporated sociodemographic variables described as covariates, including gender, age, buying frequency, educational qualifications, income levels and province.

1.11.5 Statistical analysis

Descriptive help to have a better understanding of variables. T-test value (t-statistics), CFA, and ANOVA were used to test the model for fitness and during path analysis. The theorised relations were assessed simultaneously using structural equation modelling. Models were fit to item covariance matrices using robust maximum likelihood estimation in *Mplus*, version 7.

1.11.6 Measurement model

The research suggested that a combination of different indices determines acceptable model fitness. These indices include the comparative fit index (CFI), Turkey Lewis (TLI), and standardised root mean error of approximation (RMSEA). The indices less affected by sample size are RMSEA and CFI (Hooper et al., 2008). Hooper et al. (2008) noted that although fit indices are an essential guide, structural model fitness must be examined considering substantive theory since model fit alone may prevent the fundamental theory testing aim of the structural equation modelling. The strict application of fit indices may sometimes result in a type 1 error, wrongly rejecting an acceptable model. The assessment of power was based mainly on the root mean square of approximation (RMSEA) to establish the goodness of fit for SEM analysis. From the study, the RMSEA estimates the analysis scores of less than 0.07, which reflect an overall good fitting model. The following Table shows the model fit indices and the recommended threshold. Gupta and Singh (2015) included more indices, categorised as the goodness of fit, the badness of fit, and incremental fit indices.

Table 2: Acceptability Criteria for Absolute and Incremental Fit Indices

Fit Indices	Range		Fit Criterion					
	Lower	**Upper**	**Poor Fit**	**Ideal Fit**	**Perfect Fit**	**Good Fit**	**Marginal Fit**	**Not / Less Acceptable**
				Absolute Fit Indices				
				Goodness of Fit				
GFI	0	1	0	1	0.95 and above	Between 0.90 and 0.95	Between 0.80 and 0.90	Less than 0.80
AGFI	Outside the range of 0 to 1		0	1	0.90 and Above	_	Between 0.80 and 0.90	Less than 0.80
				Badness of Fit				
CMIN/DF	_	Upper bound is unlimited	_	0	Between 0 and 1	Between 1 and 3	Between 3 and 5	Above 5
RMR	Lower bound is restricted to zero	Upper bound is unlimited	-	0	0.05 and Below	-	Between 0.05 and 0.08	Above 0.08
RMSEA	Lower bound is restricted to zero	Generally, do not exceed 1	-	0	0.05 and Below	Between 0.05 and 0.08	Between 0.08 and 0.10	Above 0.1
				Incremental Fit Indices				
NFI	0	1	0	1	0.95 and Above	Between 0.90 and 0.95	Between 0.80 and 0.90	Below 0.80
RFI	0	Can go beyond 1	0	-	0.95 and Above	Between 0.90 and 0.95	Between 0.80 and 0.90	Below 0.80
IFI	0	1	0	1	0.95 and Above	Between 0.90 and 0.95	Between 0.80 and 0.90	Below 0.80
TLI	0	Can go beyond 1	0	-	0.95 and Above	Between 0.90 and 0.95	Between 0.80 and 0.90	Below 0.80
CFI	0	1	0	1	0.95 and Above	Between 0.90 and 0.95	Between 0.80 and 0.90	Below 0.80

Source: Adapted from Gupta and Singh (2015); Hooper et al. (2008); Hu and Bentler (1999)

1.12 NOVEL CONTRIBUTIONS OF THE STUDY

The research made novel and substantive contributions, empirical, conceptual and practical. *Empirically*, research on digital collaborative consumption in emerging market contexts is almost non-existent, especially in Africa. The research provided new empirical insights into DCC-relevant constructs. It theorised relations grounded in solid theory and validated measurement tools adapted to the South African emerging market context. The literature review featured a more complete and rigorous assessment of the current state of research on DCC in an emergent context, which is a significant contribution.

Conceptually, previous studies in this new research domain usually assumed one theoretical viewpoint. The research implemented a more synergistic approach. Although prior research has studied the motivation of DCC in high-income countries, it has yet to focus on the home food delivery industry in emerging markets. This research is vital because studying consumers' experiences and attitudes helps predict future consumption trends.

Practically, the research could inform new strategies and policy decisions in business and government agencies, e.g., health, environmental management, social issues, and transport, to plan, predict and meet future demands. The researcher noted that despite the popularity of online consumption, there needs to be more guidance on developing digital collaborative consumption business models in emerging markets (Plenter et al., 2017). The research helped marketers find new ways of delivering value on products and services in the food delivery industry, adapting to changing consumer needs.

1.13 OUTLINE OF THE THESIS

Chapter 1: Introduction

The research is structured with seven chapters: The first chapter introduces the research background. The chapter discussed the context of the study, gaps in established literature and the general contribution of the study as highlighted. The theoretical underpinning of the study was introduced in the study. A brief outline of sampling design, non-probability sampling, measuring instrument, research objectives and statistical analysis was highlighted.

Chapter 2: Literature review

The chapter discusses the study's literature review, focusing on digital collaborative consumption in general and specifically in food delivery services. The chapter discusses the

literature on economic benefits, social benefits, security assurance and trust in the platform. The cognitive response variables discussed in the model are discussed in detail with particular emphasis on perceived usefulness and perceived ease of use. The behavioural intention constructs digital collaborative consumption is discussed in detail.

Chapter 3: Theoretical and Conceptual Framework

The chapter covers the theories in consumer behaviour, focussing on personality, values, and attitudes and how they influence consumer behaviour in general and specifically in the food delivery industry of emerging markets. The conceptual framework was discussed, and hypotheses were put forward. The Technology Acceptance Model (TAM) and Theory of Reasoned Action (TRA) facilitated the linkage of digital collaborative consumption product and service characteristics to cognitive, affective, and behavioural outcomes, which affects the adoption of the DCC business model. The researcher discussed the direct effects on cognitive response, i.e., PU and PEU, attitudes towards DCC, i.e., economic benefits, social benefits, trust in the platform and security assurance and the behavioural response, i.e., Digital collaborative consumption.

Chapter 4: Research Methodology

The chapter introduces the methodology section of the study, the research philosophy and the paradigm. The researcher followed the research methodology suggested by (Saunders et al., 2019b) to construct the methodology chapter.

Chapter 5: Presentation and Analysis of Findings

The chapter is mainly about the presentation of findings. The same chapter focused on missing data analysis, discriminant validity and reliability testing assessment and hypothesis testing. Mediation tests were run to evaluate latent variables' direct and indirect effects.

Chapter 6: Discussion of Findings

The chapter focussed on a discussion of findings, emphasising antecedents, cognitive response, and consumers' attitudes. The researcher evaluates the constructs' relationships while referring to the research objectives.

Chapter 7: Summary, Conclusions and Recommendations

The chapter is the last one, and it focuses on a summary of the research report, conclusions, recommendations for the study and the study's theoretical, methodological and practical implications. The proposals for future study were indicated based on the limitations of this study.

1.14 DEFINITION OF KEY TERMS

Collaboration

Collaboration refers to a situation through which players with varying perspectives of a problem can set aside their differences and collaborate to find a solution (Gray & Purdy, 2018). Collaboration is in many forms, and examples include joint ventures to promote technology transfer and public-private partnerships to reduce unemployment, drug abuse and poverty in the community.

Online Food delivery

Online food delivery is a form of e-commerce in which consumers are attracted to buy food online and are induced to complete the transaction in an offline setting (Li et al., 2020, p. 126).

Emerging markets

An emerging market is defined as a country that satisfies two criteria: rapid economic development and a government policy favouring economic liberation and adopting a free market system (Nielsen et al., 2018). The emerging market model of DCC is where underutilised resources are collaboratively shared between customers, providing a profitable commercial business concept by encouraging non-sharing firms to seek models of shared access to their customers (Billows & McNeill, 2018). In this study, South Africa is considered an emerging market.

Digital Collaborative Consumption (DCC)

Digital collaborative consumption is referred to as 'sharing economy' because consumers share access to resources and 'peer-to-peer exchange' because the transaction can occur between the consumers alone (Perren & Grauerholz, 2015; Perren & Kozinets, 2018). The DCC business model allows consumers to use online platforms and monetise their idle assets.

Sharing

Belk (2014) describe sharing as old as humankind, whilst DCC is born in the internet age. Sharing is an act that involves the process of distributing what is ours to others for their use or the process of receiving or taking something from others for our use (Belk, 2007, p. 126). This study viewed sharing as a non-reciprocal act or social behaviour among DCC consumers.

Innovation

Innovation is an invention plus exploitation (Dewangan & Godse, 2014). In the context of the study, innovation refers to innovative ideas intended to be commercialised in the market through the use of the DCC business model (Dziallas & Blind, 2019). DCC's business model was found to be supporting small businesses in emerging markets.

Attitude

Attitude is a mental and emotional construct not directly detectable or a psychological tendency expressed by evaluating a particular entity (Gaiseanu, 2020).

1.15 CHAPTER SUMMARY

In emerging markets, food delivery has been affected by consumer populations and spatial dispersion. In addition, demand characteristics have slowed the efficiency of business-to-business delivery services. Tadić and Veljović (2020) noted challenges affecting delivery service providers, including divergent distribution structure, many small orders, and changing customer needs and demands. One of the characteristics of DCC, which received little attention in the literature, is the connection between the ordering, payment, and food delivery to the endpoint and the impact the process has on the business, the customer and the transport provider. These flaws can be separated or connected to understand the drivers of digital collaborative consumption in an emerging market. The study seeks to address the flaws identified in the new and exciting business model. The chapter discussed the general overview of the thesis, study background, research context, purpose and objectives, research design and the proposed conceptual model of the study. The novel contributions of the study were highlighted. The general layout of the thesis gave a synopsis of what was covered in the other chapters that followed. The following chapter focuses on the review of the literature on innovation and digital collaborative consumption.

CHAPTER 2

LITERATURE REVIEW

2.0 INTRODUCTION

In emerging markets, food delivery has been affected by several spatial dispersion of customers and the characteristics of demand which has slowed down the efficiency of business-to-consumer delivery services. Tadić and Veljović (2020) found that divergent distribution structures, large numbers of small orders, and changing customer needs and demands pose challenges to delivery service providers. One of the characteristics of digital collaboration consumption that received little attention in the literature is the connection between the ordering, payment, and delivery of the food to the endpoint and the impact the process has on the business, customer and service provider, e.g., Uber driver. These flaws identified can be separated or connected to understand the drivers of digital collaborative consumption in emerging markets. The chapter focuses on previous studies concerning drivers and deterrents of digital collaborative consumption in emerging markets and how innovation affects the business model. The analyses of previous studies and analyzing current trends in innovation take centre stage. The chapter considers recommendations from previous scholars on improving digital collaborative consumption in the food delivery industry of emerging markets and compares different viewpoints in the literature. The discussion around innovation adoption by the firms and consumers takes place to understand the DCC business model.

2.1 DIGITAL DISRUPTION

Prominent digital innovation firms like Uber, Airbnb, DiDi, and Mr Delivery disrupt the dominants of multinational firms in the food delivery industry (Skog et al., 2018). Digital disruption is environmental turbulence caused by innovations that change how business is done in day-to-day activities (Karimi & Walter, 2015). Research has shown that digital disruption brought new changes to all industries (Bonnet et al., 2015). The ability to investigate digital disruption or induce systematic change is crucial for firms and the food delivery industry during

the fourth industrial revolution (Legner et al., 2017). The work of Skog et al. (2018) noted that disruption refers to specific processes that explain how a new entrant in the new market can successfully compete with incumbent businesses. In the study, Mr Delivery came out as the favourite brand compared to international brands in the food delivery industry in South Africa.

2.2 EXPLORING THE TERM COLLABORATION

Collaboration shows promise for solving organizational and societal problems (Gray & Purdy, 2018). Collaboration refers to a situation through which players with varying perspectives of a problem can set aside their differences and collaborate to find a solution (Gray & Purdy, 2018). Collaboration is in many forms, and examples include joint ventures to promote technology transfer and public-private partnerships to reduce unemployment, drug abuse and poverty in the community. Global alliances are established to deal with global problems like pollution and fair trade.

2.3 DIGITAL COLLABORATIVE CONSUMPTION

The concept has been described using a variety of names, for example, "collaboration consumption" (Benoit et al., 2017; Lang & Armstrong, 2018); "sharing economy" (Belk, 2014); "access-based consumption" (Bardhi & Eckhardt, 2012) and "commercial sharing system" (Lamberton & Rose, 2012). Some significant empirical contributions that have advanced the understanding of digital collaborative consumption business model performance are summarised in Table 3. Building on Ajzen and Fishbein (1980), DCC reflects the underlying position of donating, borrowing and swapping used goods. Renting and borrowing are essential in digital collaborative consumption as it enables the exchange of goods and services without transferring ownership.

Table 3: Summarised DCC empirical findings

Author	Independent variable	Dependent variable	Methodology / sampling method	Key findings
Garrett et al. (2017b)	Collaborative Consumption	• Productive/service system • Redistribution markets Collaborative lifestyle	A content analysis methodology and investigator triangulation analysis were used. Purposive sampling technique was used based on the inclusion of the CC directory on www.collaborative.com	The study showed a distinct increase in the use of social and community digital channels between traditional and CC firms.
Benoit et al. (2017)	Collaborative consumption	• Customer motives e.g., economic, social, hedonic, reducing risk and environmental risk. • Peer service provider motives e.g., economic, entrepreneurial, and social. Platform provider motives e.g., economic, innovation and reacting to the market.	Qualitative expert survey was conducted asking authors who have published in CC, asking their views on future research opportunities on digital platform provider, peer service provider and the customer. Experts were sampled following a stepwise process. Ninety-four experts who had publications in CC were identified. Snowball sampling method was utilized to find other experts in collaborative consumption.	Collaborative consumption can be differentiated from more traditional forms of exchange based on the three factors namely, number and type of actors, nature of exchange and directness of exchange. There must be further research on success factors of digital platforms in emerging markets.
Hamari et al. (2016)	Behavioral Intention	• Sustainability • Enjoyment • Reputation Economic benefits	Qualitative data was collected from 168 registered users of the Sharetribe service. The participants were selected via email and the newsletter.	Intrinsic motivations were found to be stronger determination of attitude, whereas extrinsic motivations were not having a positive effect. Attitudes positively influence Use Intentions. Economic benefit was found to be a strong motivator for intention to participate in CC.
Malhotra et al. (2004)	Behavioral Intention	• Risk beliefs • Trusting beliefs • Type of information requested Internet User's Privacy Concerns, i.e., collection, control, awareness.	Two separate field surveys were conducted, and data was collected from 742 household respondents in one-on-one face-to-face interviews.	The results of the study indicated that second order Internet User's Information Privacy Concerns (IUSPC) factor which has three dimensions: collection, control and awareness exhibited desirable psychometric properties in the context of online surveys. Causal model centering in IUPC fits the data satisfactorily and explains a large amount of variance in behavioral intention.

Digital collaborative consumption literature noted that ownership is transferred when goods are used over a very long period. Such behaviours are considered non-reciprocal because the process involves donating and borrowing products. A common thread in these studies is the assumption that DCC is a socioeconomic business model primarily focused on exchanging, trading, and renting goods and services. Lang and Armstrong (2018) noted that DCC focuses mainly on using instead of owning. Digital collaboration benefits consumers by sharing costs and reducing the burden of owning products and services. Digital collaborative consumption has three main features: paying for the service and product, e.g., renting a car; redistribution of the underutilised products, e.g., Uber driver as a peer-service provider and use of the asset or service by the customer.

Digital collaborative economy revolutionises the transport, tourism and hospitality sectors by enabling the convergence of different players and improving service delivery in the market. Zervas et al. (2017) found lower-end hotels to be affected by the entry of Airbnb into the hotel industry. Olson (2013) found high-income consumers participating more in DCC as they enjoyed other benefits associated with the business model. Owyang et al. (2013) argued that the rise of DCC has been driven by societal factors, e.g., growing population density; economic factors, e.g., more disposable income and technological factors, e.g., digital platforms and digital devices. Increased environmental awareness has caused consumers to use resources at their disposal efficiently. Participation in digital collaborative consumption has allowed consumers to connect online and form social partnerships with peers. Sharing accommodation among peers enables interactions among guests, which allows them to share their personal experiences Guttentag et al. (2018) in the DCC marketplace.

2.4 INNOVATION CONCEPT

Roger's theory of innovation is critical to understand the adoption process clearly. Ali (2020) noted that adopting new technology must be implemented following the recommendation of the diffusion innovation model by Rogers (2003). The diffusion innovation theory was found to be the most well-known work, which was built on the work of psychology and sociology. This model worked well in the adoption of innovation among the general members of the public. Diffusion innovation theory views innovation as "an idea, object or practises which is perceived by an individual while diffusion is a process where innovation is communicated to the social system" (Ali et al., 2019, p. 624). In the study, consumers and firms first reject or

accept the digital collaboration consumption business model as an innovation, as shown in the Table below. The rejected innovation is then reinvented to address the business needs.

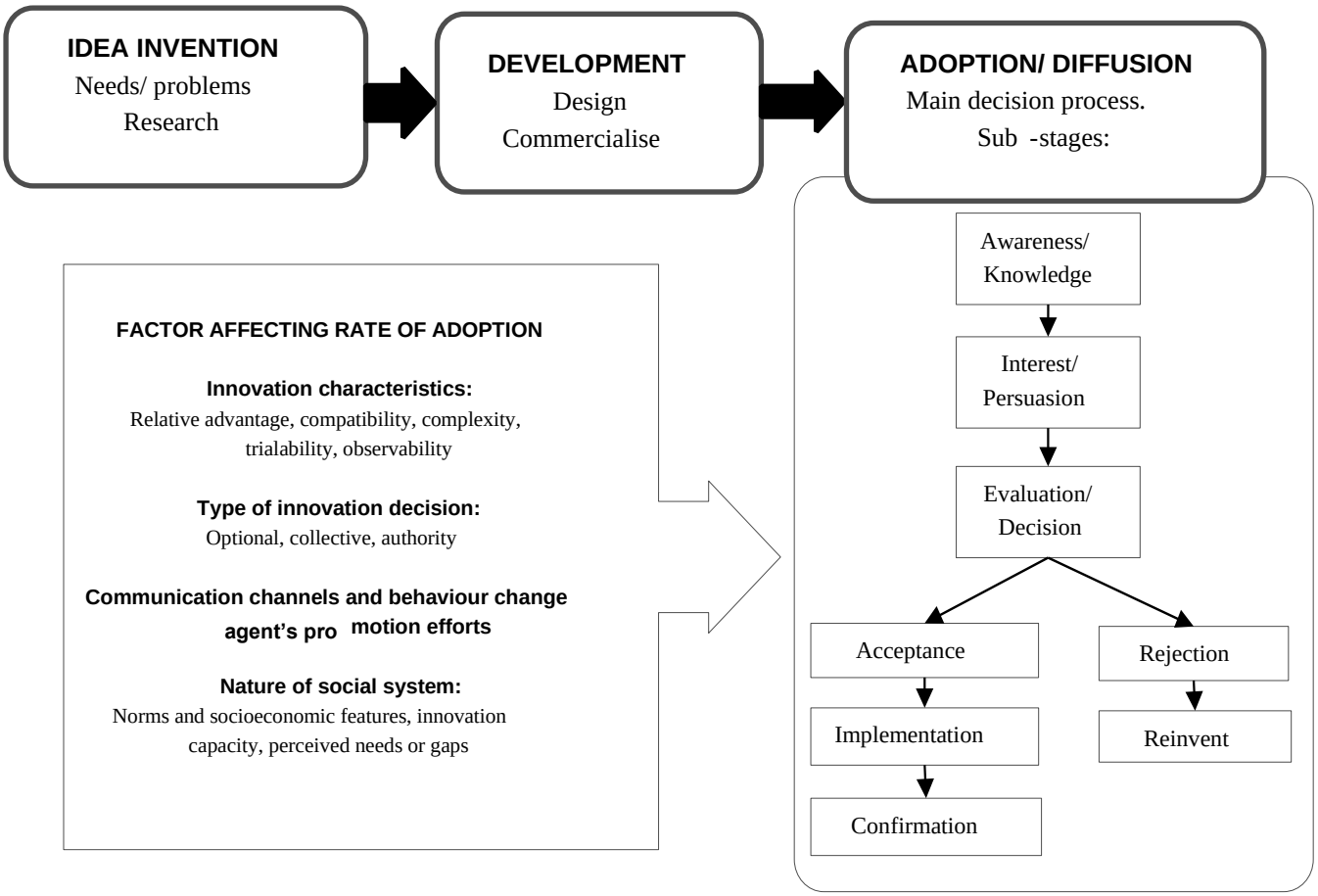


Figure 2: Rogers's basic model of innovation adoption in firms

Source: adapted from (Hishamuddin, 2019; Hishamuddin, 2021; Van de Ven, 1991)

The model addresses the stages in the innovation adoption process. The firm starts by marketing and creating awareness of the DCC business model through various platforms. Opinion leaders and brand ambassadors are used in the communication process, e.g., the use of above-the-line and below-the-line advertising where the marketers target the mass and individuals in the database, respectively. According to the model, step 2 is interest arousal by the innovation users. Organizational innovativeness, resources and communication behaviour arouse new consumer interest (Van de Ven, 1991). The third step is the evaluation decision, where the possibility of whether adoption will increase or not when innovation is accepted:

(1) innovation has a competitive advantage,

(2) compatible with existing practices,
(3) very complex, and
(4) when results are observed after trial on the new technology.

The adoption of new technology in the DCC platform follows these stages. When consumers are happy with the new technology, the results are institutionalization of the innovation in the DCC business model, and several firms in the industry will adopt the DCC business model. If the outcomes are adverse, the business rejects the innovation, and the innovator must reinvent the model.

2.4.1 Conditions enabling innovation

Several scholars identified conditions which enable innovation to take place in the workplace. Individual rewards increase idea generation, which affects innovation. Van de Ven (1991) and Peri (2020) recommended enabling conditions for innovation in the workplace:

- Frequent communication across departments.
- Allocation of resources for innovation.
- Moderate environmental uncertainty for changing environment.
- Cohesive work groups that integrate cohesive personalities
- Availability of role models
- Low staff turnover at the workplace

The adoption of innovation was found to be affected by external events and crises that frequently occur, taking slaking resources and participants overloaded with information (Sun & Wang, 2019; Wang & Wang, 2021). Rogers demonstrated innovation theory using the bell-shaped curve. The group constituted 2.5% of the participants. The next category is composed of early adopters. These are early consumers who form opinions of innovation and do with caution (Brdulak et al., 2021). The late majority are sceptics as they accept new technology when other users have accepted it. The laggards are the cast group who are afraid of innovation and change. They only adopt when it is necessary to do so, as shown in Figure 3.

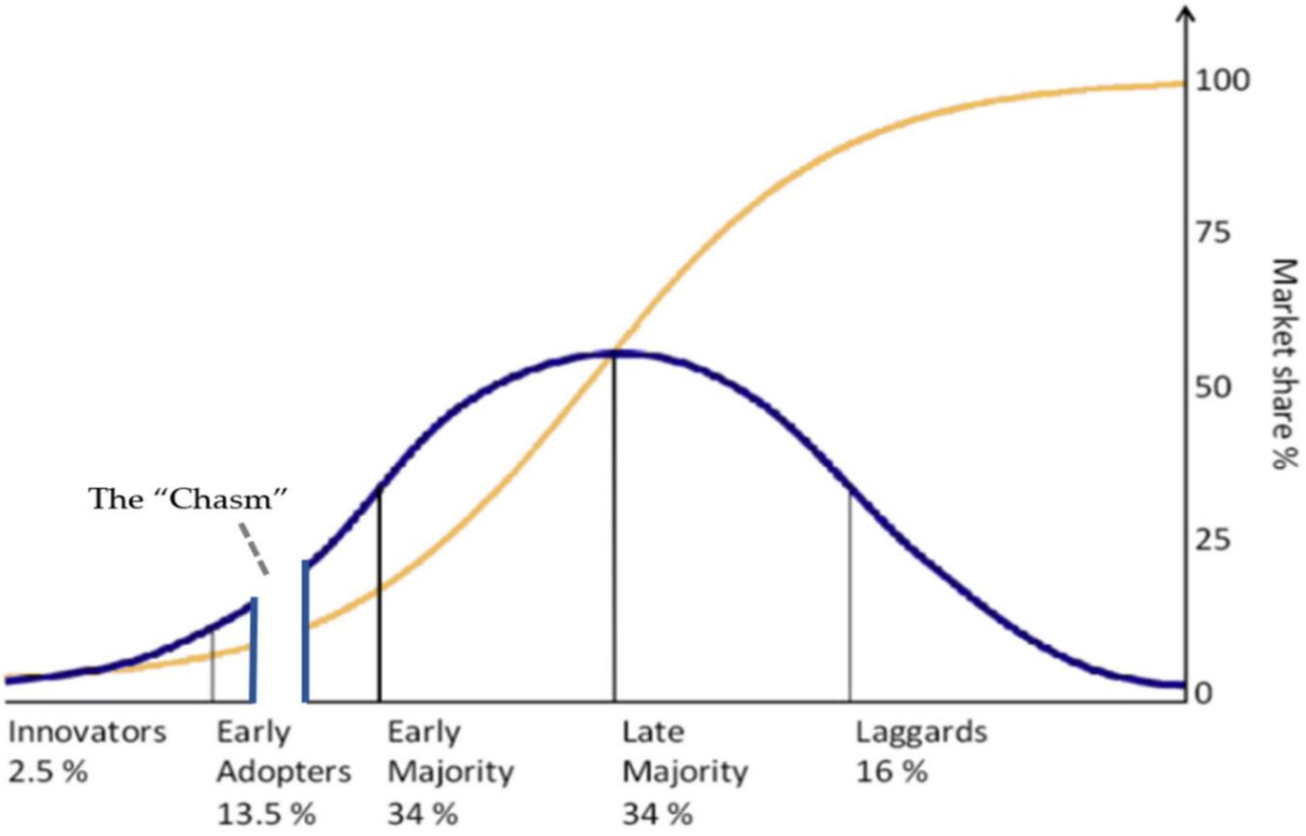


Figure 3: Roger's diffusion of innovation theory

Source: Cited by Brdulak et al. (2021) adapted from Rogers (2003, p. 281)

The S-Curve shows adopters of innovation who increase sharply as the innovation spreads. The S-Curve represents the market share of users and continually grows until it reaches market saturation. The 'chasm' represents the gaps and barriers firms must overcome to move from one customer group to another (Edwards, 2016). DCC firms are said to have moved from marginal to mainstream products and services, which increases profitability. The literature review noted that only a few studies focus on innovation resistance. Cornescu and Adam (2013) established a model indicating results of resistance to innovation as postponement, opposition, or rejection. The model is simple to follow as it indicates the different outcomes of resistance to change.

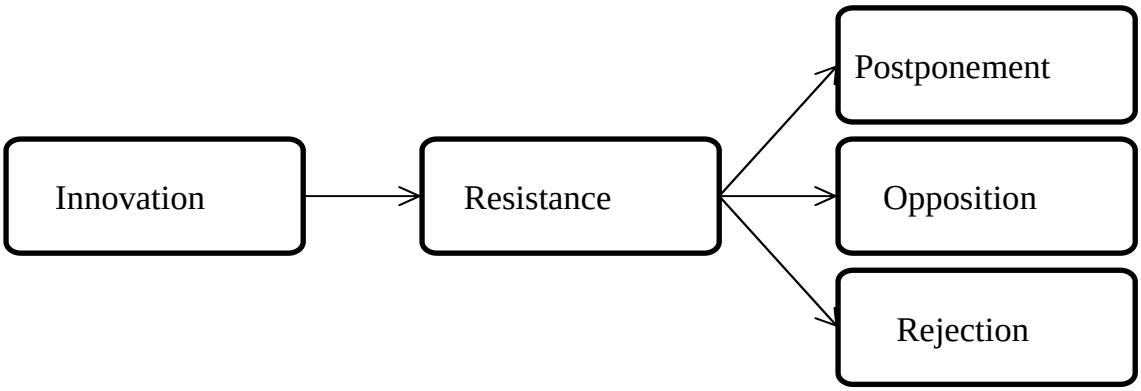


Figure 4: Model of consumer resistant to innovation

Source: Adapted from Cornescu and Adam (2013, p. 463)

Postponement is pushing forward the adoption of an innovation, although innovation seems acceptable. Opposition refers to protest innovation, giving consumers time to search for information. The standard form of opposition is boycotting technology by consumers. The model indicates the extreme form of resistance as rejection. These decisions by the consumers are not to take up the innovation.

2.4.2 Organisation's innovation adoption

Several factors affected organisational innovation, including firm size and technical sources (Rogers, 2004). Other scholars had a different viewpoint, as shown by Coad et al. (2018) found that the age of the firms affected the ability to increase innovation. The managers must understand the process of managing innovation at an organizational level. Volberda et al. (2013) noted that innovation management consists of changing organizational form, practises, and processes in a new way to the firm and the industry. This results in leveraging the firm's technological knowledge base, performance, and competitiveness in the food delivery industry.

Simply put, the management of innovation explains, to a large degree, the variance of innovation performance at an organizational level. The development of research at an organizational level must be prioritized. The development and diffusion of management require research to take place first to find the determinant of success in the business model (Schut et al., 2016; Volberda et al., 2013). Heij et al. (2020) found research and design as the primary source of competitive advantage. In addition, the authors noted that the management processes

improve the firm's internal processes, creating a suitable environment for innovation. Adams et al. (2006) developed a framework of seven innovation management processes: inputs, knowledge management, strategy, organizational culture, portfolio management, project management and commercialization. Generating ideas from different spheres requires a high level of coordination and integration among management (Adams et al., 2016). Table 4 identifies the seven areas of innovation management at a company level.

Table 4: Firms seven areas of innovation measurement

Framework category	**Measurement areas**
Inputs	People
	Physical and financial resources Tools
Knowledge management	Idea generation
	Knowledge repository
	Information flows
Innovation strategy	Strategic orientation Strategic leadership
Organization and Culture	Culture Structure
Portfolio Management	Risk/return balance Optimization tool use
Project management	Project efficiency
	Tools
	Communications
	Collaboration
Commercialisation	Market research
	Market testing
	Marketing and sales

Source: Adams et al. (2006, p. 26)

The study noted that management is concerned with the resources of innovation activities, including human resources, finance and physical resources needed by the organisation (Coish et al., 2018). Research and development have been used as input and expressed as a ratio of expenditure to outputs. Knowledge management is recognized as a core competency and the source of competitive advantage and value creation for corporate organizations (Liu et al.,

2018; Martin et al., 2020). Knowledge management concerns idea generation, knowledge repository and information flow in an organization. Ideas are raw data for innovation where managers screen the ideas to be, and they become an innovation.

The third category of Adams et al. (2016) focussed on innovation strategy, which is viewed as a timed sequence of internal consistency and conditional resource allocation to fulfil organizational objectives. The strategy must align with overarching objectives to develop new products needed in the market. To examine the relationship between the performance and output of new products. The digital collaborative consumption business model uses applications to improve the performance of their business and make improvements where necessary. The organizational structure and culture of the organization form the basis of staffing employees at the workplace (Adams et al., 2006; Keeble et al., 2020). Creativity and innovation tend to be promoted when people are grouped when doing a task. Managers must group their subordinates to solve complex problems at the workplace. This approach promotes information sharing and leads to quick problem-solving as subordinates share their experiences. Portfolio management is utilized to make strategic, technological, and resource choices that guide the Organisation's project selection. Project portfolio management is a process aimed at attaining four main objectives:

1. Maximizing value for projects
2. Attaining a balanced portfolio
3. Making sure they are aligned strategically, and
4. Developing the correct number of innovation projects that suit existing ones (Castro & Ferreira, 2020; Cooper, 2014; Si et al., 2022).

DCC business managers must collaborate with customers' suppliers to significantly improve the innovation process. Communication is when innovation is taken to the marketplace. Adams et al. (2006) view the commercialization concept as making innovative processes through producing commercially viable products through proper promotion, pricing and distribution of the product in the marketplace. Managers must implement various marketing activities, including branding, marketing research, sales, and customer relationship management, to retain existing customers and improve relationships, resulting in high customer lifetime value and maintaining good relationships.

2.4.3 M-Commerce and Smartphones

Mobile commerce, known as m-commerce, is a form of e-commerce conducted over mobile or wireless networks and is different from traditional desktop computer-based processors (Kourouthanassis & Giaglis, 2014; Narang & Arora, 2016). M-commerce is accessible through smartphones and helps customers order food online, compare prices and dishes, and search for any other information they want. The history of m-commerce is understood through the lens of the mobile marketplace, which presents innovation opportunities. The mobile revolution is summarised in three trajectories, as shown in Table 5.

Table 5: History of M-Commerce

Era	**Major milestones**
Era 1: M-portals (Starting from 1997)	1997: WAP (Wireless Application Protocol) Forum is formed 1999 (February): NTT DoCoMo's i-mode launch in Japan 1999 (December): Vodafone Live! launch in Japan (as J-Sky)
Era 2: M-internet (Starting from 2000)	2000: Ericsson R380 Smartphone (the first device to use the Symbian OS) 2000: Opera Mobile (the first commercial micro-browser) 2001: Mobile Explorer 3.0
Era 3: M-apps and M-Commerce (Starting from 2007)	2007: Apple iPhone launch (June) 2008: Apple's App Store launch (July) 2008: Google's Android market launch (October)

Source: adapted from Kourouthanassis and Giaglis (2014, p. 6)

The three eras of m-commerce development are closed "wall gardens" and open-ended solutions. During the first era, mobile network operators dominate the marketplace, e.g., Vodacom, MTN and Cell C, which provide services to their clients. *M-portals* were the first to deliver mobile applications to customers, e.g., restaurant locations. Adopting *m-portals* was unsuccessful because of the closed nature opposite to internet openness (Kourouthanassis & Giaglis, 2014; Narang & Arora, 2016). The development of 3G mobile broadband sees the rise of digital collaborative consumption firms, service providers and customers who order their products online.

2.4.4 Critique of Diffusion of innovation theory

Literature has identified several weaknesses in the diffusion of innovation theory as suggested by (Sahin, 2006). Much of the evidence for the theory did not originate from the diffusion of innovation theory, including adopter categories. The categories did not consider the development of new behaviours in the intervention in emerging markets. The theory does not foster a participatory approach to adopting new DCC innovations. The theory was found to be working better with the adoption of behaviours rather than the cessation or prevention of behaviours. Diffusion of innovation theory was found to neglect individuals' resources or social support to adopt innovation or new behaviour in the DCC marketplace. According to Sahin (2006), Rogers showed no significant difference between the ages of early adopters and late adopters.

2.5 DIGITAL COLLABORATIVE CONSUMPTION MARKETS CHARACTERISTICS

The digital collaborative consumption markets have a common thread that runs among them. Consumers depend on one another for information sharing and recommendations based on experiences. Sustainability and *value for money* are among the critical issues raised by the members of the collaborative marketplace. Research has shown that consumers with underutilized resources like motor vehicles share them by participating in e-haling services, which add money to their individuals (Petruzzi et al., 2020). Table 6 describes the characteristics of the DCC marketplace.

Table 6: Characteristics of the DCC marketplace

	characteristic	Description
1. Sharing	Social bonds	▪ Social connection between individuals involved in the interaction ▪ Feelings of solidarity, bonding, and community
	Sense of joint ownership	▪ Sense of responsibility, from all the participants, toward the shared resource
	dependent	▪ Dependent on the presence of both the sharer and receiver and the relationship between them
	Similarity to real sharing	▪ Similarity to sharing resources with the family ▪ Sense of "pseudo-kinship."
	Social reproduction	▪ Interaction amongst participants results in the reproduction of relationships and meaningful social encounter
	Singularity	▪ Each owner has a unique resource, and each resource is different from the others ▪ Not standardized ▪ Represents uniqueness
	Sustainability	▪ Sharing that entails the economic, social, and environmental components ▪ through efficiencies, reducing waste, and supporting individuals
	Underutilized resources	▪ Resources owned and shared by individuals with excess capacity ▪ One of the central characteristics associated with sharing
2. Exchange	Reciprocation	▪ The expectation of receiving something in return for the shared resource ▪ The interaction made through online platforms can include a fee, reward, or non-monetary compensation
	Money relevance	▪ Interaction is dependent upon the monetary exchange ▪ Money is part of the arrangement
	Money importance	▪ Money is very important in the interaction ▪ The amount of money is very important ▪ Profit is an inducement
	Calculation	▪ here is a calculation of how much guests should pay or how to reciprocate ▪ Sharer and receiver calculate the length of use and the financial expenditure or compensation

Source: Adapted from Petruzzi et al. (2020)

Rotigg (2016) noted the need to discuss the characteristics of the emerging markets where the research is being conducted to understand the DCC marketplace fully. Burgess and Steenkamp (2006) noted that the "emerging markets" term has different meanings due to disciplinary

interests and needs. The World Trade Organisation (WTO) classify countries into developed and developing. The United Nations and the World Bank use Human Development Index (HDI) to classify countries into four categories which are Low human development countries (LHD), Middle development countries (MHD), and High development Countries (HHD). Emerging markets are countries that are classified under low and middle HDI. The major characteristics of emerging markets are the availability of distribution channels. Subsistence marketplaces exist in countries at all stages of economic development. However, they are primarily located in emerging markets. In this proposal, the term "subsistence marketplace" refers to a subset of emerging markets that typically comprises some 30% to 70% of the total population of emerging markets and is the focus of the proposed research.

Subsistence refers to a marketplace where people barely make ends meet. There is a distinction, and consequently, the researcher is measuring subsistence consumers as described by Viswanathan et al. (2019, p. 36), "… from survival to subsistence and transformative subsistence entrepreneurship to marketplaces and exchanges in refugee contexts, tribal communities, rural and urban areas of emerging markets." The phenomenon circumscribes interest across health care, education, and water and sanitation (Venugopal & Viswanathan, 2017). These subsistence consumer markets are what Burgess and Steenkamp (2006) call *'emerging consumer markets,* and in this study, the researcher refers to them as emerging consumer markets. Emerging consumer markets are concentrated within consumer and entrepreneurial communities in emerging and low-income regions (e.g., Africa, South and Southeast Asia, and South and Central America).

In South Africa, research shows that 42.7% of South Africans are rural survivalists who live far from central metropolitan provinces, 77% of the rural survivalists reside in deep rural areas, and emerging consumers comprise 35.7% of South African (Burgess et al., 2002; Hall & Sambu, 2019). The research indicates rural survivalists as the largest group of the South African population. These emerging consumers face severe economic and human resource constraints, e.g., low household income, low formal education, low literacy, and numeracy, which severely limit their ability to escape poverty, e.g., employment in the formal sector. In addition, these emerging consumer communities spend most of their hard-earned income fulfilling their daily basic requirements. They have meagre savings, geographical isolation and poor or non-existent infrastructure (Nakata & Antalis, 2015).

Attitudes towards consumption in emerging consumer markets have shifted over the years, and consumers are more concerned with sustainable practices which do not harm the environment. The low-income communities are the most affected by these effects; hence, businesses are called to rethink adopting digital collaborative consumption in these markets. Leading scholars in emerging consumer markets believe that people living in emerging markets and low-income communities should be understood from their perspective. Adding to the dominance of the current top-down approach, the alternative way is to facilitate a more nuanced understanding of interactions among entrepreneurs, consumers and communities where businesses operate (Viswanathan et al., 2019). Therefore, the emerging consumer marketplace setting is an understanding of the consumer context rooted in emerging consumers' world views and living standards. This is an important starting point for developing policy, theory, and interventions.

Many businesses fail to survive in emerging consumer markets, as shown in Table 5, because they often assume the market is homogeneous and requires only price adjustment (Amankwah-Amoah et al., 2021; Dawar & Chattopadhyay, 2002). Some firms enter emerging markets without the knowledge of bridging the gap between formal and informal economies, as relationships in these economies are grounded on social and not legal contracts (London & Hart, 2004). According to Agarwal et al. (2007), the market exclusion of emerging consumer markets, e.g., access to health care, education, and electricity, enables entrepreneurial opportunities. For firms to succeed in emerging consumer markets, scholars recommend that policymakers be informed by emerging market interactions (Viswanathan et al., 2019; Viswanathan et al., 2010; Viswanathan et al., 2012). Digital collaborative consumption business models, e.g., Uber Eats, Mr Delivery, Bolts, and Airbnb, must incorporate bottom-up ideas to survive in these markets.

Table 7: Emerging consumer markets

Description	Author
Concentrated consumer and entrepreneur communities living in developing countries and regions (e.g., Brazil, India, China, Sub - Saharan Africa) face severe economic and human resource constraints that severely limit their ability to escape poverty.	Viswanathan et al. (2019)
Activities that provide the basic means of survival are farming, animal husbandry, fruit gathering, fishing, and hunting.	Menon (2018))
Approximately 1,3 billion people live below the US$1.25 income threshold daily.	WorldBank (2012)
Live in rural areas or urban slums, or shanty towns, lack water, sanitation services, electricity and basic care, and no access to formal financial services.	Hammond et al. (2007)
There is a one-to-one interaction between small neighbourhood store owners, local consumers, and strong social relationships.	Viswanathan et al. (2008)
Emerging market consumers can be found in two large prototypical segments of the South African population, which differ remarkably in their living standards and consumer behaviour. "One in four (26%) South Africans are *Rural Survivalists*. Rural survivalists generally live far from the major metropolitan areas…they conduct their lives much as their grandparents…Some 77% of them reside in deep rural areas. They tend to live agrarian or subsistence lifestyles, providing their own food and participating in much informal trade and barter… Many could not survive without the financial support they receive from family members living in metropolitan areas. *Emerging Consumers* comprise 39% of the South African population… They are poor but have reached a basic standard of living that includes, almost without exception, running water, electricity, and a flush toilet. About half of their homes had dishwashing liquid present when the interviews were conducted.…only one in five homes can provide for its hot water needs with a geyser." (Burgess et al., 2002, pp.48-49)	Burgess et al. (2002)

2.6 DRIVERS OF COLLABORATIVE CONSUMPTION

Many studies address why consumers engage in digital collaborative consumption. Chen and Chang (2003) noted great interest in shopping using digitally mediated platforms among consumers, as they had their food delivered to their doorstep. Amazon.com heavily advertised products with lower prices than the same products found in physical shops, increasing its market share among its competitors. The online shopping channel made it possible to compare prices and complete orders online whilst the consumer was at work or home. Many early adopters of the technology were found to be young males who were very educated and had expertise in using technology. The researcher noted limited research in emerging economies on the drivers of digital collaborative consumption, hence the rise of interest in researching the phenomenon.

2.6.1 Home delivery

Firms with muscular financial strength perform better in-house, and to achieve autonomy in the market, they must improve home delivery services of their products and services (Han et al. 2020). Punakivi (2003) identified the lack of a home delivery system as the major obstacle affecting the growth of the DCC business model. The home delivery management system must address issues like temperature preservation requirements, order-to-delivery lead times, and delivery windows. Tadić and Veljović (2020) describe home delivery as the supply chain phase that includes activities where physical goods are delivered to the customer. This represents the flow of goods between businesses and the consumer.

2.6.2 Characteristics of home delivery

Customers' satisfaction in the food delivery industry is influenced by the method of receiving goods and the endpoint delivered. Food delivery can be made in the presence of the customer, known as attended delivery or in the absence of the customer, known as unattended delivery (Yuen et al., 2018). Several papers recommended using reception, delivery boxes, and delivery to the customer's car as solutions for unattended delivery (English et al., 2021; Punakivi & Saranen, 2001). Speed of delivery and delivery time are important factors which ensure the sustainability of the digital collaborative consumption business model. The literature has used different terms referring to home delivery, including residential delivery, door-to-door delivery, and doorstep delivery which specify the end point of food delivery. Deliveries are only realized when products are taken to the location agreed by the customer and the delivery organizer, for example, the home or the office place.

2.6.3 Elements of delivery

The DCC business model requires service providers to consider several factors which affect cost and efficiency. The researchers noted that consolidating several orders creates problems finding ways to reach the specified location (Hwang et al., 2020; Punakivi, 2003). Some of the factors to consider in implementing the home delivery model include the following:

- Frequency of orders
- Competitors offering home delivery
- Online shopping market penetration
- Order size
- Cost of delivery
- The density of consumers in the area
- Average distance between the customers
- Stop time at the location of customers
- Capital investment
- Loading and unloading time
- Unattended orders
- Combination of third-party service providers

Recruitment of quality staff was an important factor in the home delivery industry. Firms must consider the size of the firm as it has a bearing on the sustainability of the business.

2.6.4 Benefits of home delivery

Home delivery has potential benefits to customers, service providers, e.g., Uber drivers, and society. Home delivery enables to make profits through the purchase of goods. The study by Cairns (1996) noted that home delivery encourages the purchase of local brands and reduces traffic on the roads. DCC was found to be providing social services, like transport services to the elderly, disabled people, sick people going to the hospital, and people who are not having their means of transport (Hobbs, 2020). Home delivery enables the supply of essentials like food from restaurants, shops and other service providers like pharmacies.

2.6.5 Critique of home delivery

Home delivery was found to be expensive compared to traditional buying at the shops (Kuhn & Sternbeck, 2013). Mixing orders by delivery people are common in-home delivery, increasing the transport costs for the delivery companies. Many delivery vehicles on the roads

lead to carbon monoxide emissions, noise pollution, and security threats in the workplaces and homes of customers. Fluctuating demand in the specific marketplace is a serious concern as companies end up making losses and bankrupting. DiDi closed its operations in South Africa as its model was not profitable.

2.7.1 Economic benefits

Economic benefits were the leading causes of engaging in a digital collaborative consumption economy. Lamberton and Rose (2012) noted economic benefits as important in motivating consumers during digital collaborative consumption engagement. An important aspect of being a dominant factor in motivating consumers to engage in digital collaborative consumption. Hallem et al. (2020) found that motivated consumers continue to use DCC platforms for several benefits, not limited to economic. Their finding supported the earlier work of (Belk, 2014), who viewed DCC as plenty of emerging consumer markets. However, the researcher found economic benefits insignificant in supporting DCC in the food delivery industry.

Furthermore, Alzamora-Ruiz et al. (2020) found economic benefits as behavioural predictors in academic articles reviewed. Other scholars in consumer behaviour operationalize financial benefits as cost and money-saving (Oyedele & Simpson, 2018; Tussyadiah, 2015). These economic benefits account for personal benefits in the food delivery industry. The work of Lamberton and Rose (2012) noted that cost-saving was a key driver in participating in digital collaborative consumption.

2.7.2 Social benefits

Community participation was significant in DCC initiatives (Albinsson & Perera, 2018). Puschmann and Alt (2016). Social interactions can be enjoyable; consumers mix and mingle with strangers in the marketplace. Research by Hamari et al. (2016) notes that perceived enjoyment significantly affects attitudes towards DCC and behavioural intention to participate and is a predictor for continuous use. On the contrary, the DCC impacts the connection between consumers and their consumption patterns as restaurants prepare meals (Li et al., 2020). Quality of family time when preparing and consuming food was found to be affected by the digitally mediated platforms in emerging markets.

Sustainable consumption and societal responsibility are important factors when consumers make purchasing decisions. Environmentally conscious consumers had positive attitudes

towards DCC, and their buying decisions were affected by socio-economical concerns such as ecological concerns de Rivera et al. (2017) and anti-establishment sentiments. The previous research by Lamberton and Rose (2012) established that purchasing decisions equally contributed to environmental impact. However, Hallem et al. (2020) noted that environmental impact did not affect purchasing decisions. The findings from different scholars clearly show no consensus among them. Consumers tend to apply their values when shopping, but research shows no difference between the intention to purchase and actual purchase decisions. Huang et al. (2018) identified interactivity, transaction, and fulfilment as DCC drivers in the food delivery market. The researchers noted that the most interactive components highlighted by customers are Internet access, Web site design, manoeuvrability, and response time (Chen et al., 2021). Long response time and difficulty in website manoeuvring were noted setbacks, leading to frustration. To improve interactivity, the platform provider must ensure good website design and network connectivity among the users, improving the shopping experience.

2.7.3 Interactivity

The interactivity of the DCC platform is a latent variable used by many researchers and was viewed from many dimensions. Scholars theorized interactivity in DCC as responsiveness (Zhao and Lu (2012), whilst others viewed it as a multidimensional phenomenon with many items. In the current study, respondents described interactivity using the DCC platform with the least challenges. Some respondents preferred applications that enable the personalization of the platform. The user control applications were among the features highlighted by consumers as they preferred the least challenges when buying food using digitally mediated platforms. (Alalwan et al., 2020) noted that consumers preferred DCC applications and websites with features that allowed synchronicity of various features and two-way communication among the stakeholders. Website interactivity was viewed as communication between the customers, platform providers and other stakeholders in the DCC buying platform.

The *transaction*-related items identified by Chen and Chang (2003) applicable to any DCC system should add value to the parties involved. The issues of Convenience and structural assurance were found to be key. Consumers raised the point that they must be able to review and evaluate the DCC platforms, which was considered important as it helps platform providers improve their systems. The structural assurance factors include the system's privacy ability to safeguard consumers' information. Consumers raised the POPI Act issue, which must be

complied with. *Fulfilment* as a phenomenon in DCC was viewed as concerned with return and exchange policies, among other things. The post-sales services on an online purchase, like technical support, were found to be important in determining fulfilment. The consumer was found to have full control to terminate the transaction of the post-purchase factors, as shown in Figure 5, showing the online shopping process.

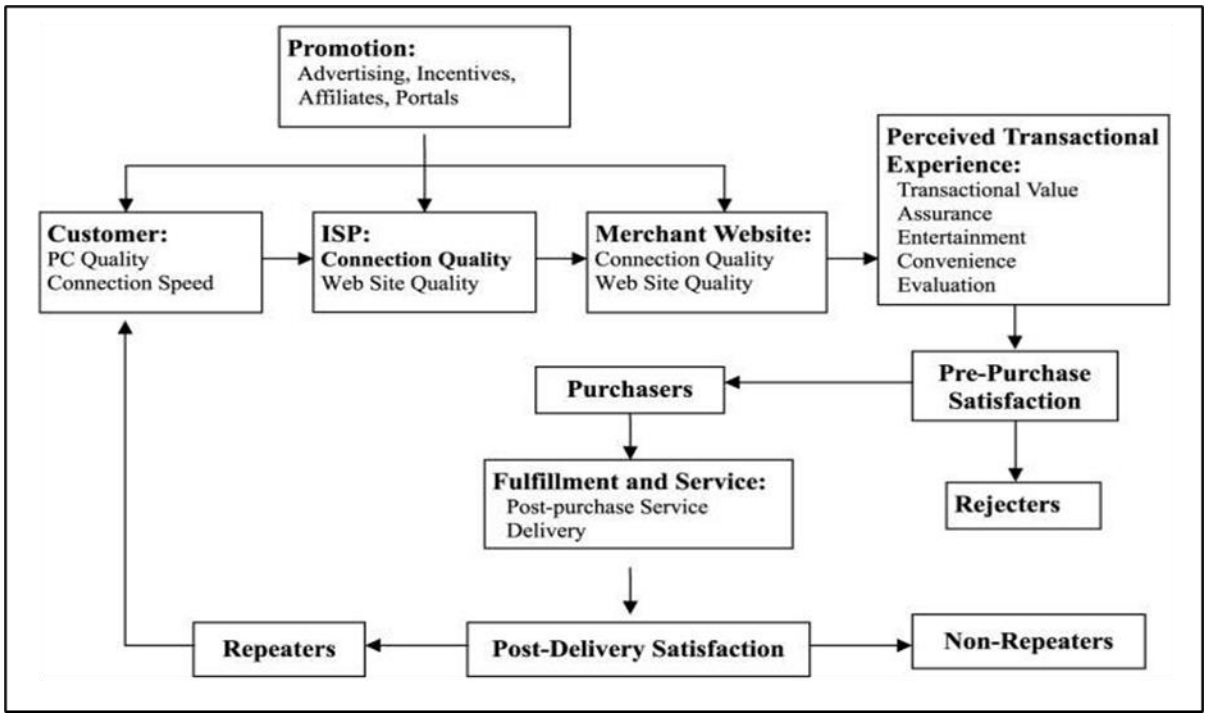


Figure 5: Online shopping process model

Source: Adapted from Chen and Chang (2003, p. 562)

The DCC shopping experience has three components: interactivity, transaction, and fulfilment. Chen and Chang (2003) found that fulfilment was a multidimensional latent variable measured by several factors, including delivery speed, technical support, and customer service. The current study noted that consumers were happy with the shopping experience.

2.7.4 Borderless marketplaces

Tassabehji (2003) highlighted the benefits of digital collaborative consumption to firms, consumers, and society in the emerging marketplace. The firms enjoy *a borderless marketplace as they reach consumers in different marketplaces instead of a* single marketplace located in a geographical area. Consumers have *more choices* as they have access to many products, services and suppliers. Price comparison is one of the advantages of DCC. Consumers compare

prices directly or indirectly, e.g., www.moneyextra.co.uk, among other sites. Operational cost saving was achieved by decreasing the use of paper-based information processing. Digital collaborative consumption enabled the customization of products and services. Inventory was reduced at the warehouse as customer order was collected and delivered through the Just in Time (JIT) system.

Digital collaborative consumption benefits society by enabling workers to work from the comfort of their homes. The working-from-home concept helps *reduce environmental pollution* as fewer people travel to the workplace. Online buying enables people in different communities and countries to connect, enjoy and access products, services, and information. Public services are offered over the internet, e.g., online consultation with medical doctors and nurses and filing taxes by individuals and businesses.

2.7.5 Enjoyment

Consumers view the enjoyment phenomenon as the level of satisfaction (Hamari et al., 2016). In De Witt Huberts et al. (2012) work, enjoyment was a key motivator that enabled consumers to engage in the DCC business model. Enjoyment was viewed as a qualitative phenomenon as researchers found it easy to describe whether consumers were happy or disgusted due to preceding events (So et al., 2021). Consumers derive their enjoyment from consuming products and services in the DCC marketplace.

2.7.6 Sustainability

Alzamora-Ruiz et al. (2020) found that consumers engaged in the DCC initiatives to curb the environmental impact on consumers, improve the standards of living of the whole society, and promote sustainability in customers' lifestyles. The interest in protecting the environment was influencing consumers to share automobiles. Habibi et al. (2016) find that contributing to improving the environment is the main reason for engaging in collaborative consumption. Galati et al. (2020) described sustainability in the food delivery industry as a business model ensuring the business initiatives' socioeconomic and ecological sustainability. Heldt et al. (2019) recommended using electric cars to reduce environmental pollution.

2.8 BARRIERS TO DIGITAL COLLABORATIVE CONSUMPTION

Many scholars highlighted several barriers to DCC. Notable barriers to online shoppers include avoiding regulations, trust issues among consumers and businesses, poor reputation, and

uncertainty about the business model's sustainability (Hamari et al., 2016). Consumers trust online businesses to varying degrees, depending on their previous experience.

2.8.1 Trust issues

Trust issues were raised by many respondents who did not trust the DCC business model. Mistrust results from online crimes where consumers are more concerned about privacy (Tussyadiah, 2015). Trust was found to be a major barrier to participating in a DCC business environment. Barnes and Mattsson (2017, p. 202) viewed DCC "as using online marketplaces and social networking technologies to facilitate peer-to-peer sharing of resources, e.g., space, money, goods, skills and services between individuals, who may be both supplier and consumer." Managers noted the scarcity of research on DCC in the food delivery industry. There appears to be a need for more research and, or literature related to DCC in the food delivery industry, more so from an emerging market perspective. This was one of the factors that led to the current study's commissioning.

2.8.2 Technology

Technological issues were found to be barriers to DCC as less tech-savvy participants could not use the digitally mediated applications to purchase the food online. Scholars described these consumers as digitally excluded (Belk, 2014; Hellem et al., 2019). Many participants in emerging markets are still excluded as they do not have gadgets, and some cannot use the platforms. Benoit et al. (2017) found that such customers are uncomfortable purchasing online without another person's assistance. Older people and most people living in rural areas cannot use the platforms (Hallem et al., 2020) as they are less techno-savvy and find it difficult to use the internet. Tussyadiah and Pesonen (2018) noted that consumers' adoption of DCC was affected by the usability and intractability of the system.

2.8.3 Utility

The perceived utility was found to be one of the barriers to DCC. The research noted that consumers prefer the business model because of the lower costs involved in terms of monetary and time management (Tussyadiah & Pesonen, 2018). The current study noted that consumers in the DCC platform were not motivated by cost-saving as economic benefits but rather social benefits and trust issues.

2.8.4 Accessibility issues

Literature bemoans consumers' misperceptions that the DCC business model curbs economic growth by increasing unemployment levels (Paker & Gök, 2021; Tussyadiah & Pesonen, 2018). The study noted poor working conditions of e-hailing services, which had a history of not respecting working conditions (Rizkyta et al., 2021). The study noted that some drivers did not respect security standards applied to places where food is delivered, like hotels or workplaces. The digital collaborative consumption service providers had to develop social ties with the communities where they operated to solve problems and concerns amicably raised by the consumers.

2.8.5 Convenience

Restaurants are not digital collaborative consumption platform providers but system users. The system sometimes makes mistakes, like mixing addresses and orders, inconveniences consumers. DCC platforms' uncertainties and unforeseen aspects must be resolved (Hallem et al., 2020). Consumers needed more time management among the firms because receiving an order after paying took a long time, but the system will show a different time frame.

2.8.6 Value

Poor quality of products and services was found to affect the value for money, as raised in previous studies (Tussyadiah & Pesonen, 2018). Previous studies show that if a consumer posts a bad review of the platform, other DCC consumers consider the post to be referring to complaining, resulting in a decrease in online consumers' activities (Bae & Koo, 2018). Digital collaborative consumption of products with meagre marginal costs was terrible for both the firms and the consumers (Jiang & Tian, 2018). The study noted that firms with high unit costs tend to encourage consumers to buy food and services online as they offer value for money.

2.9 IMPACT OF DIGITAL COLLABORATIVE CONSUMPTION

Digital collaborative consumption partners must integrate, garner necessary resources and tackle the common problem. Partners who collaborated successfully had a collective identity, as witnessed by the membership ties built as the starting point. The work of (Correa et al., 2019) noted that digital collaborative platforms are strategic tools for business competitiveness. DCC service providers who adjusted delivery times accordingly were favourites among consumers and increased their customer base (Lindblom et al., 2018). Digital collaborative consumption allows sharing of goods and services in exchange for monetary and non-monetary benefits (Belk, 2014). Sharing rather than purchasing has gained popularity among consumers

owing to its three main premises for the economy, i.e., generating new revenue models for individuals; society (i.e., increased social interactions) and the environment, i.e., communal consumption Özgen and Biçakcioğlu-Peynirci (2020). Researchers found that the sharing economy generates $15 billion in global annual revenue, and forecasters suggest a market potential of increasing to $335 billion by 2025 (PwC, 2016). Firms and consumers in the DCC business began to realize the fruits of the sharing business initiative.

2.10 DIFFERENTIATING DCC FROM OTHER ONLINE PLATFORMS

The digital collaborative consumption business model encourages collaboration among platform providers and consumers to improve service delivery (Hallem et al., 2020). Table 8 makes a comparison of key online collectives.

Table 8: Differences and similarities among online platforms

	Digital collaborative consumption	Brand community	Collective innovation	Digital content-sharing communities
Definition	A market model that enables individuals to coordinate the acquisition and distribution of a resource for a fee or other compensation (Belk, 2014), where the inter action is at least partially supported or mediated by technology	Specialised, non-geographically bound community, based on a structured set of social relationships among admires of a brand. At its centre is a branded good or service, and it is marked by a shared consciousness, rituals and traditions, and a sense of moral responsibility.	Online creative consumer communities are collaborative platforms where collective, participatory actions of online consumers give rise to innovation (Kozinets, 2008). Peer-to-peer problem-solving communities are networks of practice where consumers are 'working' to solve problems related to their shared consumption experiences.	Sometimes called P2P systems or P2P networks. Described as a form of exchange between individual consumers who operate in conjunction with one another, all outside the realm of traditional channels and the value chain, broadly construed.
Prototypes	Craig list, e-bay, Airbnb, LendingClub, Lyft, UberEats, Mr Delivery	Ford Bronco, Macintosh and Saab online communities	Flickr, Wikipedia, Crash the Super Bowl Lonely Planet's Thorn Free Forum	Digital downloading Web sites such as Kazaa, Napster, Morpheneus, and AudioGalaxy
Community purpose	Alternative marketplace to exchange goods and services	Virtual meeting space to connect with others, share experiences, and advice	Virtual space to collaborate, innovate, or receive consumption problem-solving advice	Virtual meeting space to share digital content
Type of activity	Commodity exchange	Sharing	Sharing	Sharing
Economic activity	Underground economy (often taxes are not paid, income goes unreported)	N/A – no economic activity takes place	N/A – no economic activity takes place	Illegal economic activities (often users do not have rights to distribute downloaded music)
Characteristics (based on *structural classification of consumption communities*)	▪ It can be online or both online and face to face ▪ Appeal can vary from limited to broad ▪ Focused on consumption activity ▪ Easy access ▪ Heterogeneous participants	▪ Online ▪ Appeal can vary from limited to broad ▪ Focused on brand ▪ Access can vary from easy to limited ▪ Homogeneous participants	▪ Online ▪ Appeal can vary from limited to broad ▪ Can be focused on brand or consumption activity ▪ Access can vary from easy to limited ▪ Homogenous participants	▪ Online ▪ Broad appeal ▪ Focused on consumption activity ▪ Easy access ▪ Heterogeneous participants
Service provider role	Varying roles depending on the extent to which it facilitates the exchanges	N/A – not involved	N/A – not involved	Provides a platform for exchange
Key differences from digital collaborative consumption		▪ Sense of collective belonging ▪ Built around brandy loyalty ▪ Not an exchange/marketplace	▪ Sense of collective belonging ▪ Built around a shared desire to solve consumption-related problems	▪ Not a marketplace ▪ Participants do not drive income from activities

	▪ Not an exchange/marketplace

Source: Adapted from Garret et al. (2017b)

Brand communities enable consumers in the same space to share their experiences and suggest improvements to the current status quo. The DCC communities were found to be crucial in solving challenges that society members find themselves in crime and poverty (Pandey et al., 2021). These individuals share some common goals: to improve consumption and service delivery and safeguard good business practices by the firms.

2.11 RELATIONSHIP AMONG CONSTRUCTS

The researcher used past studies to understand the relationship among different latent constructs in the hypothesized model.

2.11.1 Relationship of economic benefits, PU and PEOU

The multilevel regression testing relationship between economic benefits and perceived usefulness was found to have a significant positive effect on perceived usefulness (Li & Wen, 2019). Economic benefits, regarded as extrinsic motivation, include money savings and are perceived as a motivator of DCC (Phuphisith & Kurisu, 2022). The study by Freiberger and Sundararajan (2017) found that car sharing creates surplus income for the household. Tussyadiah (2015) found economic benefits motivating factors in peer-to-peer accommodation. The reason why consumers use DCC is to utilize resources with less cost. People reduce spending on cars by sharing rides. Möhlmann (2015) found economic benefit as the main contributor in digital platforms which are smartphone compatible.

2.11.2 Relationship of Social benefits, PU and PEOU

Understanding the impact of social influence in society is important when investigating consumers' adoption of an innovation (Min et al., 2018). Social influence is viewed as people adopting innovation in the market (Young et al., 2010). Consumers influence their social environment, e.g., family and friends, and online consumers have the potential to influence the behaviour of others towards an innovation. The study of consumer adoption of Uber mobile apps by Min et al. (2019) found that social influence positively impacts perceived usefulness and ease of use. Tussyadiah (2015) find social benefits as a key motivation in peer-to-peer accommodation. Consumers will be happy to be part of the community, and community belonging was found to be a motivating factor to participate in peer-to-peer accommodation

sharing. Sharing strengthened social bonding among consumers who are engaging online platforms. Strengthening sharing initiatives supported the participants' positive feelings and joy (Mayasari & Haryanto, 2018). In the study of e-learning in higher education, social media predicted perceived usefulness and perceived ease of use, and the hypothesis was supported (Elkaseh et al., 2016). The evidence from the literature indicates the importance of social benefits in digital collaborative consumption as it brings people from different backgrounds together, as they enjoy sharing information and other benefits using online platforms.

2.11.3 Relationship of Trust, PU and PEOU

Evidence in the literature indicates that e-commerce has been perceived as a useful channel for building consumer trust towards online businesses. Krueger and Meyer-Lindenberg (2019) define trust as a social dilemma between the two parties, which are the trustor and the trustee. PC implies that online customers a fist with more uncertainties than offline customers. We need to come to purchase products and services. Lee et al. (2019) noted that privacy and security concerns had been demonstrated in literature as solid indicators of perceived risk in an online environment. The perceived usefulness of using social media platforms was positively related to trust (Harrigan et al., 2021). Marketers and business managers in the DCC businesses must build customer trust before expecting customer purchasing behaviours. Nuryanto et al. (2020) found that trust positively influenced perceived usefulness and perceived ease of use.

2.11.4 Relationship of Security Assurance, PU and PEOU

Abu-Shanab's (2017) study found perceived usefulness, ease of use, privacy and security assurance as significant predictors of e-government. Security assurance is "the confidence that is system meets its security requirements and is resilient against security vulnerabilities and failures" (Katt & Prasher, 2018, p. 1). Confidence is referred to the level of trust in the system that the customers view as safe to use (Shukla et al., 2022). The security assurance process provides useful information, recommendation and mitigating plan that help to improve confidence among the users of the DCC business model. Security assurance offers data security and privacy standards for evaluating and certifying information technology products and services in the marketplace. In addition, security assurance provides guidelines and specifications to facilitate the specification of functional security requirements. Shukla et al. (2022) noted that some advantages of security assurance id to address security assurance concerns raised by the customers about the system as well helping with the development of information security products and systems of the DCC business. Ekclhart et al. (2007) noted

some complex, time-consuming drawbacks, and the evaluation and modelling of compiled products are challenging. Barnes et al. (2017) noted that security assurance refers to the goodness of online business ventures, which include the DCC business model. Trust was found to be influenced by structural assurance. Abu-Shanab (2017) found perceived usefulness, perceived ease of use, privacy and security assurance as strong predictors of e-government.

2.12 ONLINE FOOD DELIVERY

E-commerce has caused the growth of new business opportunities, including the food delivery industry. The online food delivery platform uses information and communications technology (ICT) to order and pay for their food online (Ji et al., 2014). The proliferation of digital devices has facilitated the growth of the industry. Li et al. (2020) noted that smartphones have enabled the development of online to offline commerce to support delivery. Research on smartphone connections found that 5.2 billion were connected in 2019, which has increased exponentially. The online-to-offline services by Li et al. (2020) are what this research calls digital collaborative consumption and include food delivery, hotel rooms, and car rentals. DCC provides consumers with many choices, as shown in Figure 6.

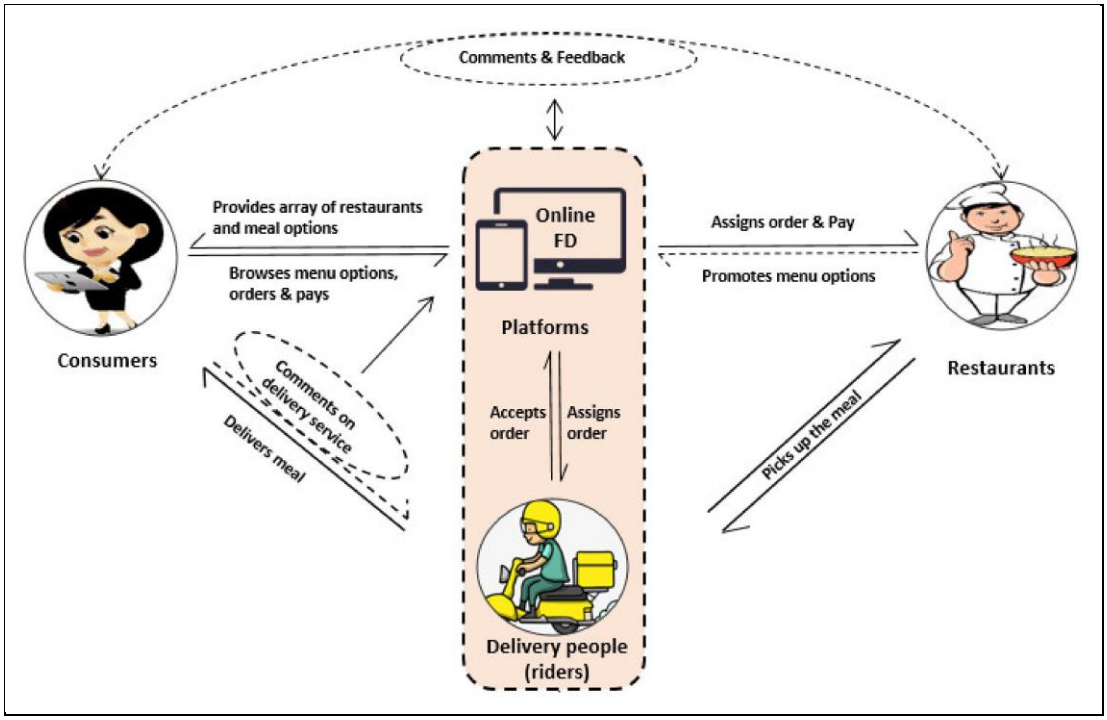


Figure 6: The functions associated with online food delivery platforms

Source: Adapted from Li et al. (2020, p. 3)

Food delivery was grouped into grocery, meal, and meal kits. The degree of pre-cooking before delivery to the consumer was found to be playing an important role. Pre-cooking food is important as the process saves time (Roh & Park, 2019). *Meal delivery* services are perceived to be effective and sustainable (Hwang & Choe, 2019). The results were the same in South Africa, as many consumers work and need more time to prepare meals. Examples of meal delivery services in South Africa include Mr D, UberEats, Ordering and Bolt food. *Meal kit delivery* services, e.g., Hello Nature in South Korea, deliver milk to kids at home. *Ghost or virtual restaurants* are another notable channels that use online channels to get consumers. Urbanization increases population density in urban areas, increasing the number of online customers using digitally mediated platforms. Digital consumption services require efficient and real-time services, as shown in Figure 7. Some participants in the study noted that restaurants use their existing staff to deliver the dishes to customers, whilst other restaurants use third parties to deliver on their behalf.

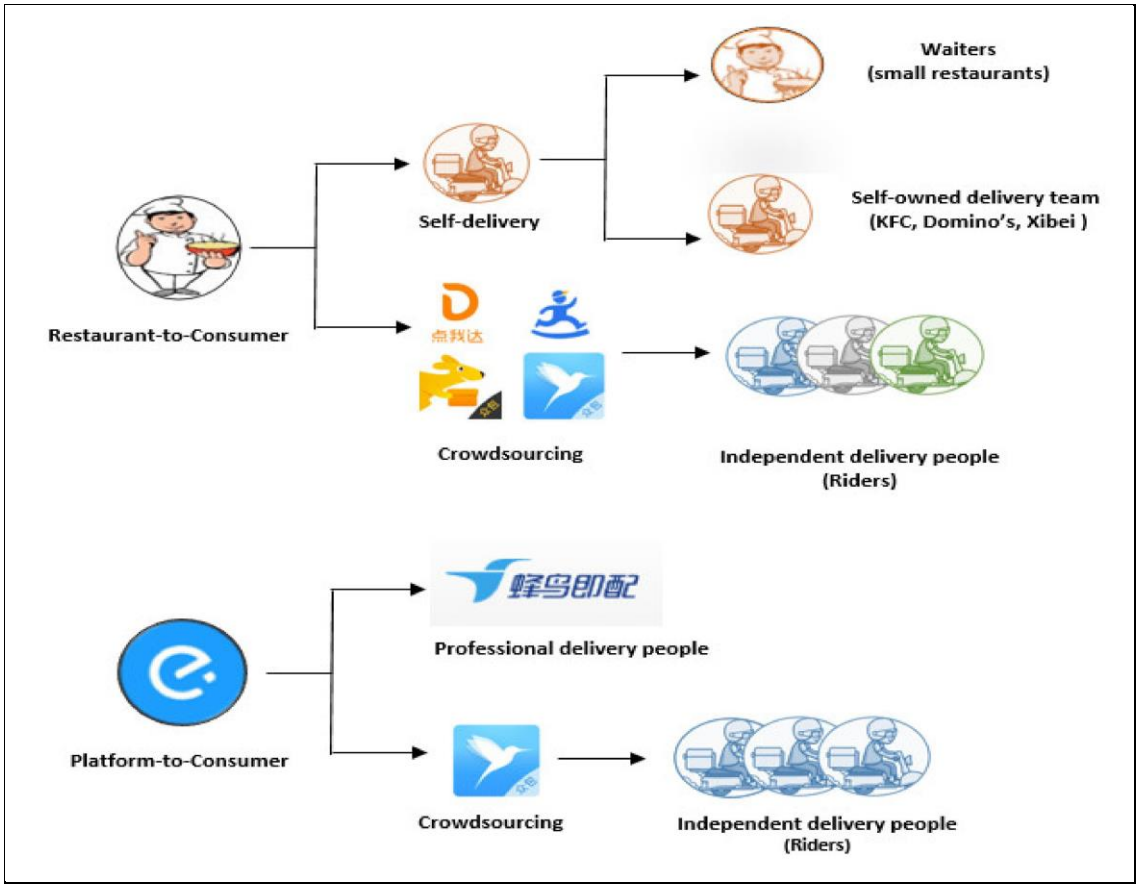


Figure 7: Online food delivery platform

Source: Adapted from Li et al. (2020, p. 4)

Elvandari et al. (2018) noted some factors that influence consumer behaviour, including the friendliness of restaurant employees. Ray et al. (2019) noted the need to train delivery staff and performance evaluations to improve customer service. The study noted the need to train the employees on customer service, time management and personal hygiene. These factors are key in keeping existing customers in the food delivery services.

2.13 TYPOLOGY OF DIGITAL COLLABORATIVE CONSUMPTION

The literature Balderjahn et al. (2018), the researcher proposed a typology of digital collaborative consumption as the product system, redistribution markets, and the collaborative lifestyle as key components better to understand the consumers in the food delivery industry. Hallem et al. (2020) noted that digital collaborative consumption enhances peer networks, whereby consumers and firms collaborate to improve service delivery among the users of digital platforms.

2.13.1 The product system

Chowdhury et al. (2018) noted that the product-service system enables firms to offer products as a service instead of selling them as products; for example, Netflix shares videos, Zipcar rents cars, and Cheg rents textbooks to students. The product-service system facilitates sharing and renting and provides access to the products and services without transfer ownership. This form of DCC could be business-to-consumer (B2C) renting, where the firm maintains ownership or peer-to-peer (P2P) renting, which allows users to rent out their products to fellow peers. The product-service system's key objective is to minimize the environmental impact of both consumption and production (Mourtzis et al., 2018). The product system offers a customized service portfolio (Song & Sakao, 2017). Roy (2000) extended the categories of the product-service system modes to include result services.

2.13.2 Redistribution markets

Redistribution markets are the second typology of DCC, enabling the exchange of used goods (Botsman & Rogers, 2010; Dworczak et al., 2021). DCC markets allow participants to share and exchange goods and services. Thread up enables parents to swap and redistribute clothing their children have outgrown since its launch in 2010. Redistribution markets include gifting, bartering and selling pre-owned goods with a transfer of ownership (Parguel et al., 2017). It prevents used products from being thrown away as waste, e.g., Freecycle, Kashless or Swaptree

(Ganapati & Reddick, 2018). Redistribution markets clearly show that compensation does not need to be financial but could be bartering or exchanging gifts.

2.13.3 Collaborative lifestyle

A collaborative lifestyle is where people share an interest, and a common philosophy of life connect to share and exchange intangible resources such as space, time, skills and co-working" (Palos-Sanchez & Correia, 2018). This third typology achieves the highest involvement of the community as the firm facilitates the sharing of goods and services by buyers and sellers. Sharing could include digital content like documents, photos and videos. In the study, consumers could share their platforms to order food online and their experiences.

2.14 CHAPTER SUMMARY

Esposito et al. (2017) call for more rigorous research on DCC in emerging consumer markets as empirical studies seem limited, affecting the future growth of DCC business. The study addresses the gap by proposing a generalized DCC model focusing on the food delivery industry in the South African food delivery industry. This is against the background that the DCC economy is expanding from developed economies to emerging markets (Davidson et al., 2018). Uber replaces traditional taxi services by filling the gap in the transport sector by providing easier and cheap movement from one point to another (Skok & Baker, 2019). Couchsurfing and Airbnb operate in more than 190 000 cities and every country worldwide (Jung et al., 2016). Mr Delivery is a South African company delivering food. Despite rising attention from DCC, little is known about the drivers of adopting DCC in emerging consumer markets, which necessitated the study's launch.

The chapter has proved that the food delivery industry is a new business model that utilizes underutilized resources to deliver food. The chapter discussed the characteristics of emerging consumer markets to get an insight into how the market is structured. Online food delivery services face challenges like increasing start-ups and higher tax regimes (Ray et al., 2019). The current research seeks to understand the adoption of DCC in the food delivery sector in the emerging consumer market. The following chapter focused on the development of the theoretical and conceptual framework.

CHAPTER 3

THEORETICAL AND CONCEPTUAL FRAMEWORK

3.0 INTRODUCTION

The chapter focuses on theories which affect the consumption behaviour of participants. The researcher starts by analysing general theories in consumer behaviour to understand consumers in an emerging market better. The several theories complement each other and present an opportunity to review theories applied in similar studies. The study's overview of these theories has been applied to address related issues and helped the researcher make informed decisions regarding the study's theoretical background. The theoretical and conceptual frameworks are discussed separately in the study. Theories and concepts in consumer psychology which affect consumer behaviour in emerging markets are discussed to understand how they affect the selection and service choice in the food delivery industry. The study viewed customers as people who purchase and buy food for consumption.

The critical assessment of personality theories, values and attitudes helped understand and explain consumer behaviour in a cross-cultural context. These consumer behaviour theories are examined to a greater extent to understand digital collaborative consumption better. Personality theories helped to understand the feelings of consumers when they participate in the DCC marketplace by buying food and other products online (Jayawickreme & Fleeson, 2017; Jayawickreme et al., 2019). The values theory helped to understand motivation towards intention to continue using DCC platforms, as values are consistent with human behaviour (Martin et al., 2020; Schwartz, 2017).

The cognitive approach was instrumental in understanding the buying process in an emerging market. The two overarching theories central to the study were the Theory of Reasoned Action (TRA) and the Technology Acceptance Model (TAM), as shown in the hypothesised model in Figure 1. The Theory of planned behaviour helped analyse the attitudes on the hypothesised model: home delivery, economic benefits, social benefits, security assurance and trust in the platform. The technology acceptance model helped to analyse the cognitive response and behavioural intentions variables on the hypothesised model. The construct borrowed from the model were perceived usefulness, perceived ease of use and intention to continue using digital

collaborative consumption (DCC) platforms. The chapter will focus on general guiding theories for the study, overarching theories, integrated value, hypotheses development and conceptual framework.

3.1 GENERAL GUIDING THEORIES IN CONSUMER BEHAVIOUR: PERSONALITY, VALUES, AND ATTITUDES

The researcher used several consumer behaviour theories to develop the conceptual framework to understand the factors limiting and enhancing consumers' interest in emerging markets' food delivery services industry. The researcher noted that a robust line in literature focuses on consumer behaviour seeking to understand the decision-making process (Brune et al., 2021). The consumer behaviour theories adapted for the research were not limited to personality, values, and attitude theories, where certain elements were included in the conceptual framework. The study included personality theories to get a general understanding of consumer behaviour, including psychodynamic, trait, behaviourist, humanistic and social practice theories. Consumers' personalities and lifestyles denoted consumption preferences but are not always accounted for by marketers and academics (Palomba, 2020). The link between personality and DCC in emerging markets has been scarcely investigated in the literature (Mangiavacchi et al., 2021). The current research analysed several personality theories to incorporate elements in the conceptual framework to understand consumers holistically and develop conclusive findings of DCC drivers in emerging markets. Considering that the research is evaluating DCC drivers, the consumer behaviour theories helped understand the consumers from different angles that helped the researcher make conclusions informed by different theories.

Values are crucial in understanding consumption drivers in DCC. The work of Garai-Fodor (2019) noted that value systems could be linked to environmental elements. Social benefits were identified as one of the values adopted in the model and supported the relation in the conceptual framework. The researcher analysed Schwartz's (1994) value theory to understand the motivation towards DCC in emerging markets. The study noted that consumers were motivated to engage in DCC platforms, as shown by acceptance of the business model. Lastly, the attitudes from the conceptual framework were measured to understand DCC drivers in emerging markets with a special interest in the food delivery industry. Ajzen (2011) defined attitudes as an instantaneous positive or negative evaluation of behaviour. In the current

context, an attitude of buying food online is regarded as a good thing to do. Several theories measured attitudes and found positive relations among the latent variables. Other attitudes included structural assurance, which had a positive relationship and supported digital collaborative consumption. The theories proved useful as they helped to explain the complex phenomenon in the model.

The consumer decision-making process dates to over 300 years ago. An early economist, Nicholas Bernoulli, postulated that the basis of the consumer decision-making process is from an economic perspective and solely focused on the act of purchasing (Bray, 2008). Many scholars have defined consumer behaviour from different perspectives. Schiffman and Kanuk (2007, p. 3) viewed consumer behaviour as "the behaviour that consumers display in searching for, purchasing, using, evaluating and disposing of products and services that they expect will satisfy their needs." Solomon et al. (2012) agreed with the earlier definition and described consumer behaviour as studying products that help shape their identities. Consumer behaviour is a set of individuals' behaviours and direct acts to obtain goods or services when purchasing (Raewf et al., 2021). Research has shown marketers use consumer behaviour models to understand digital collaborative consumption in emerging markets. Models serve several purposes as they explain complex consumer behaviour theories for pedagogical and practical purposes. The current study's models aim to act as a framework of reference, highlighting new information and knowledge gained. A critical assessment of theories of personality, values and attitudes was not given much attention but instead was used to explain the understanding of consumer behaviour in emerging markets context.

3.1.1 Personality and consumer behaviour

Personality relations existed over a decade ago. Past attempts to examine consumer behaviour through personality viewpoints yielded few positive results (Engel et al., 1986). A notable shortcoming in the previous studies, which yielded negative results, was that the personality effects studies were conducted with no frameworks (Haugtvedt et al., 1992). The word *personality* comes from *'persona'* (Latin), referring to an actor representing characters in the Graeco-Roman theatre play. The actor's task changed as the character changed (Allport, 1937; Singh & Khosla, 2020). Hogan and Sherman (2020:3) noted some contributions of personality psychology "as it brought revolutions in architecture, music, physics, medicine, music, painting, literature, economics, and philosophy." The same views are echoed by other scholars who view personality as "the distinctive attributes of a person that characterise him or

her" (Singh & Khosla, 2020, p. 150). In the current study, personality variables helped understand individual differences among the respondents. According to American Psychological Association, personality was viewed as individual differences in characteristic patterns of thinking, feeling, and behaving, affecting the buying decision in a DCC platform.

There are five dimensions of personality: extraversion, neuroticism, agreeableness, conscientiousness, openness to experience, and a measure of an individual's personality type (Robinson et al., 2020). The personality trait was found to be affecting the way individuals respond to different situations in life. Table 9 compares individuals' characteristics in terms of the level of trait. Individuals who gain greater satisfaction are the ones who are high on the trait of extraversion and were found to be enjoying being part of the DCC platforms. Extroverts participated in various consumption activities than introverted counterparts (Gerber et al., 2011). These individuals preferred challenging conversations and held different views on issues that affect them and society.

Table 9: Characteristics of the Big Five Personality Traits

	Low on trait	High on trait
Extraversion	Reserved, serious, prefer to be alone or with a few close friends.	Outgoing, active, and high-spirited, prefer to be around people.
Agreeableness	Hardheaded, skeptical, proud, competitive	Compassionate, good-natured, and eager to corporate.
Conscientiousness	Easygoing, careless, prefer not to make plans.	Well organised, strive to achieve goals.
Emotional stability	Sensitive, emotional, prone to upsetting feelings	Secure, hardy, relaxed under stressful conditions.
Openness to experience	Down-to-earth, practical, traditional	Broad interests, imaginative

Source: Adapted from Costa Jr and McCrae (1992)

Extroversion is a dimension that underlies a broad group of traits (Costa Jr & McCrae, 1992). Introversion and isolation are the opposite of the extroversion construct on the Big Five factors.

Guido et al. (2007) noted the shopping behaviour of extroverts to be hedonic, and these consumers were found to encourage their peers to participate in DCC initiatives. Openness to expensive consumers was viewed as imaginative and sensitive to the art and beauty of the emotional life of individual consumers. Personality theories help marketers to have a better understanding of consumers in the food delivery industry. The major theories of personality include psychodynamic, trait, behaviourist, humanistic and social practice theories. The different personality types in literature are used to communicate specific expected behaviour of consumers based on similarities.

3.1.1.1 Trait's Theory

Researchers noted two prominent trait theory views; "the feeling and behaviour" and "the explanations for why people think, feel and act the way they do″ (Jayawickreme et al., 2019). The Theory was very relevant to the study as the researchers wanted to understand the drivers and deterrents of digital collaborative consumption in the food delivery industry. The study noted that some consumers participate in the study because they want to interact with other "people of the platform". The trait theory was found to be having a good research base. John et al. (2008, p. 8) identified the hierarchical structures of traits as "Extraversion, agreeableness, conscientiousness, emotional stability, and intellect at a middle hierarchical level." Many participants in the study agreed with the model's latent variables testing drivers of collaborative consumption. This was evidenced by a replicable cross-national questionnaire, as found by Saucier (2009). However, the current study discussed cross-cultural replication by measuring invariant trait approaches, which were theoretical and non-exploratory (Cramer et al., 2012; Hampson, 2012). The focus of the study was to expand and answer the questions of what, why and how, as noted by (deYoung, 2015; Quirin et al., 2020). The notable weakness of the Trait theory is that the theorists' definition of traits is simplistic as a disposition focusing on a thought, feeling, and behaviour (Matthews, 2018).

Nevertheless, the participants in the study were able to express their views as far as buying digitally mediated products is concerned. Many respondents identified security assurance as key to maintaining their online presence. The traits helped the researcher understand the individual differences more, which helped target different consumer segments simultaneously. Understanding individual differences by marketers translate into monetary values as happy customers spend more in the business.

3.1.1.2 The Behaviourists theory

Behaviourist psychologists were found to be the leading critics of the psychoanalytical Theory of personality. Behaviourists are against the idea that human personality can be understood using the psyche and unconscious contents (Singh & Khosla, 2020). However, marketers use a holistic approach when selling the business model to consumers. The researchers view personality as an abstract and hypothetical concept. The businesses were encouraged to use different approaches when doing their business as some consumers prefer different approaches. The research model incorporated latent variables from the behaviourists' schools of thought. This was evidenced by the constructs that measured social, economic and security benefits. Although the results from the statistical model show positive elation on DCC, economic benefits were found to be non-significant in the study. The classical conditioning model helps to motivate consumers in the DCC platforms. The research noted that consumers appreciate and love the rewards and present they get from the DCC firms in their communities. Films were encouraged to use more than one language when advertising their products to cater to consumers who need to know the business model.

3.1.2 Personal values and consumer behaviour

Values have been a central concept in consumer behaviour. Kahle and Xie (2018) noted that social values are the building blocks of the social science phenomenon. The model incorporated some value aspects in measuring the DCC in emerging markets. The study noted that consumers prefer to discuss their buying patterns, whether good or bad. The values were viewed as sources of motivation in the study, and these values were tested in the model. The findings from the study showed that consumers preferred the systems which work well and the interaction they experience when interacting on the platform. Personal values were found to predict buying behaviour. The DCC business firms must understand consumers' values and how they can turn them into business opportunities.

It is common knowledge that every person holds some values in life, e.g., honesty, integrity and achievement with different levels of importance. Firms must thus improve service delivery on their platforms to benefit consumers who prefer unique businesses. Schwartz (2006) adopted a value theory that specifies six main features.

1. *Values are beliefs closely associated with the effect.* Bilsky and Schwartz (1994) suggest that values are mental representations of relevant individual goals and

motivators, and these motivations, once cultivated, these motivations evoke strong feelings.

2. *Values are goals that motivate action.* Individuals considering social power, wealth and exciting life will be motivated to pursue these desirable end states. Rokeach (1973) identified 18 instrumental and 18 terminal values, while Schwartz (1992) identified ten motivational goals in all human societies.
3. *Values represent obedience and honesty*. The study noted that consumers prefer to do business the other businesses that do not misinform the customers. Structural assurance is key to maintaining customer loyalty.
4. *Values are standards or criteria*. Values determine ways of behaving or appropriate end-state to pursue (Rokeach, 1973). Values prescribe what is worth pursuing or avoiding. The DCC business model has become a favourite alternative among customers.
5. *Values are ordered by importance relative to one another.* Rokeach (1973) conceptualise personality as the unique constellation of values priorities wherein a personality change reveals the reordering of value priorities.
6. *Values guide to action.* There is a trade-off among competing values and attitudes (Schwartz, 1992, 2012) as they influence action.

Research has shown that people's perceptions are critical in determining consumption behaviour. Many consumers indicated they were happy with the business model because they could interact and protect their personal information. The research noted that happy customers return and do business again, hence ensuring customers always get the best service. Schwartz's (1994) value scale was based on Rokeach's (1973) terminal values and has ten distinct values. The study showed that consumers are motivated to engage in digital collaborative consumption. Firms were encouraged to keep offering quality products and services to ensure repeat business from the consumers. The refined Theory, validated in 15 samples from 10 countries, was instrumental in drawing the conceptual framework for the study as more variables were to be considered by the researcher. Table 10 provides the variables on basic individual values.

Table 10: The 19 values defined in terms of motivational goal

Value	Conceptual definitions in terms of motivational goals
Self-direction-thought	Self-direction-thought Freedom to cultivate one's own ideas and abilities
Self-direction-action	Freedom to determine one's own actions
Stimulation	Excitement, novelty, and change
Hedonism	Pleasure and sensuous gratification
Achievement	Success according to social standards
Power-dominance	Power through exercising control over people
Power-resources	Power through control of material and social resources
Face	Security and power through maintaining one's public image and avoid humiliation
Security-personal	Safety in one's immediate environment
Security-societal	Safety and stability in the wider society
Tradition	Tradition Maintaining and preserving cultural, family, or religious traditions
Conformity-rules	Conformity-rules Compliance with rules, laws, and formal obligations
Conformity-interpersonal	Avoidance of upsetting or harming other people
Humility	Humility Recognizing one's insignificance in the larger scheme of things
Benevolence-dependability	Being a reliable and trustworthy member of the in-group
Benevolence-caring	Devotion of the welfare of in-group members
Universalism-concern	Universalism-concern Commitment to equality, justice, and protection for all people
Universalism-nature	Preservation of the natural environment
Universalism-tolerance	Acceptance and understanding of those who are different from oneself

Source: Adapted from Schwartz et al. (2012)

Values were key in determining the motivation of the participants in the study. These values cover all the substantive components of the original values (Castillo et al., 2018). Values were found to have a small but consistent association with various behaviours in the digital collaborative consumption business model and pro-environmental behaviours Martin et al. (2020) among a large nationally representative sample of DCC consumers in emerging markets. DCC participants were found to be choosing firms with clear environmental policy as their favourite among them. Take a lot with its brand, “Mr Delivery (Mr D.)” was found to be the favourite service provider among South African consumers in the food delivery industry.

3.1.3 Consumer Attitudes and behaviour

The concept of *attitudes* has been extensively used in consumer behaviour literature. Consumer attitudes are applicable in nearly all decision-making contexts (Steenkamp & De Jong, 2010). For a long time, journals have published research concerning attitudes and purchase intentions over different themes, including country of origin effects White et al. (2021) and attitudes towards market globalisation (Horner et al., 2018). Consumer behaviour scholars distinguish between two types of attitudes: General attitudes are expressed towards nearly everything, e.g., brands, products, and phones. Second, attitudes towards a behaviour are domain-specific since they relate to performing specific behaviour relative to the attitude object (Ajzen & Fishbein, 1980; Ajzen & Schmidt, 2020). The distinction between general and specific attitudes is essential to understand how they influence consumer behaviour in emerging markets. An attitude is commonly construed as a predisposition or tendency to respond consistently to an object or stimuli with some amount of favourableness or unfavourableness (Ajzen & Fishbein, 2005; Ajzen & Schmidt, 2020). Fishbein and Ajzen (1975, p. 66) state that attitude is "a learned predisposition to respond in a consistently favourable or unfavourable manner with respect to a given object." Haddock and Maio (2017, p. 1) supported this view and referred to attitudes as "overall evaluations of people, groups, and other objects in the social world". Reporting on attitudes involves deciding on liking versus disliking or favouring versus disfavouring an object". The evaluative response to an attitude object is regarded as the core element of an individual's attitude (Ajzen, 2011). Some characteristics of Ajzen and Fishbein's (1980) definition require shows that attitudes are learned. Consumers are not born with the attitudes they express towards different objects they experience.

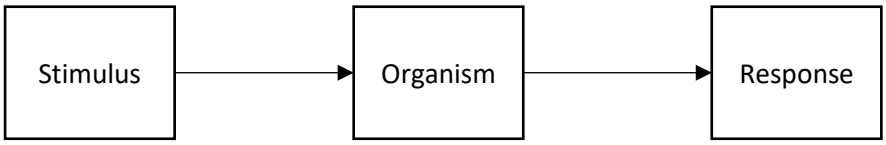


Figure 8: Stimulus - organism - response model of decision making

Source: Adapted from Cziko (2000)

Consumers could measure their attitudes on the measurement tool completed online, and the results indicated a positive correlation to consuming collaboratively. Regardless of the contributions made by the Theory in consumer behaviour literature, some scholars quickly found shortcomings of the cognitive approach in consumer behaviour. Foxall (1990, p. 96)

argued that the cognitive approach "…relies extensively upon the use of abstract and unobservable explanatory variables which seldom prove amenable to empirical investigation and evaluation". Consumers could apply their minds in making buying decisions and making repeat purchases.

3.1.3.1 Cognitive Approach

Early Stimulus-Organism-Response models suggest, as indicated in Figure 8. The researcher tested the DCC business model's direct and indirect effects. It was interesting to note that home delivery, Economic benefits, social benefits and Security assurance have positive direct and indirect effects.

3.1.3.2 The Theory of buyer behaviour

Social stimuli to participate in the DCC of food services in emerging markets. As shown in Figure 9, the hypothetical constructs were classified into two groups: perceptual and learning constructs.

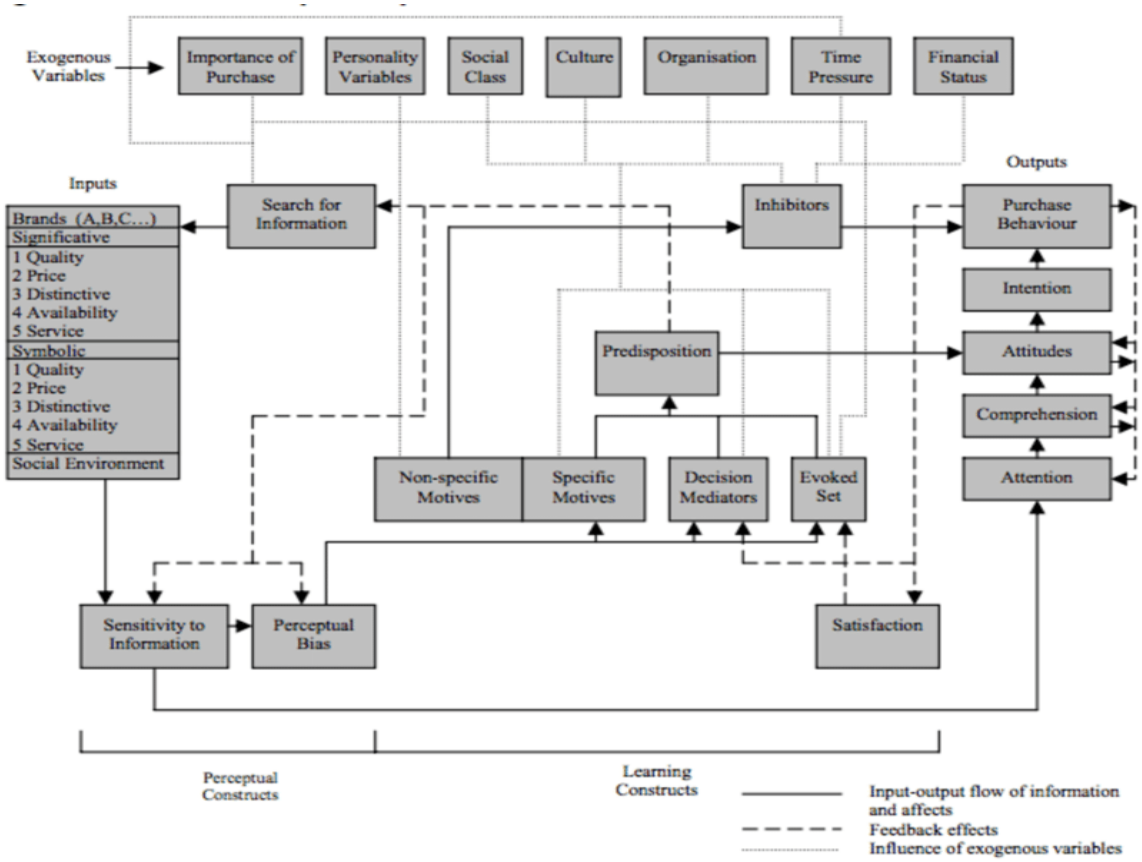


Figure 9: Theory of buyer behaviour

Source: Loudon and Della Bitta (1993)

The researchers noted that the consumers were motivated to participate in the study. The research showed a positive association among the constructs except for security assurance, which was insignificant. The inhibitors of DCC were security concerns and trust issues that should not be compromised.

3.1.3.3 The Expectancy-Value Model

Expectancy value models explain attitudes evaluation (Babrow & Kwitonda, 2020). The participants who participated in the study agreed on the significance of latent variables that measure DCC variables. Security assurance was key in determining the success of the marketplace's business model. The hypothesis testing showed the significance of the constructs. The Theory was good in assisting the researcher in mapping the way forward in improving service delivery and increasing the motivation of participants.

3.2 OVERARCHING THEORIES

The overarching theories of the study are the Theory of reasoned action and the Technology acceptance model. The theories are explained in detail, motivating their inclusion in the hypothesised model.

3.2.1 Theory of Reasoned Action (TRA)

The theory of reasoned action is one of the extensively used theories which explains determinants of consciously intended behaviour (Ajzen & Fishbein, 1980). According to TRA, an individual's performance of his specific behaviour is determined by behavioural intention (BI) and subject norm (SN)(Davis, 1989a). According to the literature, behavioural intention measures one's intention to perform a specific behaviour (Ajzen & Schmidt, 2020; Fishbein & Ajzen, 1975). In the same vain, Gaiseanu (2020, p. 13) define attitude "as a mental and emotional construct which characterises human personality, a concept which cannot be observed directly, and only be inferred from people's actions or psychological tendency to express evaluation of a particular quality and degree of favour or disfavour granted to it. Attitude is an individual's positive or negative feelings about performing a certain behaviour (Buabeng-Andoh, 2018). Subjective norm was viewed as the person's exception that important people should not perform certain behaviours. The theory of reasoned action noted that some beliefs predict an attitude towards a behaviour about the consequences of performing and behaviour multiplied by the evaluation of consequences. Davis (1989a) describes belief as a subjective probability that results in consequence. Attitude and social norms constructs were

found to be important determinants of intention to use technology (Teo et al., 2019). The study combined the Technology acceptance model and the Theory of reasoned action to investigate the determinants of DCC in the food delivery industry.

3.3 TECHNOLOGY ACCEPTANCE MODEL (TAM)

To understand the drivers of digital collaborative consumption in the food delivery industry in South Africa, the TAM was adopted by the researcher as a theoretical framework underpinning the research. Perceived usefulness and PEOU were the two latent constructs that helped determine consumers' acceptance of DCC platforms in buying food online (Jung et al., 2021). The famous seminal researcher Davis (1989a) presented an extended TAM model with more elements for individual decision-making. The current research applies the TAM model to examine the associations among the constructs to determine the intention to consume collaboratively in the emerging marketplace of South Africa.

The highly influential model (TAM) has been examined from several viewpoints. In the current study, the researcher draws on TAM to capture the special conditions of emerging markets. The researcher brings together variables and relations not previously studied in emerging markets' food delivery service sector. The goal of digital collaborative consumption in the food delivery industry was to increase its footprint in urban areas, create employment, improve service delivery, and improve revenue for the firm. Unfortunately, these goals are impacted when consumers reject DCC technology. Acceptance of digital collaborative consumption platforms is a pivotal factor determining the success or failure of the business model. The TAM is the most cited theory and has been used most often; hence the researcher used it in the current study. Practically, the researcher is not interested in explaining DCC drivers to consumers in emerging markets but in understanding how to improve the DCC business model to benefit both the firm and the consumer. The original TAM is faithfully reproduced in Figure 4, and it is on which the model of the current research is based.

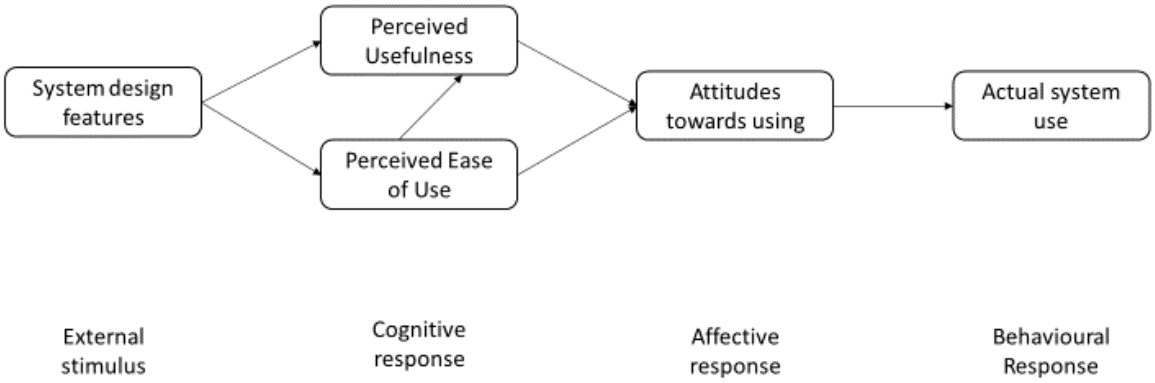


Figure 10: Technology Acceptance Model

Source: Adapted from Petruzzi et al. (2020)

From the original model, the overall attitude towards system use is hypothesised as a determinant of using the system. From the study, attitudes towards using are referred to as affective responses and function of several beliefs: PU, PEOU and security assurance (SA). These beliefs are referred to as cognitive responses according to the original TAM. Davis (1993) noted that PEOU affected PU. System design features, i.e., external stimuli, directly influence PU and PEOU. Systems design features indirectly affected the attitude towards using the new system, i.e., affective response, and actual usage behaviour, i.e., behavioural response, through a direct effect on PU and PEOU (Davis, 1993). The conceptual development of the thesis was informed by a well-known overarching theory that helped explain the processes and mechanisms by which constructs are related. The TAM was the overarching theory of the current study. In the thesis, the capabilities and competing claims of the theory were explored to provide a conceptual foundation for the adoption of technology in digital collaborative consumption and self-service technologies in emerging markets. The theory identified the determinants of using technology, for example, PEOU, PU, risk, attitudes towards usage, and usage behaviour, as suggested by (Bolton et al., 2018). These determinants have been found to have influenced directly and indirectly attitudes towards usage and usage behaviour (Bolton et al., 2018). Antecedents to the new DCC model were home delivery and social norms, which supported the relationship significantly

The TAM is based on Fishbein and Ajzen's (1975) work which focused on the attitude paradigm from a psychological point of view. Davis (1993), accredited with much research on attitudes, specified how relevant components of attitudes are measured. The author gave a clear guideline on distinguishing attitudes from beliefs in consumer research. In addition, Davis (1993) specified how the external stimuli, such as the objective features of an attitude, are linked to beliefs, attitudes, and BI. In the current model, the attitudes of the study were PU, PEOU, economic benefits, social benefits, security assurance and trust in the platform. Most of the attitudes supported the model except. Fishbein and Ajzen (1975) and Hill (2017) draw distinguished attitudes toward something, which they referred to as "affective evaluation" of an attitude object towards behaviour. The process refers to evaluating a person's behaviour towards the object. The results from the study showed that attitudes towards behaviour were strong. The behavioural intention in the model was the intention to consume collaboratively, also called digital collaborative consumption. In the study, attitude is "the degree of evaluative effect that an individual associates with using the target system in his or her job" (Davis, 1993, p. 476). The DCC model employed some of Davis's measurement scales to operationalise collaborative attitudes towards the intention to consume. Some adjustments were made to suit the current study.

Attitudes refer to the extent to which a consumer has a favourable or unfavourable behavioural evaluation. *Subjective norms* relate to "the perceived influence of social pressure" from one person to perform a behaviour, whereby others agree or disagree with the behaviour (Barnes & Mattsson, 2017). The technology acceptance model is an underlying theory for this research. It is extended to provide behavioural intention to consume collaboratively (e.g., home food delivery) through a digital collaborative consumption platform.

Scholars agree that TAM has mainly two beliefs: perceived usefulness (PU) and perceived ease of use (PEU), which both resonate with this DCC study. Scherer et al. (2019) noted that the prospective user's subjective probability increased job and task performance within the organisational context. An enquiry from the research participants on their performance at work after buying food online was positive, as respondents found more time to do their work. PEOU refers to "the degree to which the prospective user expects the target system to be free of effort" (Davis et al., 1989, p. 985). The food ordering apps were easy to use when buying food online. PEOU and PU supported the model positively and had a strong positive direct and indirect relationship with the intention to consume collaboratively (ICC). In a different study, PU and

ease of use were key in directly and indirectly explaining the outcomes of the relationships (Marangunić & Granić, 2015). Factor analysis suggested that PU and PEOU are statistically distinct dimensions Swanson (1987), and the same results were confirmed in the current study. External variables to the DCC model were among other latent variables: home delivery, subjective norm, economic and social benefits, trust, impact, and covariates, which were significant in the study except for economic benefits that were not supported.

3.4 CRITIQUE OF THE OVERARCHING THEORIES

Researchers identified several issues or flaws with the TAM. First, Imtiaz and Maarop (2014) identified a substantial variation in specific paths in the model TAM framework. The scholars Pynoo et al. (2012) noted a significant direct relation between PU and behavioural intention (BI); however, other researchers did not (Teo, 2015). Furthermore, Burton-Jones and Hubona (2006) noted that the duty to explain external variables in TAM differs remarkably. Third, many technology acceptance models exist in the literature that can be tested for direct and indirect effects (Scherer et al., 2019). The model's development spanned over two decades from 1996 (Marangunić & Granić, 2015). One of these versions had only technology use as an outcome variable, whilst others considered behavioural intention and technology use as outcomes, excluding attitudes (Scherer et al., 2019).

The fourth aspect being investigated was the measurement and structural invariance of the TAM across groups of online consumers who participated in the survey (Teo et al., 2009). The results of measurement invariant were recorded in the chapter on data analyses. In short, the invariant measurement results showed that TAM had some shortcomings and might only be fully applied to some contexts and groups of online consumers to the same extent. Other models, like regression analysis, are recommended. The moderators were added to the model as the fifth variable characterised as covariates. The covariates of the study were composed of the gender age of participants, who were 18 years at least. The other component of covariates was the frequency of orders in a month, of which the majority indicated that they order at least once a month.

Furthermore, the covariates captured in the current study included the participants' qualifications, whereby most participants had at least a matric qualification. The full description of the covariates was done in the chapter. Covariates moderated the relations in the

study. However, it was observed that the variable did not affect the overall digital collaborative model, as shown by the study of (Pandey et al., 2021).

3.5 INTEGRATED VALUE OF THE THEORIES REVIEWED

From the literature, consumers prefer products and brands associated with desirable attributes and, inversely, avoid products and brands largely associated with undesirable attributes. The personality theories were incorporated into the model to understand what makes digital collaborative consumption consumers different. The model's social norms and social benefits were viewed from the lens of personality theory to understand the unique qualities of consumers. The trait and behaviourist personality theories were reviewed and contributed to the model. The theories were incorporated into the model to provide motivational goals for participating in digital collaborative consumption. The values motivate behaviour and help predict consumption attitudes. Trust in the platform construct was incorporated from these value theories. The study notes that consumers prefer trustworthy digital collaborative consumption platforms as they are concerned with their data security.

Attitude theories played a role in understanding and evaluating the consumption behaviour of consumers in the food delivery industry in an emerging market in South Africa. Attitudes are a set of emotions, beliefs and behaviours towards an object resulting from one's experiences. It is important to note that attitudes have a powerful influence over behaviour and can change over time. The cognitive approach theory helps researchers understand the theoretical framework's experiences, behaviours, motives, and attitudes central to the proposed digital collaborative consumption. The theorised model integrated economic and social benefits from the theory of buyer behaviour. The social benefits were found to be significant in the model. They include the influence of family, peer and reference groups who influence the participation of individual customers in digital collaborative consumption. Expectancy value theory explains attitudes, decisions, and behaviours as outcomes of consumers' beliefs in DCC. The more positive beliefs, the stronger attitudes towards digital collaborative food consumption in an emerging market.

The attitudes incorporated in the conceptual framework are economic benefits, social benefits, trust in the platform, security assurance, PU and PEOU. Testing the attitudes in the conceptual model using structural equation modelling produced significant relations except for economic benefits. Overall results of the current study showed that digital collaborative consumption

consumers are inclined to hold attitudes about food delivery service providers to fulfil their needs.

3.6 THE RESEARCH MODEL AND HYPOTHESES

The conceptual framework was built after studying several theoretical frameworks from different scholars. The study's hypotheses are highlighted after a brief description of the concept. Environmental influences affecting digitally mediated collaborative consumption adoption in emerging marketplaces remain neglected. This is unfortunate because digital collaborative consumption business models may represent a significant opportunity to create employment and address the typical socio-economic challenges of emerging markets. Scholars have used different theoretical frameworks to study collaboration consumption online. The frameworks include the TAM (Correa et al., 2019; Roh & Park, 2019) and the theory of reasoned action (TRA) (Correa et al., 2019). The current research draws on the TAM model and the theory of reasoned action to capture the special conditions of emerging markets in the food delivery industry. The hypotheses are formulated following the description of each variable.

The new model includes several latent variables from the two well-known theories, an extension of the original Technology acceptance model and the Theory of reasoned action that provides the overarching Theory. The summary of constructs and relations studied in the study are summarised in Figure 11. The novel conceptual framework was used to organise the dissertation and guide the research, examining theorised DCC acceptance in emerging markets. The model has attitudes mainly adopted from the Theory of reasoned action. Home delivery allows consumers to order food from the comfort of their homes by dialling the phone or ordering online, and people deliver to the doorstep. Davis (1993) calls these characteristics external stimuli. As represented in Figure 11, the model includes social norms effects because subsistence consumers move to larger urban areas and may not perceive the same normative influence for certain behaviour. The antecedents, i.e., home delivery and social norms, affect cognitive response to the product offered: perceived usefulness, perceived ease of use and security assurance. The consumers determine whether the product is useful or not. The cognitive responses affect attitudes towards the intention to consume collaboratively. The constructs are economic benefits, social benefits, and trust in the Platform.

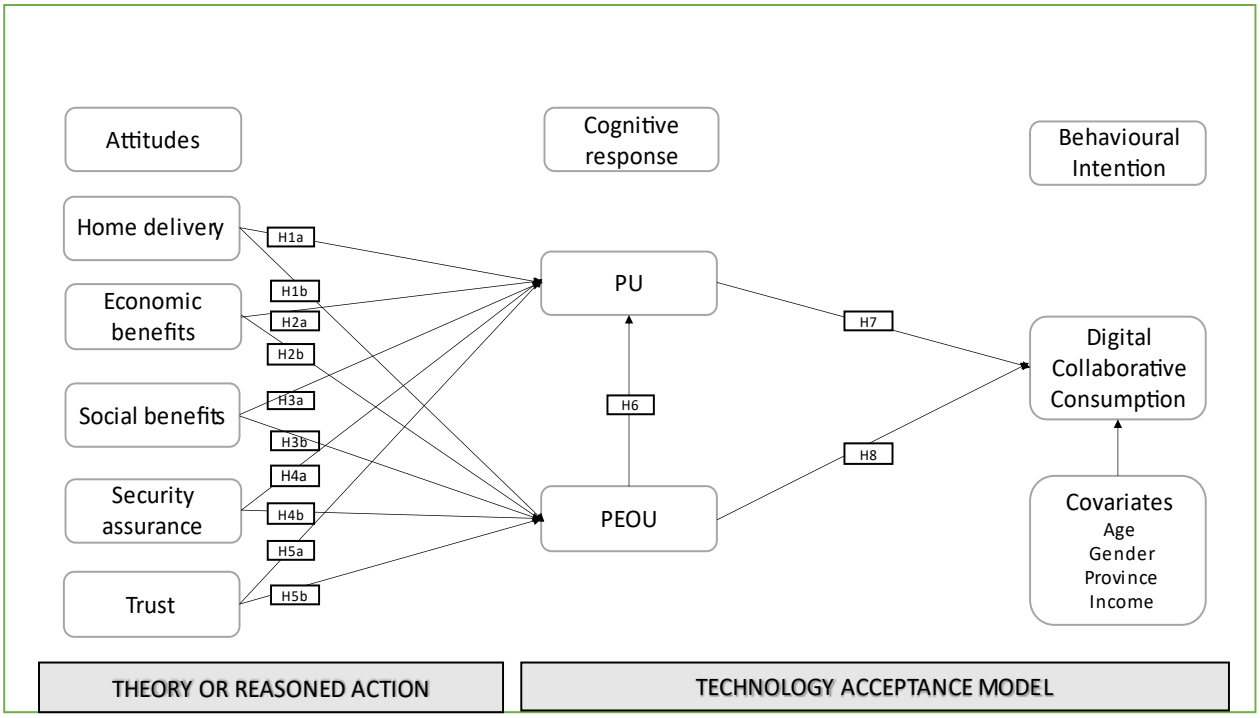


Figure 11: Research model and hypothesis

Source: Author

The original TAM model refers to these attitudes towards collaboratively consuming as an effective response. Behavioural response is referred to the intention to consume collaboratively in the study. The model had moderators, which were referred to as covariates. The elements which constitute covariates are gender, age, education, and household income. The theory rests on the external environment, and data was not collected in deep rural areas because the DCC service providers are not present in the rural and remote areas of South Africa. The primary determinant of the business model is poor network coverage, and the households are scattered all over. Restaurants with DCC applications are not available in such areas.

The new model summarises the novel constructs and relations studied in the current research. The constructs include home delivery, social norms, perceived usefulness and ease of use, economical and social benefits, trust in the platform, security assurance, impact, and intention to consume collaboratively. Attitudes were included through the triple-bottom-line antecedents, namely economic benefits (profit) and social benefits (people). The mediator variables in the model were Perceived Usefulness (PU), Perceived Ease of Use (PEOU) and Security Assurance (SA). Trust in the platform is an antecedent of intention to consume with

security assurance collaboratively. Moderators are included as covariates, and they capture age, gender, level of education and household income.

3.6.1 Attitudes

First, it is essential to note that the middle two columns of constructs summarised in Figure 7 are attitudes. Although it is among the most researched constructs in marketing and social psychology during the last century, the attitude construct is defined variously. Many of the most influential articles on attitudes in the marketing and psychology literature do not address this plurality, instead omitting any definition of the construct, e.g., (Bagozzi & Yi, 2012). There are, however, several influential conceptualisations of the attitude construct from which we can obtain guidance. An attitude is a mental and neural state of the consumer's readiness in the DCC marketplace. Perhaps the most cited definition does have a limitation in that it does not differentiate the construct from other constructs, such as personality traits and emotions. Eagly and Chaiken (1993) and Carling and Schewel (2018) proposed a more "common-sense" conceptualisation, describing attitudes as a psychological tendency that is expressed by evaluating a particular entity with some degree of favour or disfavour. However, their definition does not necessarily differentiate the attitude from the values construct. Ajzen and Fishbein's (1977) influential theory proposes that attitudes are held concerning some aspect of the individual's world, representing an evaluation of the entity in question, taking on evaluative or affective properties. The empirical findings on DCC indicate that trust in the platform and social and perceived benefits determine consumer attitudes towards online shopping (Al-Debei et al., 2015). The same notion is echoed by Cicia et al. (2021), who realised that consumers with more positive attitudes are more likely to purchase food online than those with negative attitudes.

Proponents of consumer attitudes argue that attitudes play a major role in shaping consumer behaviour, deciding which brand to buy and which store to shop. The most favourable brand evaluated most favourable is likely to be selected. Market researchers often seek to measure consumer objects, such as advertisements, brands, and products, to explain and predict consumer attitudes (Goldsmiths & Bridges, 2000). Ajzen and Fishbein's theory and Rokeach's Theory are compatible in assuming that attitudes are the consequence of centrally-held values, past experiences, and social normative influences and differing only in "semantic differences" and other "inconsequential" respects (Burgess, 1992; Burgess & Steenkamp, 2013). Furthermore, almost every attitude conceptualisation captures the central elements of

evaluating an object, situation, or event, as proposed by Rokeach. Consequently, Rokeach's definition will inform the conceptual development of the dissertation.

In the current research, several attitudes are studied. These include economic and social benefits and security assurance. The model reflects the theoretical expectation that attitudes result from past experiences, affective and cognition and affect the intention to engage in behaviour towards the service, activity or product (Fishbein & Ajzen, 1975). Negative attitudes are regarded as one of the reasons why consumers refuse to buy online products and services. The study on the relationship between attitudes towards the platform and use intentions found that attitudes are a major dominant factor for behavioural outcomes, including an intention to purchase, use or recommend (Hamari, 2015; Van der Heijden et al., 2003). In the study, perceived usefulness and ease of use influence attitudes towards home delivery.

3.6.1.1 Home delivery

Research suggests that DCC in emerging consumer markets is used to develop a sustainable marketplace. May (2008) noticed a positive environmental impact of car-sharing. In the study of accommodation sharing, sustainability benefits were key motivational factors (Tussyadiah, 2015). Conservationists have proposed several generalised sustainable consumption models (Barnes & Mattsson, 2017). Sustainable consumption optimises the social and economic environment to meet the current and future generation's needs (Phillip et al., 2013). The environmental dimension captures purchasing products produced, packaged, and disposed of in an environmentally friendly manner. Much research has examined how technology, such as smartphones and payment systems, is utilised in emerging markets. However, less attention was given to sustainability, affecting consumers' day-to-day lives in emerging markets. Focusing on unmet basic consumer needs is of significance. This study seeks a lasting solution to satisfy these future unmet needs through digital collaborative consumption. The subsistence marketplace's physical environment is affected by the competing needs between technology and basic needs (Viswanathan et al., 2019). When policymakers exclude emerging consumer market communities when they make decisions affecting them, their voices are not heard during planning, e.g., the construction of freeways, e-tolls, train tracks, and economic development zones, and the absence of collaboration leads to the failure of such projects. A notable contribution was made by Barnes and Mattsson (2017), who noted that consumers' past behaviour regarding sustainability determines the understanding of environmental beliefs.

Scholars note that business models engaging in-home delivery make a surprise comeback (Ehmke & Mattfeld, 2012). Digital collaborative consumption requires the cost-efficient and customer-oriented design of home deliveries. Food is one of the products delivered at home, and the list includes small parcels and equipment. The current research focuses on home delivery of food in the emerging market. In general, deliveries are made to the client's home, reception, delivery boxes, collection points, locker banks or other places as per the consumer's instruction (Gevaers et al., 2011).

The key question for home delivery is the availability of the client when delivery is done. Home delivery needs customers to be present for security reasons and perishable goods (Agatz et al., 2011). Food deliveries can be personalised on the DCC system to ensure the customer gets the best service at the required time. Online food delivery services in South Africa are Mr D, UberEats, OrdeIn and Bolt food. One interesting finding is that Mr Delivery, a local brand, was the favourite among South African consumers compared to other international and established brands.

DCC services help customers who want to serve time by ordering prepared meals. On the other hand, grocery delivery targets customers who want to cook their meals using the ingredients they order. Pre-packaged ingredients are delivered to households, which saves time preparing the meal as everything is in one place (Roh & Park, 2019). Virtual restaurant is another notable service that attracts customers using the DCC platform. This type of restaurant incurs high logistic costs as it eliminates the space customers use for dining, and secondly, the business model delivers food to scattered customers. Scholars note that an increase in population density affects urbanisation. More customers are served in small areas, massively delivering products at a lower cost. However, research notes that firms are no longer making a good profit due to increased population density and less space for diners in quiet locations in towns (Glaeser et al., 2001). The firms must create a more sustainable cost structure in extremely densely populated areas to realise profitable business.

Visser et al. (2014) note that home delivery is not only related to DCC; long ago, retailers delivered goods to homes. Mail-order companies delivered parcels to homes, and retailers delivered large goods to the customer's residences. The goods delivered to homes include TVs, furniture, and beds. Traditional mail-order companies and brick-and-mortar stores are moving to a digital collaborative consumption platform. Home delivery is made to one's home address

or another's address, e.g., a neighbour, workplace, or community pick-up point (Visser et al., 2014). Research by Weltevreden and van Rietbergen (2009) conducted in the Netherlands has shown that 78,4% of goods bought are delivered to consumers' homes. The study captured home delivery to determine the influence on PU and PEOU. Having said this, the following hypotheses were proposed:

H1a: Home delivery has a positive effect on Perceived Usefulness.
H1b: Home delivery positively affects Perceived Ease of Use.

3.6.1.2 Economic Benefits

The economic value of DCC, e.g., sharing goods and services, is the most dominant factor in emerging markets. Consumers replace ownership of goods and services through renting at collaborative consumption platform providers. Economic benefits, e.g., price, have been recognised as the most important motivator by Tussyadiah (2015), but other studies found it less important. In studying motivation for participating in open source development, Roberts et al. (2006) find strong evidence supporting extrinsic motivation, e.g., economic benefits as potential future rewards. Fraiberger and Sundararajan (2017) provided an economic analysis of car sharing. They found evidence that consumer surplus was being created by car-sharing and ownership was being substituted by car rental, mainly from below-income users in the USA. Economic benefit was a key motivational factor in the peer-to-peer accommodation-sharing study. In the simple structural equation model of online collaborative consumption,

Hamari (2015) noted that extrinsic motivation (e.g., economic benefits) determines behavioural intentions. Botsman and Rogers (2010) noted that DCC offers more value with less cost. Consumers were motivated to participate in DCC because of the economic benefits associated with the business model. Environmental awareness among consumers makes them find ways to use resources more efficiently to have a sustainable society. Several scholars agree that the DCC economy is cost-saving (Dabbous & Tarhini, 2021; Liu & Chen, 2019). It reduces inequality by providing income to people from all social classes in the community (Sundararajan, 2016). Hamari et al. (2016) noted that DCC is often considered ecologically sound and economical. Participating in the digital collaborative consumption economy could help consumers replace exclusive ownership of their assets. Some individuals realised the economic impact of the DCC platform (Bock et al., 2005; Hamari et al., 2016). The study of

Hars and Ou (2001) finds that economic benefit motivates future rewards in the DCC marketplace. In the context of peers, sharing of economic resources was emphasised.

More recent research by Li et al. (2020) echoed that the rise of DCC in food has been instrumental in improving consumers' living standards and creating employment in the neglected sectors. Researchers note that DCC platforms employ many people. Meituan and Eleme in China employ 1.17 million delivery people, Swiggy in India has 17 thousand delivery people, and the US-based Uber Eats has over 10 thousand employees (Li et al., 2020). On the other hand, Li et al. (2020) expressed concern about DCC firms' poor working conditions for DCC delivery people. For instance, they are reportedly exposed to long working hours, inadequate training and criminal risks they are exposed to while delivering food to the clients. Job satisfaction in the DCC platforms was low because of poor working conditions. Many restaurants that hosted clients face-to-face realised decreased revenue and patronage as consumers bought the food online.

The seminal work of Hars and Ou (2001) found that financial gains are expected rewards for participating in open-source software. Kim and Yoon (2021a) note that digital collaborative consumption enables efficient use and allocation of resources. Earlier work of Kim et al. (2015) found many benefits to consumers who participate in DCC, including enjoying lowering costs in terms of time and finances. The business model enables consumers' reciprocity engagement, creating relationships among consumers and DCC platform providers. This relationship leads to opportunities to utilise underutilised resources, thereby creating additional household income.

Similarly, customer loyalty and buyer-seller relationship are strengthened and act as an economic benefit to the firms and consumers. Chuah et al. (2021) cited economic, cost-saving and financial benefits as the main reasons for engaging in the DCC business model. The researcher hypothesised that extrinsic rewards positively influence perceived usefulness and ease of use. Based on the above assertion, the following hypothesis was proposed:

H1a: Economic benefits positively influence perceived usefulness.
H1b: Economic benefits passively influence Perceived ease of use.

3.6.1.3 Social benefits

In a globalising world, social identity research continues to provide the overarching theory for many hundreds of studies annually, which share the expectation that human is influenced by a sense of membership of the salient groups, which includes personal and social identities, cultural and environmental forces (Hogg et al., 2017). Previous South African research suggests that social identity theory is important in emerging market research (Burgess, 2002, 2003; Burgess & Steenkamp, 1999; Hogg, 2020). Stets and Burke (2000, p. 225) describe a *group* as "a set of individuals who hold a common social identification or view themselves as members of the same category" and can refer to any characteristic with which people identify. It has long been known that consumer behaviour may be influenced by perceived identification with a salient group (i.e., the in-group) or non-identification with a salient group (i.e., the out-group), which may be defined by any of the myriad individual differences or environmental differences associated with a person (Burgess, 2002). To this end, some studies have proven that social identity dynamics satisfy an underlying self-enhancement motive and are motivated by self-esteem (Hogg et al., 2017).

The research focuses on the important potential defining social identity characteristic: technology adoption. Technology adoption can be an important group differentiator that provides important information about one's social identity. For example, news media accounts of the recent attempts of the taxi industry to stop the adoption of the Uber business model have frequently focused on consumer income, social class and other identity characteristics (Geradin, 2016; Schaub, 2018) rather than the consumer benefits of the two transportation models as an attempt to influence social opinion and government regulation. Social identity includes the emotional or evaluative and other psychological correlates of in-group classification. Abrams and Hogg (1988) found that self-categorisation can be separated from self-esteem (evaluative) and commitment (psychological) components (Davis et al., 1989). The social dimension focuses on workers' treatment, respect for human rights, no discrimination, no child labour and fair compensation (Balderjahn et al., 2018).

Sociality refers to the tendency of people to interact in a group and form cooperative relationships (Wittel, 2001). The impact of socialisation on DCC is satisfaction, friendliness and the building of mutual trust among the participants in the emerging markets. Earlier research noted that providing rich exchanges positively affects consumers' trust and intention

to purchase services. Increased online social interaction helps to govern the exchange process and build trust. Online accommodation, car rentals, and cars and services businesses are proving to be lucrative, as evidenced by the expansion of the digital marketplace.

Some other recent findings illustrate these points. Perren and Kozinets (2018) note that social resources and software platforms algorithms interact as a resource and platform operand resources whose negative consequences, such as opportunism, require careful management through assurances and institutional arrangements. Benoit et al. (2017) found the main role of platform providers as 'matchmaking' in digital collaborative consumption. Socialisation in the sharing economy enables free-flowing interactions as actors negotiate and synchronise the services with platform providers to realise social benefits. Service providers such as Uber drivers (hosts) provide a service to the customer (guest) through the service enabler, e.g., Uber, Mr Delivery, and Airbnb. The social platforms thus allow firms, suppliers, customers, employees, and government agencies to work together on the same platform, which could benefit the production and consumption of goods and services in emerging markets.

Digital collaborative consumption impacts the relationship between consumers and service providers. These changes affect consumer relationships, and there has been a debate regarding the impact of online shopping on family time and community interactions (Offiaeli & Yaman, 2021). Families used to accompany one another and enjoy the comfort of others when shopping and preparing food, but this is now different because of online consumption. On the contrary, some studies note that married Korean women are probably less influenced to buy food online due to the obligatory belief to prepare meals for the family. Other scholars perceive that ordering food online enhances family and societal interactions (Offiaeli & Yaman, 2021). Buying food online saves time for consumers, for example, shopping time, preparing the meal for the family and cleaning part, which follows afterwards. Scholars noted that at least 48 minutes are saved when buying food online (Li et al., 2020). Other researchers extend the time saved to two hours daily if the food is bought online (Liu & Chen, 2019). In Italy, online food deliveries increased by 137% in 2017 because consumers delivered their food directly to their offices and doorsteps.

DCC providers provide employment opportunities for drivers who deliver food and prepare meals. New research has shown that DCC provide some lifeline during the COVID-19 pandemic to people quarantined in their homes (Li et al., 2020). DCC apps help reduce social

distancing as people do not interact. Similarly, hospitals in China installed contactless lockers where food is delivered securely in the lockers, and medical personnel unlock using the QR codes and collect the food. DCC platforms allow working consumers to spend their time working without disturbances. The new business model comes with challenges, as it causes too much traffic on the roads. The DCC platform's commission and management systems have made the drivers race against time to meet the delivery deadlines to get more commission, compromising road safety for other road users.

Social interaction and networking between service providers and customers benefit from participating in the DCC business model (Barari et al., 2022). The study by Benoit et al. (2017) and Huang and Kuo (2020) found that social benefits are enjoyed by customers when they interact with service providers like Uber Eats drivers. In addition, current research has shown that social benefits are associated with consumer intention to use apps when buying food online (Kaur et al., 2022; Ray et al., 2019). DCC create social benefits by enabling jobs opportunities in emerging markets, creating social bonds, and providing a wider selection of service providers, which leads to lowering of prices charged by competing service providers (Sastre-Centeno & Inglada-Galiana, 2018). Based on the above assertions, the study proposed the following hypothesis:

H2a: Social benefits positively influence perceived usefulness.
H2b: Social benefits positively influence perceived ease of use.

3.6.1.4 Security assurance

Privacy protection control was found to be key in emerging markets (Pandey et al., 2021). Several participants indicated they were happy with the DCC platform providers as their information was not yet abused. The researchers tested the direct and indirect effects on the intention to consume collaboratively. The current study results are presented in later chapters; however, they showed similar trends of concern about storing and sharing their personal information. The businesses must comply with the POPI act as information-seeking consent is prohibited. Pantazopoulos et al. (2018) argued that Security assurance is the degree of confidence that the security requirements of an IT system are satisfied. In the same vein, Mohamad et al. (2021) argue that security assurance cases are a form of structured argumentation used to reason about the security properties of a system. The presence of security tools and techniques employed by DCC firms promotes trusting beliefs among customers and

must be implemented by the consumers. Empirical studies found a weak relationship between brand reputation and website design (Bart et al., 2005).

In the study, security assurance affects trust in the platform. The term assurance refers to employees' knowledge, courtesy and the ability to convey trust and confidence (Parasuraman et al., 1985). In digital collaborative consumption, assurance could mean winning customer trust during online food delivery. Koay et al. (2022) found that consumers evaluate quality assurance based on the pace at which ordered food is delivered, i.e., the correct food ordered is delivered in the right quantities when buying online. Security assurance was described as the degree of confidence that the security requirements of an information technology system are satisfied (Pantazopoulos et al., 2018). Security, privacy, and safety are important concerns that provide necessary trust to DCC customers when online. A study on security assurance found a weak relationship between brand reputation and website design (Bart et al., 2005). In the study, security assurance affects DCC. The following hypothesis was proposed:

H3a: Security assurance affects perceived usefulness.
H3b: Security assurance affects perceived ease of use.

3.6.1.5 Trust in the Platform

When consumers trust service providers, they are less likely to terminate their commitments, like confidentiality (Kim et al., 2009; Kim et al., 2018; Lee et al., 2018). Trust was found to be a key factor when doing business with the government (Beldad et al., 2012; Shao & Yin, 2018). Researchers (Beyari & Abareshi, 2018; Ng & Feldman, 2013) explained e-commerce purchasing and recommendations using trust. The DCC's word-of-mouth (recommendations) help sustain its reputation (Kim & Park, 2013), a crucial factor in building trust in the DCC platforms.

Teh and Ahmed (2012) developed a model based on the Technology Acceptance Model (TAM) of Davis (1989), describing the adoption of social commerce by adding the trust variable. Trust strongly influences behavioural intention (Barnes & Mattsson, 2017). Information systems scholars on trust identified "four determinants of trust: security, situational anomaly, vendor familiarity and structural assurance" (Gefen et al., 2003 p. 5). Kim et al. (2009) found that trust positively relates to behavioural intention. Trust is important in the development of long-term relationships between businesses and customers. Scholars on global research note trust as a

crucial element of online business (Kim & Peterson, 2017). Trust is important in regulating business agreements (Werbach, 2018; Yousafzai et al., 2003). Trust is now a long-term barrier to realising B2B online commerce. Trust is described broadly as confidence in a person's favourable expectations of what other people will do.

Scholars found trust crucial in promoting participation in DCC transactions (Mattsson et al., 2017; Möhlmann, 2021) and are considered to promote exchange activities online. Rousseau et al. (1998, p. 395) view trust as a psychological state comprising an intention to accept vulnerability based on positive expectations of the intentions or behaviour of another". Research has shown that digital collaborative consumption platforms are very complex, in which the peer consumer interacts with intermediaries and other stakeholders (Möhlmann, 2021). The work of Sundararajan (2016) found that trust cues allow customers to check the suitability of their future transactions. The trust cues include peer ratings (Bolton et al., 2013) which are essential and help to improve service delivery. The outbreak of the COVID-19 virus has positively impacted the food delivery industry. Consumers increased the usage of online tractions when buying food and other products. Trust in digital collaborative consumption platforms increases as users make contactless payments (Marinković et al., 2020). The research by Zhu et al. (2017) validated trust as having the most significant effect on online payments for goods and services (Zhao & Bacao, 2021). In addition, Zhou (2013) found that trust has significant direct and indirect impacts on the behavioural intention to use online payments. Based on the above assertion, the following hypothesis was proposed:

H4a: Trust has a positive effect on perceived usefulness.
H4b: Trust has a positive effect on perceived ease of use.

3.6.2 Cognitive Response (beliefs)

The cognitive response variables for the study are perceived usefulness and perceived ease of use. The researcher analysed the effect of behavioural intention on the intention to continue using DCC.

3.6.2.1 Perceived usefulness

Perceived usefulness is the degree to which a person believes a system of a particular system would enhance job performance (Davis, 1989a). The theory of reasoned action (TRA) developed the technology acceptance model. When describing PU from the customer's

viewpoint implies how the use of technology improves customer performance. Davis (1989a) hypothesised that user attitude determines whether the user accepts or rejects the new system of buying food online. Post-usage usefulness affected the relationship between attitudes and continuance intention (Yeo et al., 2017). Perceived usefulness is described as how much easier buying food on the DCC platform would be. Motivation scholars noted that perceived usefulness is an example of extrinsic motivation (Kim & Yoon, 2021b). Perceived usefulness was found to be promoting consumers' intention to use online food delivery services, which is promoted by high-quality information availability (Kang & Namkung, 2019a). Food delivery service, i.e., DCC platforms, provides up-to-date information on consumption trends, e.g., restaurant lists, price, and menu information. Effective use of DCC generic apps in the food delivery industry requires service providers to produce accurate and reliable information like operations hours, delivery service areas and times. The following hypothesis was proposed:

H5: Perceived ease of use has a positive effect on perceived usefulness.
H6: Perceived usefulness positively affects the intention to continue using digital collaborative consumption.

3.6.2.2 Perceived ease of use

Scholars view perceived ease of use as the extent to which using a specific system is easy (Dong et al., 2017). Other scholars view perceived ease of use as a customer's feeling of effortless and convenience whilst using new technology (Keni, 2020; Stocchi et al., 2019). The theoretical definitions imply that PEOU is how people judge new technologies when they use them and how easy the technology is to use. Perceived ease of use reflects the extent to which specific technology is advantageous and convenient when using technology. PEOU and PU predict attitude and intention to use. The researchers noted that this leads to adopting new technology in the food delivery industry (Kim et al., 2016). Some studies noted that PU is a stronger predictor than PEOU (Porter & Donthu, 2006). Research in digital technology suggests that perceived usefulness explains over 50% of the variance in intention to use technology (Tong, 2010). The results show that consumers prefer new technology if it is easy to navigate and use. The following hypothesis was proposed.

H7: Perceived ease of use has a positive effect on DCC.

3.6.1.8 Covariates

The covariates measure the sample's characteristics, including gender, age, educational achievements, and household income. Understanding the digital collaborative consumption consumers' background information and comparing it in different countries is important. The covariates help the researcher to analyse the differences in consumption behaviour based on gender, among other variables. However, no group difference analysis takes place for the current study.

3.7 CHAPTER SUMMARY

The chapter presented new empirical insights into the relevant DCC constructs and theorised relations grounded in solid literature. The two overarching theories were discussed in the chapter: the technology acceptance model and the theory of reasoned action. Hypotheses on the theorised relations were formulated per variable by adapting scales from previous studies. The following chapter discusses the methodology used in the study. The researcher adopted Saunders et al. (2019a)’s framework on research onion, and it was found to be useful as it lays steps that need to be followed in the study. The six steps start with the research philosophy and end with the techniques and procedures used in the study.

CHAPTER 4

METHODOLOGY

4.0 INTRODUCTION

The methodology section of the study explains how the research will be undertaken. The chapter includes a system of beliefs and philosophical assumptions which assist in understanding the research question and influence the choice of research design. The construction of the methodology chapter follows the well-known theoretical concept of research onion proposed by (Saunders et al., 2019a). The research onion framework has six layers or stages which need to be followed to formulate an effective methodological section, and these are:

(1) Research philosophy

(2) Approaches to theory development

(3) Methodological choice

(4) Strategy

(5) Time horizon

(6) Techniques and procedures for data collection and analysis (Saunders et al., 2019a).

The chapter starts by following a research assumption to distinguish research philosophies: epistemology, ontology and axiology. The survey instrument for the study was developed using items validated in previous studies in consumer behaviour settings. The participants who participated in the study gave background information and completed the study's primary constructs. The main latent constructs of the study are home delivery, economic benefits, social benefits, trust, assurance, perceived usefulness, perceived ease of use and digital collaborative consumption.

4.1 THE CONTEXT

The democratisation of South Africa post-1994 has been accompanied by continuing and even deepening economic inequality with a high level of poverty and unemployment (Fine, 2018, p. 126). This trend hinders potential economic growth and development. Despite its challenges, South Africa remains the advanced economy of emerging African markets. According to Statistics South Africa 2019, over 66 per cent of the 59 million South African population live

in urban areas and use online food delivery. Consumers prefer the online food delivery platform (Yeo et al., 2017). The development of online retailing in South Africa means unlimited dishes available to consumers (Yeo et al., 2017). The South African food delivery industry offers additional online services to remain competitive. Prior research has addressed general consumer attitudes towards online buying, and no researchers have addressed DCC in the food delivery industry in the South African context. The current research seeks to test DCC drivers in the food delivery industry in emerging markets.

4.2 RESEARCH PHILOSOPHY

The research philosophy of the study refers to a system of beliefs and assumptions about knowledge development (Saunders et al., 2019a). Research philosophy guides the study flow, assumptions and knowledge nature (Pranas & Regina, 2018). This implies that researchers have different assumptions about the nature of truth, knowledge, and acquisition. Scholars agree that research philosophy as a method of enquiry has four essential characteristics, which are reflective, meditative activity; seeking clarification and understanding rather than binding axioms and universal truth; has no particular subject matter on its own and lastly, achieving its goals by thrusting ideas against one another and challenging underlying assumptions (Žukauskas et al., 2018). The researcher believes philosophy is an ongoing questioning process, juxtaposing ideas. Research philosophy is not necessarily about identifying contradictions and ambiguities but exposing underlying assumptions and raising questions about the validity and value of those assumptions. Scientific research philosophy has been viewed as a method that allows generations of ideas into knowledge within the research context, which can fall into positivist, interpretivism, pragmatist, and realist research philosophies. To understand research philosophy as part of the methodology, the researchers used the research onion approach as an alternative method, as indicated in Figure 12 below.

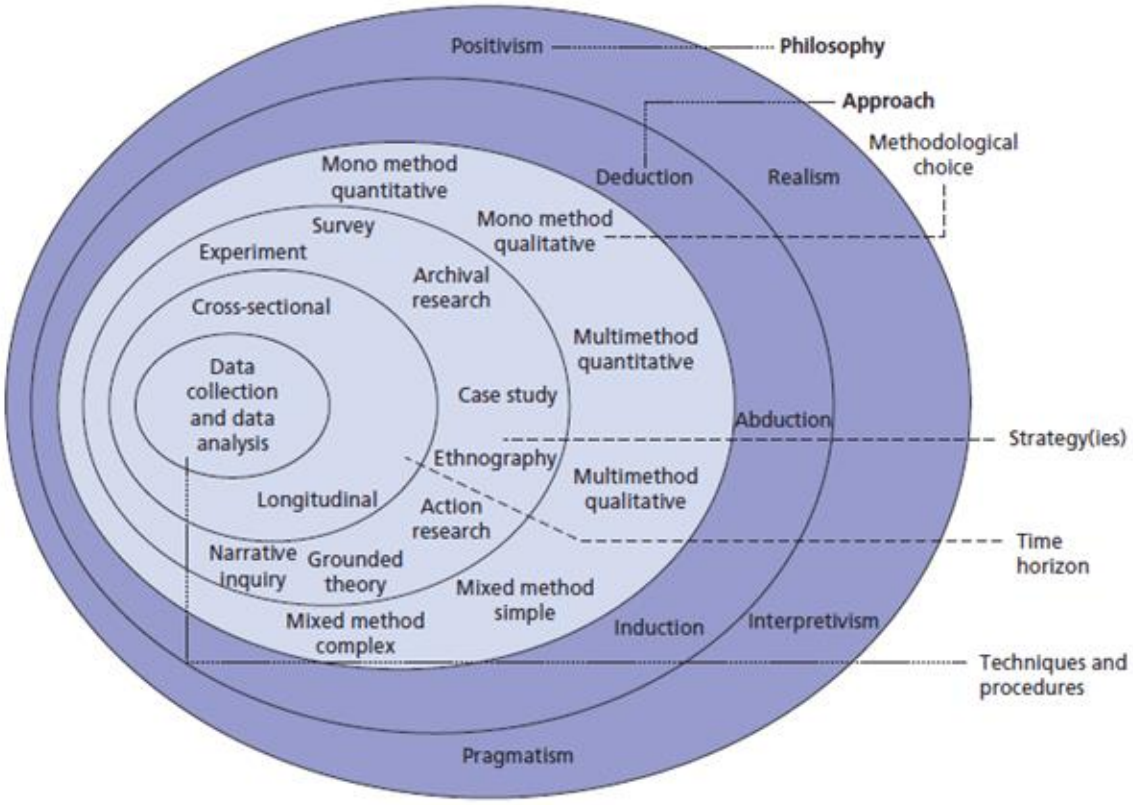


Figure 12: The Research Onion

Adapted from Saunders et al. (2019a, p. 130)

Following the research onion concept, the researcher started by focusing on the methodology for delineating the main research philosophy. The research approach was chosen, the method and strategies were considered, and the time horizon (Melnikovas, 2018). The positivism philosophy was adopted for the current study as it reflected the philosophical stance of natural scientists (Hansmeier et al., 2021; Melnikovas, 2018). The researcher's views of reality were informed by external objectives and independent social actors who are digital collaborative consumers. The quantitative approach was used for the study. Data was collected through the Qualtrics platform, where the self-administered questionnaire was loaded, and respondents used a link to complete the research tool. Data were analysed, and hypotheses were tested based on the hypothesised model. Table 11 shows the differences between the research philosophical positions of Saunders et al. (2019b).

4.2.1 Epistemology

The concept concerns answering what is regarded as acceptable knowledge in the discipline. Bryman et al. (2016) noted a central question in the epistemology of whether the social world

can be studied according to some principles and procedures and others as natural science. Epistemology is viewed as the assumptions about what constitutes valid knowledge and how that can be communicated to others (Burrell & Morgan, 2017). Three epistemological approaches are positivism, realism and interpretivism.

4.2.2 Positivism

The positivist assumption represents the traditional form of research, which holds true for quantitative rather than qualitative research (Creswell & Creswell, 2018). Positivism challenges the traditional notion of the absolute truth of knowledge and recognises that research cannot be positive about the claims of knowledge when studying human actions and behaviours (Creswell & Creswell, 2018; Phillips & Burbules, 2000).

4.2.3 Positivist assumptions

The key assumptions of their position were proposed by Phillips and Burbules (2000).

i. Knowledge is theoretical and anti-foundational, where absolute truth can never be found. The author argues that evidence established in research is always imperfect and fallible. In the study, the researcher avoided using the words "prove hypothesis".
ii. Research is the process of making claims and then reforming and abandoning some of them for other claims that are more strongly warranted (Creswell & Creswell, 2018). The (Heron, 1996)study starts by testing the theory before making claims.
iii. Data, evidence, and rational considerations were found to be shaping knowledge. The study satisfies this assumption by collecting data on instruments based on measures completed by participants.
iv. The research seeks to develop relevant and true statements that explain the situation of concern that describe the causal relationship of interest. The researcher satisfies the assumption by advancing the variables by posing questions and hypotheses in the study.
v. Being objective is essential to competent inquiry (Creswell & Creswell, 2018; Phillips & Burbules, 2000). The researcher examines methods and reliability tests in the study to ascertain competent inquiry.

4.2.4 Critical realism

Critical realism philosophy "focuses on explaining what we see and experience, in terms of the underlying structures of reality that shape the observable events" (Saunders et al., 2019a, p. 147). Melnikova (2018) considers critical realism as assuming the flexibility of the future. His school of thought assumes that the future can be influenced to some extent by consumers. Patomäki (2006) argue that the critical realist position provides the basis for future studies. These views were supported by Aligica and Boettke (2011), who argued that the approach could be employed to explain future constraints. Critical realists see reality as external and independent but not accessible through observation. What researchers experience is empirical, a manifestation of the things in the real world rather than the actual things.

The critical realism assumptions were proposed by Melnikovas (2018) based on the previous works (Bell, 2003; Patomäki, 2006; Van der Heijden et al., 2003) and formulated the following assumptions:

i. Reality can be divided into three domains.
    a. The domain of real, which is the largest, consists of mechanisms, events, and experiences.
    b. The domain of actual, consisting of events and experiences and,
    c. The domain of empirical is the smallest and consists of experiences. Many more real possibilities exist than actual and empirically observed events in a closed system. Real-world can be known as knowledge about the world that lies within the real domain.
ii. The future as an entity is real, although not manifested yet, and consists of multiple possibilities.
iii. Social reality is an open system containing observable and non-observable components and dimensions. This makes it difficult to have precise scientific predictions. Researchers can anticipate the future based on the observation of generative mechanisms.
iv. Analysis of possible futures creates different narratives of how the future may unfold, and
v. Future studies are focused on ongoing processes and actions rather than past events. Futurologists explain the development of various social structures and specify boundary conditions.

Based on ontological studies, positivism philosophy provides theoretical ground for future studies where obtaining actual data is possible, e.g., in demography and economic development areas. Critical realism assumes that the present situation can influence different futures.

In conclusion, the phenomena for positivists are observable, and causality between their elements is timely and consistent (Irshaidat, 2022). The researcher adopted positivism to document actions that form patterns, assuming the applicability of casting these patterns on other venues and actors in similar situations (Gammelgaard, 2004). Positivism seeks to identify the relationship between constructs in a model. Lin (1998) noted that positivism is not designed to comprehend how and why variables are sequenced. Positivism was adopted for the study because it allows the investigator to be detached form the enquiry as they are not personally or emotionally involved in the process to reduce bias (Healy & Perry, 2000; Irshaidat, 2022). Positivists operate based on the hypothesis to accept or reject causality between variables (Bailey et al., 2009). Positivism makes generalisation possible by identifying similarities concerning the phenomenon under study within the varied conditions to apply findings to other conditions (Irshaidat, 2022; Rudnick, 2014). Positivists noted that trustworthiness is manifested in reduced error margins, and replicable findings reflect reliability (Healy & Perry, 2000; Hjørland, 2005).

4.2.4 Interpretivism

The development of interpretivism resulted from the limitations of positivism in the application of social science. The approach assumes that researchers cannot study human beings the same way they study objects in natural sciences because humans constantly change, and the environment influences them (Alharahsheh & Pius, 2020). The scholars recommended that people not be studied in laboratories because they do not live in laboratories. Several intellectual traditions influenced interpretivism, and these include the following:

(a) Hermeneutics concerns the theory and method of interpretive or human actions (Bryman et al., 2016).

(b) Phenomenology focuses on how humans make sense of the world around them. The researcher's task is to interpret and get a better understanding of human behaviour and describe it from the perspective of the very same group.

(c) Symbolic interactionists see reality as highly symbolic and constructed (Melnikovas, 2018). Human beings can read meaning into one's actions because they share a meaning system, such as language.

4.2.5 Ontology

Saunders et al. (2019a) view ontology as an assumption about the nature of reality. Bryman et al. (2018) noted that questions of social ontology concern the nature of social phenomena, either objectivism or constructivism.

a. Objectivism is an ontological position that asserts that social phenomena and their meaning have an existence that is dependent on social factors (Bryman et al., 2016, p. 17). An organisation is viewed as a tangible object with rules and regulations and adopts standardised procedures to get things done.

b. Constructionism is viewed as an alternative ontological position that challenges organisation and culture as pre-given and therefore confronts social actors as external realities that social actors have no role in fashioning. Social constructivists believe that individuals seek to understand the world in which they live (Creswell, 2018). Individuals develop meanings of their own experiences. Crott and Gilis (1998) identified several assumptions of constructivism.

   - Human beings construct meaning as they engage with the world they are interpreting. Open-ended questions in qualitative research use a constructivist viewpoint to allow participants to share their views.
   - Humans engage with their world and make sense of it based on their historical and social perspectives. Qualitative researchers ask questions to understand the context or setting of the participants through visiting and gathering information personally.
   - The basic generation of meaning is social, arising in and out of interaction with communities in society. The process used by qualitative researchers is inductive, where the inquirer generates meaning from data collected from the field.

Table 11: Research Philosophical positions

Ontology (nature of reality or being)	**Epistemology (what constitutes acceptable knowledge)**	**Axiology (role of values)**	**Typical methods**
Positivism			
Real, external, independent one trie reality (universalism) Granular (things) Ordered	Scientific method Observable and measurable facts Law-like generalisations Numbers Causal explanation and prediction as a contribution	Value-free research The researcher is detached, neutral and independent of what is researched The researcher maintains an objective stance	Typically deductive, highly structured, large samples, measurement, typically quantitative methods pf analysis, but a range of data can be analysed
Critical realism			
Stratified/layered (the empirical. The actual, and real) External, independent intransient Objective structures Causal mechanism	Epistemological relativism Knowledge historically situated and transient Facts are social constructions Historical causal explanation as a contribution	The value-laden researcher acknowledges bias by world views, cultural experience and upbringing. The researcher tries to minimise bias and errors. The researcher is as objective as possible.	In-depth historically situated analysis of pre-existing structures and emerging agency. Range of methods and data types to fit the subject matter.
Interpretivism			
Complex, rich Socially constructed through culture and language Multiple meanings, interpretations, and realities Flux of processes, experiences, practices	Theories and concepts are too simplistic. Focus on narratives, stories, perceptions and interpretations. New understanding and world view as a contribution.	Value-bound research. Researchers are part of what is searched, subjective. Researcher interpretations are key to contribution. The researcher is reflective.	Typically inductive. Small samples, in-depth investigations, qualitative analysis methods, but a range of data can be interpreted.
Postmodernism			
Norminal complex, rich Socially constructed through power relations Some meanings, interpretations, realities are dominated and silenced by others Flux of processes, experiences, practices	What counts as truth and knowledge are decided by dominant ideologies. Focus on absences, silences and oppressed or repressed meanings, interpretations and voices. Exposure of power relations and challenge of dominant views as a contribution.	Value constituted research. Researcher and research embedded in power relations. Some research narratives are repressed and silenced at the expense of others. The researcher is radically reflexive.	Typically deconstructive – reading texts and realities against themselves. In-depth investigation of anomalies, silences and absences. Range of data types, typically qualitative methods of analysis.
Pragmatism			
Complex, rich, external Reality is the practical consequence of ideas Flux of processes, experiences and practices	The practical meaning of knowledge in specific contexts. True theories and knowledge are those that enable successful action. Focus on problems, practices and relevance.	Value-driven research. Research initiated and sustained by the researcher's doubts and beliefs. Researcher reflexive.	Follows research problem and research question. Range of methods: mixed, multiple, qualitative, quantitative, and action research. Emphasis on practical solutions and outcomes.

	Problem-solving and informed future practice as a contribution.		

Source: Adapted form Saunders et al. (2019a, p. 144)

4.2.6 Axiology

Saunders et al. (2019b) view axiology as the role of values and ethics. The researchers want to view the impact of the beliefs and values of consumers in the research. Heron (1996) argues that researchers' values guide all human actions. This assumption is seen when researchers choose one topic instead of the other. The researcher must be able to articulate the values based on making judgements about the research. Melnikovas (2018) views research philosophy as forming the basis of the research by delimitation of ontology, i.e., the nature of reality, and epistemology is the nature of the source of knowledge or facts. The third view focuses on axiology, the study's values, beliefs, and ethics.

4.2.7 Pragmatism

Pragmatism arises from actions, situations and consequences rather than antecedent conditions (Creswell & Creswell, 2018). The viewpoint strives to reconsider objectivism and subjectivism, facts, values, accurate rigorous knowledge and different contextualised experiences (Saunders et al., 2019a). Pragmatism was found to be a philosophical underpinning for mixed methods studies Tashakkori and Teddlie (2021). However, the current study on drivers of DCC in emerging markets did not incorporate a pragmatism approach as it uses a mixed method. The researcher considered the study's theories, concepts, ideas, hypotheses, and research findings, which are some of the elements in the approach.

4.2.8 Post-Modernism

The philosophical concept emphasises the role of language and power relations, seeking to question accepted ways of thinking and considered marginalised viewpoints (Saunders et al., 2019a). The philosophical viewpoint emphasised the chaotic primary flux, movement, fluidity and change instead of focusing on objectivist and realist ontology of things. Postmodernism deconstructs reality to search for instabilities within the widely accepted truths and what has not been discussed (Melnikovas, 2018; Stezhko & Shalimova, 2022). The study used positivism as a philosophical viewpoint to answer the research questions: (1) What are the drivers of DCC in the South African food delivery industry? and (2) What are the deterrents of DCC in the food delivery industry?

4.3 APPROACHES TO THEORY DEVELOPMENT

Saunders et al. (2019a) identified three approaches to theory development which are deductive, inductive, and abductive.

4.3.1 Deductive

Deductive research logic is whereby the researcher starts from the general rule to a specific law like inference, and this approach is used for theory testing (Melnikovas, 2018). The six steps deductive approach was recommended by (Blaikie, 2007, 2018; Blaikie & Priest, 2019) as follows:

i. Put forward a tentative idea, a premise apotheosis, or a set of hypotheses to form a theory.
ii. Use existing literature to specify conditions under which the story is expected to hold deduced proposition.
iii. Examine the premises in the logic of the argument that produced them and compare them with the existing theories.
iv. Test the premises by collecting appropriate data to measure the concept.
v. If the analysis results are inconsistent with the premises, i.e., the test fails, the theory is false and must be rejected, modified, and restarted.
vi. If the results are consistent with the premises, the theory is corroborated.

Table 12: Approaches to theory development- deduction, induction and abduction

	Deduction	Induction	Abduction
Logic	In deductive inference, when the premises are true, the conclusion must also be true	In inductive inference, known premises are used to generate untested conclusions	In an abductive inference, known premises are used to generate testable conclusions
Generalisability	Generalising from the general to the specific	Generalising from the specific to the general	Generalising from the interactions between the specific and the general
Use of data	Data collection is used to evaluate propositions or hypotheses related to an existing theory	Data collection is used to explore a phenomenon, identify themes and patterns and create a conceptual framework	Data collection is used to explore a phenomenon, identify themes and patterns, locate these in a conceptual framework and test this through subsequent data collection and so forth
Theory	Theory falsification or verification	Theory generation and building	Theory generation or modification; incorporating existing theory, where appropriate, to build new theory or modify existing theory

Source: adapted from Saunders et al. (2019a, p. 153)

The study used a deductive approach to develop a theory of the study. The process made it possible to generalise the findings.

4.3.2 Induction

Inductive reasoning is a way of theory building which starts with the observation that a general rule is formulated (Melnikovas, 2018). Inductive reasoning is associated with intuitive techniques (Kuosa, 2011, 2016). The inductive approach is concerned with the context in which events take place. This approach is aimed at controlling information through structural and categorisation argumentation.

4.3.3 Abductive

The abduction starts with observing a surprising fact and then works out a plausible theory of how the event occurred. The abductive approach aims to identify structures, connections, contexts and constraints and involves using cognitive argumentation (Melnikovas, 2018). The researcher with different philosophies can use abductive. In the current study, the researcher used the deductive approach, which translates to moving from theory to data in the development of the research. This stage was necessary as the objective was to create a theory from data to theory rather than to test the TAM and theory of planned behaviour theory in the food delivery industry. Data collected was used to test the hypotheses and evaluate whether they relate to the existing theory.

4.4 METHODOLOGICAL CHOICE

Saunders et al. (2019a) review research choice with reference to quantitative or qualitative research methods, simple or complex or both or the use of a mono method. The qualitative method prefers induction informed by constructivism and interpretivism. Melnikovas (2018) identified four traditions of qualitative research, which were proposed by (Holstein & Gubrium, 2011). Naturalism seeks to understand social reality in its terms. It provides a detailed description of people as well as their environment.

1. Naturalism seeks to understand social reality in its terms. It provides a detailed description of people as well as their environment.
2. Emotionalism is one concerned with subjectivity and gaining access to inside experience. In simple terms, its emotionalism concerns the inner reality of human beings.
3. Ethnopedology seeks to understand how social orders are created through talk and interaction and has a naturalistic orientation.
4. Postmodernism emphasises a method talk. The approach mainly concerns constructing social reality (Bryman et al., 2016).

4.4.1 Quantitative research

The quantitative research method was used in the current study. Quantitative research was designed to enable the allocation of variables and hypotheses to allocate variable and hypothesis (Abdelhakim, 2021). The collected data for the study is either rejected or supports the paradigm. Cohen et al. (2007) argued that quantitative research is mainly used in epistemology and ontology regarding human behaviour. Daniel (2019) found that quantitative

research used the theory to generate data. Saunders et al. (2019b) delimit research selections into two main ones, which are quantitative and qualitative.

4.4.2 Criticism of quantitative research

Bryman et al. (2016) noted that quantitative research has shortcomings: failing to distinguish people and social institutions from the natural world, like a false sense of precision from the measurement process statistics, a static view of social life and a missing connection between research and everyday life.

4.4.3 Criticism of qualitative research

The method has shortcomings, including being too impressionistic and subjective, difficult to replicate, generalisation problems and lack of transparency (Bryman et al., 2016). Multi-choice methods require using either qualitative or quantitative methods, although the research is focused on one of the two (Saunders et al., 2019a). The current study used the quantitative method to determine drivers of digital collaborative consumption in the food delivery industry. The researcher is interested in measuring hypotheses of human behaviour, which is evaluated by participants' experiences as recommended by (Creswell & Creswell, 2018).

4.5 RESEARCH STRATEGIES

Hernández et al. (2016) describe research strategies as systems used to collect data for the research project, which are practical or hypothetical. Each research strategy can be used for investigative, exploratory and descriptive research. Several methods and techniques used in the study are according to the research problem and objectives. Saunders et al. (2019a) identified several research strategies which the researchers can use:

- The experiment examines where the hypothesis is tested methodologically (Buchanan & Scofield, 2018).
- The survey is an empirical study where individualities and interrelations of psychological and sociological variables (Kapur, 2018).
- The case study explores real-life practical phenomena (Hernández et al., 2016).
- Ethnography involves anthropologists with the local community and gathering detailed life accounts of tradition and local people's behaviour (Abdelhakim, 2021).
- Grounded theory gathers a logical data set to discover or develop a theory (Reiter, 2011).

- Archival data strategy concerns data gathering and sharing for later planned use (Das et al., 2018).
- Action research is concerned with the resolution study of significant or administrative subjects. It is a correlation between theory, practice and intermediating discourse (Yu, 2006).
- Narrative inquiry is a philosophical and theoretical approach that turns the researcher to live stories to gather data (O'Toole, 2018).

The current study used the survey approach to describe attitudes, trends and opinions of the population and test the association among the population variables by studying a sample of that population (Creswell & Creswell, 2018, p. 147). The survey method for this study helped the researcher to ask three distinctive questions which are:

1. descriptive
2. relationship between variables, and
3. questions about predictive relationships between variables over time.

Fowler Jr (2013) noted that researchers must specify the form of data collection, which could be male, telephone, the internet, personal interviews, or group discussions. The study used a self-administered questionnaire shared online using the Wits Qualtrics platform, which is an online platform used to collect data. The respondents got the link and completed the survey at their own convenient time. The Qualtrics platform was easier for the researcher to track participants who had completed the questionnaire. The platform showed the completion rate, and it was simple to export and analyse the results.

4.6 TIME HORIZON

Abdelhakim (2021) described time horizons as the periods to be studied or sequential horizons of changing extent. Saunders et al. (2019a) distinguished cross-sectional research and longitudinal research horizons. The cross-sectional research design involves collecting data on more than one case simultaneously (Bryman et al., 2016, p. 107). Numerous case studies focus on interviews done over a short period. Hernández et al. (2016) noted that longitudinal research could study changes or improvements in the phenomenon. The type of study may take place over several months or years. A cross-sectional research design was used in the study. Data was collected over a shorter period, which is specifically six months. The cross-sectional design is defined as data in which the same information is asked from different samples of individuals

each time (Doering, Suresh, & Krumwiede, 2020; Rafferty, Walthery, & King-Hele, 2015). Lavrakas (2008) note that reliability in cross-sectional design is improved by collecting data from a large sample and using a consistent sampling approach.

4.7 TECHNIQUE AND PROCEDURES

Saunders et al. (2019a) argued that techniques and procedures mainly focus on data collection and analysis techniques. A self-administered survey was used to collect data from the public. The self-administered method was cheaper to administer than other forms of data collection. Participants in different parts of the country managed to participate in the study virtually as they completed the questionnaire independently. The researcher found the self-administered survey quicker to administer as the process was done by sharing the questionnaire link with prospective participants. Bryman et al. (2016) noted that a self-administered questionnaire has some advantages, which include the absence of interviewer effects, no interviewer variability and convenience for respondents. Kapur (2018, p. 324) noted a greater possibility of anonymity and greater convenience for participants as they could complete their questionnaires independently without writing their names. The self-administered questionnaire was developed by adopting scales used in previous studies, as indicated in annexure A.

4.8 SAMPLING DESIGN

The study used the established sampling procedure recommended by other scholars in consumer behaviour research. The steps define the population of interest, data collection method, sample frame, sampling method, and sample size. Babbie (2015) argued that sampling design assists in determining whether the population needs cluster sampling or single sampling. A sample is a subset of the population considered representative of the sample. Figure 13 shows the steps followed by the researcher to determine the sample size.

STEP	DESCRIPTION
1	Definition of the population
	
2	Data collection method
	
3	Description of the sample frame
	
4	Sampling method
	
5	Sample size

Figure 13: Sample design steps

Source: the researcher

4.8.1 Step 1: Population of interest

Malhotra (2015) noted that determining the appropriate population and sample to choose respondents is crucial in survey research. The population is the totality of units from which the sample will be derived (Bell et al., 2022; Zigmond and Stipp, 2010). Wiid and Diggines (2013, p. 186) view population as "the total group of people or entities from which information is required." The researcher defined the study population as people who have access to the internet and use food ordering and or delivery applications to order food in South Africa. The target population is a set of all the people or subjects the researcher is interested in knowing from which the sample is selected (Kapur, 2018, p. 364). In this study, the target population is the consumers who ordered food online using Mr Delivery, Uber Eats, Bolt Food and OrdeIn apps in the South African market. Sophisticated statistical analysis tests relationships among latent variables, generalised to a large undefined population (Dillman & Bowker, 2001). Target population identification was key to the study as it was the first step. Ceci (2021) noted that

36.45 million South Africans had accessed the internet using one or more devices. POPI Act made it difficult for the researcher to access consumer databases; hence the members of the public participated in the survey.

4.8.2 Step 2: Data Collection

Data collection involves interviewing and completing a research questionnaire for the organisation or individual. The choice of data collection method was found to be critical in the research process (Kapur, 2018). The self-administered questionnaire was used to collect data from the participants. A total of 828 valid responses were considered enough by the researcher for the study. Lack of sampling frame, reliable transport, unreliable mail delivery services, and low penetration of internet services hamper primary data collection in emerging markets (Burgess & Steenkamp, 2006). The researcher overcame transport and mail delivery services using a self-administered questionnaire completed on the Qualtrics platform. The consumers who ordered food online using Mr Delivery, Uber Eats, Bolt Food and OrdeIn apps were considered for the study. The companies were chosen because they have footprints in all urban and peri-urban areas across South Africa. Respondents completed the questionnaire on their smartphones, computers and tablets. Use of paper and pencil was not used because of the COVID-19 pandemic.

4.8.2.1 Self-administered questionnaire

The self-administered questionnaire was developed from adopted items from previous studies. Bryman et al. (2016) noted that in the self-administered questionnaire, respondents completed their questions themselves without the help of the other person or the interviewer.

Advantages of the self-administered questionnaire

The advantages of the self-administered questionnaire were noted by Bell et al. (2022), and they include the following:

- They are cheaper to administer
- They are quicker to administer
- They are convenient for the respondents

Disadvantages of the self-administered questionnaire

- Cannot probe questions as they must be clear

- Difficult to ask other kinds of questions, unlike open-ended questions, respondents do not want to write a lot.
- It is difficult to know the person who answered as there is anonymity.
- Long questionnaires are rarely feasible, and participants end up not answering.
- There is a risk of missing data. The researcher rejected questionnaires which did not have a completion rate of at least 65%.
- The type of tool has a very low response rate (Bell et al., 2022; Bryman et al., 2016).

The study used closed-ended questions on a five-point Likert scale to make it easier to complete the tool. The physical layout of the questionnaire was found to be important. Johnson and Onwuegbuzie (2004) argued that a questionnaire must be as short as possible. The self-administered questionnaire was divided into three sections, namely:

A - covering DCC service providers in South Africa

B - covering beliefs and attitudes constructs in the model and

C covering background information of the respondents.

The measuring instrument is shown in annexure A.

4.8.3 Step 3: Sample frame

Bryman et al. (2016) describe a sample frame as listing all units in the population from which the sample will be selected. The sample frame incorporates the basis on which respondents are selected. The sampling frame is important for any study as it mirrors the population of interest. Hair Jr and Sarstedt (2021) noted that the sample frame lists all eligible sampling units related to the population. The three characteristics of a good sample are comprehensiveness, probability of selection and efficiency. The consumers who buy food online in South Africa using online platforms and other applications like UberEats, Mr Delivery, Orderin and Bolt were considered part of the sampling frame as the actual list of individuals, households, organisations, or other identifiable units that make up the population of interest. The researcher did not have the sampling frame for the study as the actual list of individuals or institutions that buy food online using apps or other platforms was unavailable.

4.8.4 Step 4: Sampling method

The researcher must determine how the study sample units will be selected from the population. Previous studies indicated that sampling methods are divided into two major categories: probability sampling and non-probability sampling (Bell et al., 2022; Bryman et al.,

2016). The researcher's research design and objectives informed the sample size decision. The sampling process was influenced by the sample size of the related studies and the resource constraints (Malhotra, 2015). Cross-national consumer studies have used sample sizes ranging from 200 respondents and above to perform structural equation modelling and measurement invariance analysis (Burgess & Steenkamp, 2006; Hamari et al., 2016; Steenkamp & Maydeu-Olivares, 2021). Scholars concur on the need for an adequate sample size to avoid sampling errors and generalise the results (Taherdoost, 2017). Non-probability sampling method was used in the study as the sample frame was not available. Convenience sampling is a type of non-probability sampling where members of a target population that meet certain criteria such as accessibility using online platforms or in person, geographical proximity, and willingness to participate are selected for the study (Dörnyei & Ushioda, 2009, 2021; Etikan, Musa, & Alkassim, 2016). The main assumption of purposive sampling is that population is homogenous, and differences in research results won't be noticed if data is collected using random sampling (Etikan, 2016). Weaknesses of purposive sampling noted in literature include bias as the population is not represented. The effect of outliers has a devastating effect on subject selection (Hatch & Lazaraton, 1991). As recommended, the researcher removed outliers from the data (Ghosh & Vogt, 2012). Participants below eighteen years of age and those not using DCC platforms when buying were considered outliers by the researcher and excluded from the study.

4.8.5 Step 5: Sample size

The sampling size is the number of elements included in the study (Malhotra, 2015; Malhotra et al., 2004). Scholars agree that determining sample size is complicated (Kapur, 2018). The sample size is essential as it provides a basis for estimating the sampling error. Bryman et al. (2016, p. 171) describe sampling error as the difference between the population and the population from which it is selected. Sampling size directly impacts the appropriateness and statistical power of the structural modelling. Kumar (2019) identified four factors which govern the sample size, and these are:

i. the number of groups within the sample
ii. the significance of the information and exactness required of the results
iii. cost of the sample, and
iv. the unevenness of the population.

The study sample was drawn from a population of 36.45 million using the approach suggested by Krejcie and Morgan (1970) as confirmed by the Research Advisors 2006. Arifin (2018)

argued that sample size calculation is not easy, as sample size calculators for reliability coefficients are repetitively scarce. The target sample for the study was drawn from consumers who lived in both rural and urban provinces of South Africa. Table 13: An extract Table for determining sample size.

A sample size justification should consider how informative the data will be given an inferential goal, such as estimating the effect size or testing the hypothesis (Lakens, 2022). The researcher used the sample size based on the heuristics. VanVoorhis and Morgan (2007) translate an absolute minimum of 50 + 8 observations for regression analysis suggested by a rule of thumb in Green (1991) into the recommendations to collect a minimum of 50 observations. The study collected 827 observations, far above the minimum required observations in social sciences. Simmons, Nelson, and Simonsohn (2013) recommended a sample size of more than fifty (n > 50) observations in quantitative research.

Table 13: An extract Table for determining sample size

Population Size	Confidence 95.00% Degree of Accuracy/Margin of Error				Confidence 99.00% Degree of Accuracy/Margin of Error			
	0.05	0.035	0.025	0.01	0.05	0.035	0.025	0.01
10	10	10	10	10	10	10	10	10
20	19	20	20	20	19	20	20	20
30	28	29	29	30	29	29	30	30
50	44	47	48	50	47	48	49	50
75	63	69	72	74	67	71	73	75
100	80	89	94	99	87	93	96	99
150	108	126	137	148	122	135	142	149
200	132	160	177	196	154	174	186	198
250	152	190	215	244	182	211	229	246
300	169	217	251	291	207	246	270	295
400	196	265	318	384	250	309	348	391
500	217	306	377	475	285	365	421	485
600	234	340	432	565	315	416	490	579
700	248	370	481	653	341	462	554	672
800	260	396	526	739	363	503	615	763
900	269	419	568	823	382	541	672	854
1,000	278	440	606	906	399	575	727	943
1,200	291	474	674	1067	427	636	827	1119
1,500	306	515	759	1297	460	712	959	1376
2,000	322	563	869	1655	498	808	1141	1785
2,500	333	597	952	1984	524	879	1288	2173
3,500	346	641	1068	2565	558	977	1510	2890
5,000	357	678	1176	3288	586	1066	1734	3842
7,500	365	710	1275	4211	610	1147	1960	5165
10,000	370	727	1332	4899	622	1193	2098	6239
25,000	378	760	1448	6939	646	1285	2399	9972
50,000	381	772	1491	8056	655	1318	2520	12455
75,000	382	776	1506	8514	658	1330	2563	13583
100,000	383	778	1513	8762	659	1336	2585	14227
250,000	384	782	1527	9248	662	1347	2626	15555
500,000	384	783	1532	9423	663	1350	2640	16055
1,000,000	384	783	1534	9512	663	1352	2647	16317
2,500,000	384	784	1536	9567	663	1353	2651	16478
10,000,000	384	784	1536	9594	663	1354	2653	16560
100,000,000	384	784	1537	9603	663	1354	2654	16584
264,000,000	384	784	1537	9603	663	1354	2654	16586

Source: Adapted from The Research Advisors (2006)

The sample size was determined using the following equation:

$s = x^2NP(1-P)/ d^2 (N-1) + x^2 P(1-P)$

Where:

s = required sample size

x^2 = the table value of chi-square for one degree of freedom at the desired confidence level

N = the population size.

P = the population proportion (assumed to be .50 since this would provide the maximum sample size)

d = the degree of accuracy expressed as a proportion (.05)

Based on the recommendation of Krejcie and Morgan (1970), Table 13 shows the targeted sample size ranges for a given population. A population size of 36 450 000 was estimated for the study as it represents the number of consumers accessing the internet in South Africa. Using the same model, with a confidence interval of 99% and a margin of error (degree of accuracy) of 3.5%, the researcher sampled 827 respondents. Initially, the researcher used a 95% confidence interval and a 5% margin of error, and the target sample size was 784. The researcher maintained the same level of precision, i.e., the margin of error at 3.5% and the probability that the margin of error contains true precision, i.e., confidence interval at 99%. This step helped increase the target sample to estimate the true population proportion, i.e., the study's sample size to 1354 participants. A sample of 827 respondents was drawn from the population, representing a 61% response rate from the target sample. The respondents' responses were anonymously recorded, and it was challenging to identify the responses of consumers who participated in the study. The process helped to reduce biases.

4.9 STRATEGIES TO IMPROVE RESPONSE RATE

The researcher followed the procedures recommended by Krejcie and Morgan (1970), cited in Saruchera (2014), to determine the targeted sample size used to calculate the response rate. Following the mentioned procedure, the researcher's targeted population was 36 450 000. As illustrated in Table 8, the response target sample calculated was found to be 1354. A total of 1635 respondents answered the self-administered questionnaire on Qualtrics. Most participants elected not to participate in the study, and the researcher respected their opinions. The responses were cleaned, resulting in 827 responses meeting the set criteria of accepting

questionnaires completed to a 65% level of completion. Eight participants were in that category of 65% plus, but most had completed it fully. The response rate was calculated by choosing the accepted responses over the response target sample multiplied by 100. The response rate calculated was 61%. Other researchers in emerging markets got higher response rates Mehreen et al. (2021) with 90%, and Saruchera (2020) with 96.6%. However, cross-national research was found to be having a low response rate. Steenkamp et al. (2018) contacted 140 managers and received 52 completed questionnaires, translating to a response rate of 37%. The obtained response rate for the study was regarded as high and good for analysis.

To improve the response rate, The researcher wrote a cover letter explaining the objectives and importance of the study. The study guaranteed the confidentiality of respondents. The contact details of the researcher and the supervisor were included in the cover letter. Follow-up was made by sending reminders to encourage participants to complete the questionnaire. Clear instructions were given, and this was improved after pilot testing.

4.9.1 Questionnaire design

A questionnaire is a formalised set of questions to obtain respondents' information (Malhotra, 2006). The data was collected from South African consumers who buy food online. The questionnaire employed psychometric measurements (Nunnally, 1978). Each construct was measured with four to seven items on a five-point Likert scale ranging from 1 = Strongly Disagree to 5 = Strongly Agree, where 3 = Neutral. Apart from theoretical and conceptual considerations in questionnaire design, particular importance is the level of information sought, i.e., nominal, ordinal, interval, ratio, respondents' capabilities, cost, time, and existing scales (Malhotra, 2015). The scaling techniques were varied in the questionnaire to allow for the greatest variety of statistical analyses (Malhotra, 2006). The work of Churchill et al. (1996) and DeVellis et al. (2003) proposed a step-by-step psychometric procedure to be employed when designing questionnaires. In line with the study's objectives, the literature was examined to identify appropriate scales to measure all the constructs in the study. The researcher made special attention to choosing the scales that would stand up to the highest scrutiny, ensuring that all measured scales had been rigorously validated in a cross-cultural, emerging market context. The scales used for the research were adopted from the extant literature.

The questionnaire design followed the funnel approach (Saunders, 2007), in which the instrument started with the general to the specific questions. The technology acceptance model

was instrumental in guiding the researcher to choose latent variables and has been widely used in consumer behaviour research.

The first section of the questionnaire was *section A*, which informed the researcher about South African food delivery service providers. The researcher examined whether consumers were aware of the digital collaborative consumption platforms. The researcher wanted to know the frequency of buying online, the type of food consumers buy, and the preferred platform.

Section B of the research instrument sought to understand antecedents, beliefs, attitudes and perceptions regarding digital collaborative consumption. The section allowed respondents to choose from the statements and indicate the level of agreement on the items. The five-point Likert scale was used with the following measurements: 1 = Strongly Disagree, 2 = Disagree, 3 = Neutral, 4 = Agree, and 5 = Strongly Agree. The Likert scale was used to measure the latent constructs of the research model.

Section C of the questionnaire consisted of consumer background information. The section aimed to gain information on gender, age group, educational qualification and the province they are based in. The researcher decided to bring household information at the end of the questionnaire because consumers are hesitant to share household income information.

Closed-ended questions were used to measure the attitudes towards the intention to consume collaboratively because they proved to be better at measuring latent variables (Baburajan et al., 2020). The researcher preferred closed-ended responses because of the fast operation of surveys, higher completion rate and execution time (Krosnick, 2018). The researcher presented statements describing the antecedents and attitudes being measured. This helped the participants to interpret the questions to understand the antecedents and attitudes while retrieving relevant beliefs and feelings on the DCC constructs. The optimal number of points on the Likert scale has been the subject of intense debate, with research scholars arguing for 5 to 7-point scales, and the debate still needs to research consensus (Simms et al., 2019). The study used a five-point Likert scale that included the middle option, i.e., neutral, to allow individuals who prefer to be neutral or are unsure of their level of agreement with the statements to express their views.

4.10 MEASUREMENT SCALE DEVELOPMENT

The researcher outlined the scale measurement development process, acknowledging the ideas' sources. The measurement scale is divided into four parts: antecedents, beliefs, attitudes, behavioural intentions, and covariates. The researcher discussed the antecedents of digital collaborative consumption in the food delivery industry. Home delivery and social norms were tested to identify the effect on consumption patterns in the food delivery industry. The antecedents had an indirect effect on attitudes towards digital collaboration buying behaviour.

4.10.1 Attitudes towards DCC

Reasons for motivating consumers to buy food from an online platform are very important in the food delivery industry. Jun et al. (2022) noted that attitudes play an important role in utilising DCC apps in the food delivery industry. The results confirm the earlier work of Gefen (2003), who found attitudes to predicting consumer attitudes towards buying behaviour. Consumers feel motivated when attitudes towards online food delivery services meet their expectations. The consumer attitudes influencing digital collaborative consumers to buy food online include *trust in the platform* and *environmental and social benefits*. Table 14 shows the constructs and items measuring attitudes towards DCC

Table 14: Attitudes constructs and item

Dimension	Theoretical definition	Operational definition	Measurement items adapted from prior related studies	Code
Home delivery	Park and Regan (2004, p. 5) describe home delivery as deliveries of goods to customers' homes or another location of the customer's choice, such as a workplace, rather than customers having to collect the goods in person from a physical point of sale.	Home delivery is a service where goods bought through online platforms are delivered to the customer's residence or workplace to provide convenience.	Getting the food efficiently (Suhartanto et al., 2021, p. 12).	HD1
			The delivery of food is as promised (Suhartanto et al., 2021, p. 12) Delivery orders when promised (Suhartanto, Dean, et al., 2019, p. 284).	HD2
			The food ordered is sent promptly (Suhartanto, Helmi Ali, et al., 2019, p. 16).	HD3
			Food freshness (Suhartanto et al., 2021, p. 12).	HD4
			Ease to find the needed food (Suhartanto et al., 2021, p. 12).	HD5
Economic benefits	Hamari et al. (2016, p. 2048) defined economic benefits as "saving money and time, facilitating access to resources and free riding, which constitute individualistic reason for participating ".	Economic benefits are incentives enjoyed by users of DCC platforms in terms of improved use of assets, matching demand and supply in real-time, and saving time and money.	Buying food online saves money (Frank & Peschel, 2020, p. 544).	ECO1
			Participating in collaborative consumption benefits me financially (Hamari et al., 2016, p. 2059).	ECO2
			Participating in collaborative consumption can improve my economic situation (Hamari et al., 2016).	ECO3
			My participation in collaborative consumption saves me time (Hamari et al., 2016, p. 2059)	ECO4
			MinBilDinBil is a low cost option (Barnes & Mattsson, 2017, p. 41)	ECO5
			I can't trust the online company (Forsythe et al., 2006, p. 61)	ECO6
Social benefits	Kim et al. (2015, p. 7) describe social benefit as "the satisfaction in user's desire to get socially tied and socially connected to others within the sharing economy".	Social benefits are the degree to which consumers engage online to maintain social relationships and find pleasure in attaining community-shared purpose through a technology-enabled platform.	By using MinBilDinBil, I am helping others (Barnes & Mattsson, 2017).	SOCB1
			By using MinBilDinBil, I am helping others (Barnes & Mattsson, 2017).	SOCB2
			Most friends and acquaintances think that shopping for groceries via the internet is a good idea (Hansen, 2008, p. 137)	SOCB3
			Would improve the way I am perceived (Sweeney & Soutar, 2001, p. 212)	SOCB4
			People who influence my behaviour encourage me to use MinBilDinBil (Barnes & Mattsson, 2017, p. 42)	SOCB5
			If someone asked me about the service, I would give a positive opinion (Belanche et al., 2020, p. 9).	SOCB6
Security assurance	Security assurance is "a measure of confidence that the security	Security assurance is the goodness of the online platform through offering	I feel safe conducting business with MinBilDinBil because its assurances will protect me (Barnes & Mattsson, 2017, p. 40).	SEAS1

	features, practices, procedures, and architecture of an information system accurately mediates and enforces the security policy" (Shukla et al., 2022, p. 3)	support such as guarantees, privacy and trust.	The retail website has a policy on privacy and security (Ray et al., 2011, p. 410).	SEAS2
			The availability of privacy or a security statement was easily seen on the website (Ray et al., 2011, p. 410).	SEAS3
			I can remove my personal information from this site when I want to (Ray et al., 2011).	SEAS4
			This site devotes time and effort to preventing unauthorized access to my personal information (Ray et al., 2011).	SEAS 5
			I am worried about providing personal information (Ingham et al., 2015).	SEAS6
			Privacy and security have become a concern for online shoppers (Chai & Yat, 2019).	SEAS7
Trust	Trust is viewed as "an attitude of confident expectation in an online situation of risk that one's vulnerabilities will not be exploited" (Beldad et al., 2010, p. 860)	Trust is ensuring the customer's faith in the reliability of the service provider's technology when completing a transaction.	I feel safe conducting business with MinBilDinBil because its assurances will protect me (Barnes & Mattsson, 2017, p. 40).	TRU1
			MinBilDinBil is honest (Barnes & Mattsson, 2017)	TRU2
			The online store is honest, caring, not opportunistic, trustworthy, and keeps its promises (Ingham et al., 2015).	TRU3
			The vendor is trustworthy (Hu et al., 2010, p. 417)	TRU4
			I find it is necessary to be cautious with this vendor (Hu et al., 2010, p. 417).	TRU5
			MinBilDinBil cares about its customers (Barnes & Mattsson, 2017, p. 40).	TRU6
			BilDinBil cares about its customers (Barnes & Mattsson, 2017, p. 40)	TRU7

4.10.1.1 Home delivery

Home delivery literature showed that most retailers do not have physical shops, and the products are delivered to customers' homes or at specific destinations like the workplace. Scholars noted the unsuitability of traditional delivery channels, such as postal and courier services, in the food delivery industry (Punakivi & Saranen, 2001). It is worth noting that the logistical system created in the food delivery industry has been started using trial and error, and third-party providers like UberEats, Mr Delivery, OrdeIn and Airbnb provide the services. Other researchers note that the advancement in online food delivery technology has resulted in

a shift in the food delivery industry, affecting customers and businesses. The DCC technology in the food delivery industry allows customers to compare prices and shop conveniently (Lu et al., 2020). There is an agreement among scholars that home delivery of food has enhanced food sales, productivity and relationship management through DCC application and website sales (See-Kwong et al., 2017). Research has shown that many customers find ordering food through the DCC platform more pleasurable than ordering other items, and the pattern proliferates (Caputo et al., 2018).

Furthermore, digital collaborative consumption allows the food delivery industry to expand its market share where they are operational. The questions for the home delivery construct were adapted from a couple of sources from the literature (Lu et al., 2020; Suhartanto, Dean, et al., 2019). Table 14 depicts the specific scale items used in the study.

4.10.1.2 Economic benefits

The DCC business model expects compensation in the form of money (Zervas et al., 2014). The economic benefits of the platform to other businesses are the transaction cost for providing a service. The same conclusions were echoed by Tussyadiah (2015), who found that DCC helps get more value and less cost. It is evidenced that inventory will increase as the customer base increases. The SEM process and Path analysis of the model noted different results from what other scholars found. Economic benefit was found to be insignificant. No relationship suggests that consumers in DCC benefited financially or otherwise. The researcher challenges other scholars to replicate the study and see if different results will be found. Having said this, economic benefits are witnessed by the firms participating as they expand their horizons.

4.10.1.3 Social benefits

Participation in DCC was found to influence the pillars of sustainability. DCC protects the environment, helps improve the population's living standards, and brings people together. Belk (2007, p. 123) argued that sharing is the "act and process of distributing what is ours to others for their use and/or the act and process of taking from others for our use". The research data model for the study indicated that social benefits positively influence the intention to consume collaboratively. Individuals are important sources of information for other consumers, as they share experiences and social benefits.

4.10.1.4 Security assurance

Beznosov and Kruchten (2004) argued that security assurance provides some level of confidence working with the DCC business model instead of measuring the security of the whole system. Current research noted that system properties for DCC are safe, reliable and secure against attack (Rehman et al., 2018), as witnessed by consumers who could recommend the business to others. The DCC platform providers must ensure that they give assurance to their customers that they will not compromise the safekeeping of data. Using a special prototype database to protect consumers' data must be emphasised.

4.10.1.5 Trust in the platform

Research on the food delivery industry noted that trust is one of the key central variables when buying online. The research by (Suhartanto, Helmi Ali, et al., 2019) noted that businesses must display their registration certificates for public members to make informed decisions about the DCC platform providers. Regarding the *trust* variable, respondents were asked questions related to the importance of trusting ICT applications as guided by Tussyadiah (2013), Gefen et al. (2003), and Morgan and Hunt (2004). Ison (2013) found trust a barrier to DCC, as peers mistrust strangers. Trust was tested for direct and indirect effects to see the impact on the DCC. Respondents voiced concerns that they will support businesses with a clean and clear track record in the market.

4.10.2 Cognitive response (beliefs)

Cognitive response in DCC is a function of many beliefs such as PU, PEOU and security assurance (Davis, 1993; Huang et al., 2019). The cognitive response latent variables positively correlated with the antecedents and attitudes in the model. The path analysis model showed that the PU, PEOU and security assurance had a significant direct and indirect effect on the behavioural intention of the model, which is the intention to continue using digital collaborative consumption, as shown in Table 15.

4.10.2.1 Perceived usefulness

The latent variable of PU was initiated in TAM as defined (Davis et al., 1989, p. 320) as "the degree to which a person believes that using a particular system would enhance his or her job performance." The study showed that the construct predicts the intention to use the DCC business model. The renowned researcher Davis (1989a) found that consumers DCC marketplace tend to accept or reject online food delivery apps because they have limited

knowledge about how business is contacted. PU increased when consumers were able to use the DCC app. From the analysis of the relationship with other constructs in the model, the researcher noted that PU has a significant relationship. Testing of direct and indirect relationships to continue using the DCC business model was significant.

Table 15: Cognitive response constructs and items

Dimension	Theoretical definition	Operational definition	Measurement items adapted from prior related studies	Code
Perceived Usefulness	Perceived usefulness is "the degree to which a person believes that using a particular system would enhance his or her performance" (Davis, 1989b, p. 320).	Perceived usefulness is the belief that using particular technology enhances job performance and improves an individual's task in terms of effectiveness and efficiency.	Electronic mail enables me to accomplish tasks more quickly (Davis, 1989a, p. 324)	PEU1
			Electronic mail increases my productivity (Davis, 1989a, p. 324).	PEU2
			Overall, I find electronic mail useful in my job (Davis, 1989a, p. 324)	PEU3
			Electronic mail saves me time (Davis, 1989a, p. 324).	PEU4
			Electronic mail lets me quickly accomplish the task (Davis, 1989b, p. 324).	PEU5
			Overall, using MinBilDinBil is advantageous (Barnes & Mattsson, 2017).	PEU6
Perceived ease of use	Perceived ease of use is "the degree to which a person believes that using a particular system would be free of effort" (Davis, 1989a, p. 320).	Perceived ease of use is the degree of internal belief by participants that using particular technology or system would not require much effort.	My interaction with the electronic mail system is easy to understand (Davis, 1989b).	PEOU1
			I find it easy to get the electronic mail system to do what I want (Davis, 1989b, p. 324).	PEOU2
			The electronic mail system is rigid and inflexible to interact with (Davis, 1989a).	PEOU3
			It will be easy to operate the equipment in the CRC (Taylor & Todd, 1995, p. 173).	PEOU4
			Interacting with the electronic mail system requires much mental effort (Davis, 1989a).	PEOU5

4.10.2.2 Perceive ease of use

Perceived ease of use was found to have a causal effect on PU. The food service industry was found to have fewer challenges with using technology when serving customers. The research noted that PEOU was significant in the model and contributed to the success of the DCC business model. Table 15 shows cognitive response constructs and the items modelled in the study.

4.10.3 Behavioural intention towards DCC

The level of consumer behavioural intention towards DCC consumers in an emerging market was empirically tested in one latent construct, "the intention to continue using digital collaborative consumption." Table 16 shows the adapted items used to measure the latent variable.

Table 16: Behavioural response constructs

Dimension	Theoretical definition	Operational definition	Measurement items adapted from prior related studies	Code
Digital Collaborative Consumption	Digital collaborative consumption is "peer to peer based activity of obtaining, giving, or sharing the access to goods and services, coordinated through community-based online services" (Hamari et al., 2016, p. 2047)	Digital collaborative collaboration uses social networking technologies to facilitate sharing of resources and services among peers who may be consumers or suppliers in the digital marketplace.	Likely, I will frequently participate in collaborative consumption communities in the future (Hamari et al., 2016, p. 2059).	DCC1
			I can increase my collaborative consumption activities (Hamari et al., 2016, p. 2059).	DCC2
			I expect to continue collaborative consumption often in the future (Hamari et al., 2016, p. 2059).	DCC3
			Intention to recommend friends and family (Suhartanto, Dean, et al., 2019, p. 293).	DCC4
			Intention to recommend friends and family (Suhartanto, Dean, et al., 2019, p. 293).	DCC5

	Intention to write a positive review on social media (Suhartanto, Dean, et al., 2019, p. 293).	DCC6

Möhlmann (2015) added some factors to consider when buying online, including cost-saving, familiarity, service quality, trust, and utility. Consumers must choose and consume sustainably. Based on this view, questions were formulated around these factors as guided by Li et al. (2020). The researcher tested the respondents' views to check if DCC improves their satisfaction and their views on employment created by the business.

4.10.4 Covariates

The study sought information on socio-demographic variables: age, gender, educational background, location, and monthly income. Burgess and Harris (1998) found South Africa to be one of the countries with a high level of diversity, as witnessed by many ethnic groups. Socio-demographic variables are used to segment the consumer market in marketing research. The current study reported socio-demographic variables as covariates to control their effect in the research context (Burgess & Steenkamp, 2006; Steenkamp & Maydeu-Olivares, 2021). Ailawadi et al. (2001) followed a method consistent with marketing activities to narrate psycho-demographics to consumer behaviour. The customers in the DCC business model, specifically those saving directly in the food delivery industry, are from different socio-economic backgrounds. Covariates were found to be insignificant except for two variables. Table 17 shows the covariates of respondents who participated in the study.

Table 17: Covariates

Dimension	Item	Category
Gender	How do you describe your gender?	Male
		Female
		Prefer not to say
Age group	Please indicate your age group in years.	18 -24
		25-34
		35-44
		45-54
		55-60
		61+
Frequency of ordering	On average, how many times do you order food online per month?	Less than 5 times
		6-10 times
		11+ times
Educational Qualification	What is your highest educational qualification?	Matric
		Diploma
		Degree
		Post graduate degree
Income level	What is your average monthly income?	Less than R5000
		R5001-R10000
		R10001-R15000
		R15001-R20000
		Above R20001
Province	Please indicate your province.	Limpopo
		Mpumalanga
		North West
		Eastern Cape
		Western Cape
		Northern Cape
		Gauteng
		Free State
		KwaZulu Natal

4.11 QUESTIONNAIRE RESPONSE FORMAT

Many response formats were recommended by researchers when conducting surveys. Toepoel et al. (2019) noted that the response category influences consumer response rates. The way surveys are completed online has changed in recent years. In the current study, consumers completed the online surveys using different gadgets, including laptops, desktops, notebooks, tablets, and smartphones. This was done to ensure accessibility of the tool, which translated to fast completion by respondence.

Ordinal scale questions were used in the study to capture responses on the self-administered questionnaire, which was shared on the Qualtrics platform. Ordinal scales were used in the study because they used labels to classify constructs into ordered latent factors. The ordinal scale had questions presented in different formats. The answer categories had fully labelled endpoint categories. Specifically, the researcher included dichotomous scales where respondents were required to indicate whether they knew DCC platforms. The options given were, e.g., "yes" or "no", identification of food type bought online, and average times of ordering food per month, to mention a few. The ordinal scale helped measure the frequency of responses, and the researcher identified high or low important values through the patterns shown. Pictorial icons were used on one question where respondents were supposed to choose the DCC platform they preferred when ordering food online, and the results showed that Mr Delivery brand with 54.6%, followed by UberEats with 41.2%, Bolt was having 2.9% whilst Oderin had the least with 1.3%. The ordinal scale made it possible for the researcher to realise that Mr Delivery and Orderin were the two extremes in terms of preference by consumers.

Radio buttons were used in the research to enable respondents to choose one of the predefined sets of mutually exclusive options. The radio buttons used standard HTML code that works well with all browsers (Cernat & Liu, 2019). Radio buttons were found to have shortcomings during the study because they were inefficient in using space on a screen and were not scalable.

The pictorial scale was used to measure the preference for DCC platforms, and there was only one question in the study. Researchers noted that pictorial scales are mainly used when collecting data from kids (Hall et al., 2016), assessing pain levels (Toepoel & Funke, 2018), and measuring job satisfaction (Elfering & Grebner, 2010; Toepoel et al., 2019). Literature indicated that *smiley face scales* could be used in the study where respondents match their emotions and attitudes on a scaled format (Toepoel et al., 2019). The study did not opt for

smiley scales. The researcher felt the smileys might misrepresent the original ordinal information sent to the respondents del Pozo and García-Lapresta (2021). Lastly, most of the questions required attention and were high, requiring more processing time. The survey had an average time of 15 minutes, and many customers did not have that time to spend. The faces assist in quickly processing questions for low-literate respondents without reading and understanding the whole text, but this was a different case with the current study.

The study measured the latent scales using the *Likert scale,* named after the developer Likert in 1932. The Likert scale had step ratings (Cheng et al., 2021). The ratings for the study were integer-valued on a range of 1 = "strongly disagree" to 5 = "strongly agree," from which respondents were asked to indicate their level of agreement. When determining the total score for each respondent on each scored item, the researcher used the recommendations of Malhotra (2006) that a consistent scoring procedure must be followed to reflect a favourable response. The study used a low-to-high procedure for the questions on the latent variables where the Likert scale was used. The researcher assigned categories from "Strongly disagree" to "Strongly agree". A "strongly agree" response was used to reflect a favourable statement, and a "strongly disagree" response was used to reflect an unfavourable statement. The current study used the Likert scale because its scale constriction and data analysis procedures have been well established (Cheng et al., 2021), and it was easier to administer online. Lastly, the Likert scale has been widely adopted in consumer research studies. The Likert scale was found suitable to administer during the COVID-19 pandemic period when data was collected.

Churchill et al. (1996) identify open-ended questions as fixed alternatives, including multi-dichotomous, dichotomous, and closed-ended questions. With open-ended questions, respondents freely responded to the questions in the way they understood without choosing from a fixed, limited set of alternatives. However, this was not adopted for the study since a quantitative approach was used. The research used multi-dichotomous and dichotomous questions responses where respondents selected from alternatives given. Specifically, the researcher used a multi-dichotomous approach to record information on demographics. In simple terms, the closed-ended question and the closed-ended answer format were adopted for the study because they minimise the likelihood of misinterpretation of questions.

4.12 SECONDARY DATA REVIEW

Secondary data review is a process that involves the collation, synthesis and analysis building of data that was collected by someone else for another primary purpose (Johnston, 2017). The researcher used this empirical exercise to review journal articles, databases, and policy documents. The literature review was instrumental in finding facts from past studies, getting information through data mining, and accessing articles, which helped build the research model. Past empirical studies in digital collaborative consumption were reviewed and gave the researcher insights into past results, which worked well when the study results were compared to the current study. Secondary data analysis made comparing results and analysing trends easier, which helped conclude the study.

4.13 PILOT STUDY

A pilot study was used to validate the feasibility of the research process (In, 2017). The pilot study was carried out on 20 selected participants, including Wits Business School postgraduate students, marketers, and members of the public. Convenience sampling was used to select the participants. The respondents were given a soft copy of the questionnaire and the link on survey monkey. The participants were advised to critique the tool and suggest the best alternatives to improve the tool.

The participants on the pilot survey advised that survey money would require payment if collecting more than 100 responses, and a decision was made to load the questionnaire on the Qualtrics platform of the Wits Business School. The original questionnaire had many items, and other latent variables had few items. The researcher was guided by the work of Emerson (2017), who recommended an average of six items per construct, which later helped the researcher when structural modelling was being run. Items with low scores were deleted, which helped improve the model. The pilot survey participants suggested changes to some statements and made them shorter. The suitability of data collection was then tested, and some basic descriptive analyses were run on SPSS version 27 and Mplus version 7 to test the tool's suitability.

A pilot study was meant to check if respondents could answer the questions correctly. The questionnaires with challenges were addressed before data was collected at a larger scale. All the issues were addressed before the final questionnaire was sent for ethical clearance, and the main research data was collected. Expert opinions were sought from marketing lecturers and

researchers before the tool was adopted. The pilot study was conducted on a minor scale, and it assisted in improving the quality and efficiency of the main study.

4.14 DATA COLLECTION PROCEDURES

Data collection was conducted to gather and measure information on the study's variables. The researcher applied for an ethical clearance certificate from the Human Research Ethics Committee (Non-medical) of the University of the Witwatersrand. The application was approved, and the committee issued the ethical clearance certificate protocol number H20/08/39 (attached in Annexure O). The self-administered questionnaire was loaded on the Qualtrics portal of the University of Witwatersrand. The link was shared on online platforms, including WhatsApp, with fellow students and members of the public who buy food online in South Africa. One thousand six hundred and thirty-five responses were recorded from all nine provinces of South Africa. The study samples were drawn using the procedure described under sampling and sample size.

4.15 ETHICAL CONSIDERATIONS

The independent committee reviewed the research tool to determine the study's risk level for the participants or the researchers (Williams, 2000). An ethical review ensured high ethical standards were followed before data collection. To meet the university requirements for research, the researcher applied for clearance to collect data from the Human Research Ethics Committee (non-medical), which was granted (***Certificate Number H20/08/39***, Annexure O). The researcher employed safeguards to protect the data of participants. Respondents read and signed the participant consent form before completing the online questionnaire. The researcher stored the collected data in a password-protected computer.

Confidentiality was maintained throughout the research process (Kaiser, 2012). Leading researchers argue that social science researchers must protect individual respondents' confidentiality, share their stories with a large audience and create rigorous scientific manuscripts for journal publication (Kaiser, 2012). The researcher upheld privacy and confidentiality to protect research participants from any harm. All respondents were required to complete a consent form before answering the online self-administered questionnaire from a Qualtrics link provided by the researcher. The researcher employed safeguards to protect the data of participants. Respondents read and signed a participant consent form before completing the online questionnaire. The researcher stored collected data in a password-protected

computer to comply with the Personal Protection of Personal Information (POPI) Act (Kandeh et al., 2018). No identification mechanism was put in place for the responses. The researcher provided contact details of the research committee for respondents to complain should they feel that their rights were infringed. Respondents were given the option to continue with the survey or terminate it. These procedures were undertaken to safeguard the safety and integrity of participants in the study.

4.16 RESEARCH FINDINGS VALIDITY AND RELIABILITY

The researcher measured the reliability of the scale using SPSS version 27. Scale means and scale variance if item deleted, and Cronbach alpha if item deleted for the survey. The estimates obtained from the data showed that reliability exceeds the recommended minimum threshold of 0.60 (Bagozzi et al., 1989; Yadav et al., 2019). The work of Steenkamp and Van Trijp (1991) confirms the Unidimensionality of the construct based on the overall goodness of fit of the measures and parameter estimates of item loading significantly and positively on their respective latent variables. All the items show a standardised factor loading greater than 0.5, evidence of convergent validity. The measuring instrument's validity and reliability helped improve the model fit.

4.16.1 Validity

Validity testing ensures that the data collection instrument "measures the real construct that is supposed to be measured" (Isnin et al., 2021), i.e. in terms of accuracy. In testing face validity, the researcher sought experts' opinions to determine if an instrument measures what it intends to measure. They made proposals on the appearance of the questionnaire, formatting, consistency of the file, and precision of the language used on the tool. Content validity was accomplished by inviting ten experts to verify the instrument's content (Friedel et al., 2021). The process by the experts involved analysing the extent to which commonality or overlap exists on the instrument under investigation. Construct validity was achieved by ensuring that the instrument matches the construct the tool was intended to measure. This was the overarching concern of the current research. Criterion validity was achieved by examining how closely the instrument relates to other instruments that measure the same variable (Isnin et al., 2021). The tool was found to match well.

In previous years, internal reliability has been assessed using Cronbach's alpha (Burgess & Steenkamp, 2006). Limitations: Cronbach's alpha ignores heterogeneity, as it is positively

biased by the number of items of the scale and is not a good measure of unidimensional. Scale reliability in emerging markets is lower than in high-income countries (Alden et al., 2006; Deshpandé & Farley, 2004). The psychometric properties of all scales were assessed using the confirmatory factor analysis steps of (Steenkamp & Baumgartner, 1998; Steenkamp & Van Trijp, 1991), which provided a rigorous and systematic assessment of composite reliability, discriminant validity, convergent validity and measurement invariance. If the scales exhibit measurement invariance, results are compared across different groups.

Convergent validity was tested using three metrics: average variance extracted (AVE), composite reliability (CR) and Cronbach's alpha, as guided by Steenkamp and Maydeu-Olivares (2021). The scholars proposed that the average variance extracted should be greater than 0.5, composite reliability greater than 0.7 and Cronbach's alpha above 0.8 (Steenkamp & Maydeu-Olivares, 2021). The discriminant validity results satisfied the expected threshold as indicated in Annexure C. Discriminant validity refers to the degree to which the measures that should be highly correlated are distinct (Anderson & Gerbing, 1988). Fornell and Larcker (1981) proposed the traditional metric. They suggested that each construct AVE (variance within) should be compared to the inter-construct correlation (as a measure of shared variance between constructs) of that same construct and all other reflectively measured constructs model. The shared variance between all model constructs should not be larger than their lives. Fornell and Larcker (1981) suggest that the AVE should be greater than the variance between the construct and other constructs in the model, i.e., squared correlations between the two constructs. The model satisfied discriminant validity.

Scholars consider various measures to mitigate the effects of measurement bias on an across-the-country survey. The types of biases listed in Table 18 constitute a framework for presenting measures. The researcher had to develop strategies to mitigate the challenges presented in the literature.

Table 18: Strategies for identifying and dealing with biases in DCC assessment

Type of bias	Strategy
Construct bias	▪ decentering, i.e., simultaneously developing the same instrument in several cultures. ▪ convergence approach, i.e., independent within-culture development of instruments and subsequent cross-cultural administration of all instruments.
Construct or Method bias	▪ use of informants with expertise in local culture and language. ▪ use samples of bilingual subjects. ▪ use of local surveys, e.g., content analyses of free-response questions. ▪ Nonstandard instrument administration, e.g., "thinking aloud". ▪ Cross-cultural comparison of nomological networks, e.g., convergent/discriminant validity studies, mono trait-- multimethod studies, the connotation of key phrases.
Method bias	▪ extensive training of administrators, e.g., increasing cultural sensitivity. ▪ detailed manual/protocol for administration, scoring, and interpretation. ▪ detailed instructions, e.g., with enough examples and/or exercises. ▪ use of subject and context variables, e.g., educational background. ▪ use of collateral information, e.g., test-taking behaviour or test attitudes. ▪ assessment of response styles. ▪ use of test-retest, training and/or intervention studies. ▪ detailed manual/protocol for administration, scoring, and interpretation. ▪ use of test-retest, training and/or intervention studies.
Item bias	▪ judgmental methods of item bias detection, e.g., linguistic and psychological analysis. ▪ Psychometric methods of item bias detection, e.g., differential item functioning analysis. ▪ Error or distracter analysis. ▪ documentation of "spare items" in the test manual, which are equally good measures of the construct as used test items

Source: Adapted from Van de Vijver and Tanzer (1998)

A convergence approach is used where researchers and cultures are crossed. Researchers from different cultural groups develop their instruments and translate them into other languages

where the instrument was administered. These recommendations were not implemented in the current study as the questionnaire was in one language only, English. However, some changes were implemented during the pilot study to reduce bias.

Communication problems between the respondent and the tester/interviewer were found to be a source of method bias in general. Language problems are the primary source of method bias because it is common in cross-cultural studies to conduct interviews in the respondents' second and third languages. However, in the study, language problems were not encountered as participants could answer the self-administered questionnaire on their own without the assistance of the researcher. Early researchers who found miscommunication in cross-cultural studies noted the problem of ethnocentric interpretations (Banks et al., 1991). To curb such biases in the study, the researcher used the Likert scale after testing the items in a pilot study. Statements that were unclear were modified to fit the context of the study. The researcher collected data anonymously using the link on Qualtrics.

4.16.2 Reliability

To assess the reliability, the researcher conducted Cronbach's Alpha reliability test (Cronbach (1951) to measure the internal consistency of the measurement tool. The value of alpha results "vary between 0 and 1, and the closer the value is to 1, the stronger the internal cohesion of the scale" (Saruchera, 2014, p. 88). According to Ursachi et al. (2015), a generally accepted rule of Cronbach alpha is that 0.6-0.7 indicates the acceptable level, and 0.8 and above represent a good level. Values greater than 0.95 were "not necessarily good since they might indicate redundancy" (Hulin et al., 2001). Cronbach's internal testing was conducted to establish the internal consistency of the measuring instruments in addressing the study's research objectives. The overall internal reliability and consistency results for the whole questionnaire were (0.910) Cronbach's alpha based on standardised items, representing a very good measurement level. To get the overall Cronbach's alpha value, the themes were drawn from the data collection instrument, whose reliabilities were separately tested. The Cronbach's alpha was run on the research questions addressing digital collaboration consumption themes drivers in emerging markets. The researcher further separated the latent variables and ran them according to their group.

The researcher was interested in improving model acceptance in digital collaborative consumption. Attitudes towards the intention to consume collaboratively as a function of

beliefs referred to cognitive response in the model, PU and PEOU. Attitudes were represented by home delivery, economic benefits, social benefits, security assurance and trust in the platform, which affects the intention to continue using DCC. The technology acceptance model specifies the causal relationships between attitudes features, cognitive response (beliefs), and behavioural response. To test the relationship between the hypothesised model and the validity of the measures used to operationalise model variables, the researcher used a reliability test using Cronbach's alpha following causal relationships between attitudes, cognitive response and behavioural response. Table 19 summarises the reliability test results for the study's ten themes.

Table 19: Summary of reliability tests results

	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
Home delivery	7.001	.291	.837
Perceived Usefulness	6.035	.620	.796
Perceived ease of use	6.308	.577	.802
Security Assurance	6.400	.575	.803
Economic Benefits	6.046	.558	.805
Social Benefits	5.956	.588	.800
Trust	6.133	.593	.800
Intention to continue using DCC	6.152	.592	.800

Cronbach's tests were run on research questions addressing the drivers of digital collaborative consumption themes, which were the key to the study, as shown in Table 19. The Cronbach's alpha had different items measuring one construct to extract reliability tests of the scale. Some of the themes did not load well. According to the work of Taber (2017), alpha values were described as acceptable if they ranged from (0.45 -0.98) and not satisfactory (0.5 -0.55). Grithuijsen (2014) reported a cross-national survey of 0.502 and 0.446 on different constructs but justified continuing to analyse the results and recommended that increasing the items would lead to acceptable results. The researcher considered the alpha value good for the study and acceptable, as guided by the recommendations of Taber (2017) on acceptable alpha ranges.

4.17 CHAPTER SUMMARY

A research approach was viewed as a general plan used to examine the research quotations of the study (Kalaian, 2008a; Snyder, 2019). The current study used a quantitative approach, making it necessary to focus on fresh data collection in accordance with the problem of a large population and data analysis (Rahi et al., 2019). As Grinnell and Unrau (2010) described, the quantitative approach is a scientific method, and its ground can be identified in positivism. The quantitative approach focuses on testing theories and hypotheses using statistical and numerical methods about the phenomenon. (Kalaian, 2008b; Kalaian & Kasim, 2016). Conclusions were drawn from the study after running multivariate analysis of variance and structural equation modelling procedures to determine relations between dependent and independent variables of the model. The sample size of 827 was large enough to meet statistical assumptions. The self-administered questionnaire survey approach was used to collect data from respondents as the approach was now popular during the COVID-19 pandemic. The chapter focused on the research method implemented to assess the theoretical model and hypotheses. The self-administered questionnaire was used to collect data from the respondents across the country. Unlike a longitudinal research design, a national research design employed in this study was cost-effective and less time-consuming. It enabled the comparison of large groups across the country. When the researcher used Mplus version 7 in the measurement model, the normality test was crucial in informing the analysis type, as normally distributed data has a different test from those not normally distributed. This was the cause of the study. The next chapter presents the findings of the study.

CHAPTER 5

PRESENTATION OF FINDINGS

5.0 INTRODUCTION

The study sought to establish the drivers of digital collaborative consumption in an emerging market, with special attention to South African food delivery services. This chapter presents the profiles of the respondents together with the sample characteristics. The psychometric properties of all scales are assessed using the confirmatory factor analysis steps of (Steenkamp & Baumgartner, 1998; Steenkamp & Maydeu-Olivares, 2021; Steenkamp & Van Trijp, 1991), which provides a rigorous and systematic assessment of composite reliability, discriminant validity, convergent validity and measurement invariance. If the scale items exhibit measurement invariance, results from different groups can be compared. A confirmatory factor analysis model can easily be extended to systematically evaluate theorised relations in a structural equation model. The current study utilised multi-group structural equation modelling (SEM). Structural equation modelling enables the creation of more complex models than possible with traditional regression analysis. Path modelling is an extremely useful technique for examining direct and mediated effects on the model. Mplus version 7 was used to analyse descriptive demographic data. Model testing was performed using random coefficients regression analysis and hierarchical Bayes to estimate the modus and variance of a normal distribution in an alternative model. The proposed practical procedure by (Steenkamp & Baumgartner, 1998; Steenkamp & Maydeu-Olivares, 2021) should be followed when measuring invariance. Three metrics will be used to evaluate convergent validity: average variance extracted (AVE), composite reliability (CR), and Cronbach's alpha.

5.1 MISSING DATA ANALYSIS AND TREATMENT

Missing data issues in research are an unavoidable part of data analysis. Subjects dropping out due to boredom, fatigue, or refusal to answer a specific question on the survey questionnaire are all possible reasons for not completing all sections. Any statistical conclusions drawn from such data would be skewed to the extent that the non-randomness of missing data affects the

variables included in the analysis (Ho, 2013). According to Tabachnick and Fidell (2001), the problem is less serious if only a few data points (less than or equal to 5%) are missing from a random pattern drawn from a large data set. This view is consistent with Lang and Little (2018), who note that when applied correctly, principled missing data treatments can aid in recovering the underlying inferential model and increasing the study's validity. The researcher analysed the results without including socio-demographic variables because no data from the previous analysis on socio-demographic variables were missing.

Table 20: Missing Value Analysis Output

Univariate Statistics

	N	Mean	Std. Deviation	Missing Count	Missing Percent	No. of Extremes[a] Low	No. of Extremes[a] High
HD1	828	4.17	3.678	0	.0	41	0
HD2	828	4.13	3.679	0	.0	46	0
HD3	828	4.11	3.718	0	.0	91	0
HD4	828	4.18	3.672	0	.0	46	0
HD5	828	4.16	3.699	0	.0	67	0
PU1	828	3.73	.820	0	.0	7	0
PU2	828	3.53	.989	0	.0	22	0
PU3	828	4.11	.717	0	.0	21	0
PU4	828	4.21	.734	0	.0	23	0
PU5	828	4.06	.771	0	.0	34	0
PU6	828	3.99	.784	0	.0	31	0
PEOU1	828	4.13	.704	0	.0	21	0
PEOU2	828	4.02	.792	0	.0	37	0
PEOU3	828	3.96	.783	0	.0	.	.
PEOU4	828	4.07	.723	0	.0	28	0
PEOU5	828	2.44	1.045	0	.0	0	44
SA1	828	3.71	.801	0	.0	8	0
SA2	828	3.81	.748	0	.0	4	0
SA3	828	3.14	1.102	0	.0	0	0
SA4	828	3.48	.954	0	.0	23	0
SA5	828	3.50	.869	0	.0	21	0
SA6	828	4.24	.820	0	.0	28	0
SA7	828	2.93	3.665	0	.0	37	0
EB1	828	2.94	1.140	0	.0	0	0
EB2	828	2.89	1.106	0	.0	0	0
EB3	828	2.79	1.073	0	.0	0	0
EB4	828	4.17	.708	0	.0	21	0
EB5	828	3.96	.894	0	.0	69	0
EB6	828	3.03	3.707	0	.0	1	0
SB1	828	3.63	3.674	0	.0	17	0
SB2	828	2.69	1.056	0	.0	0	54
SB3	828	3.68	.894	0	.0	18	1
SB4	828	2.89	1.130	0	.0	0	0
SB5	828	3.09	1.028	0	.0	0	0
SB6	828	3.03	1.064	0	.0	0	0
TP1	828	3.55	3.668	0	.0	9	0
TP2	828	3.55	.821	0	.0	7	0
TP3	828	1.84	11.197	0	.0	10	0
TP4	828	3.34	.824	0	.0	18	0
TP5	828	2.96	3.683	0	.0	1	0
TP6	828	3.43	.825	0	.0	14	0
DCC1	828	4.09	.800	0	.0	32	0
DCC2	828	3.90	.945	0	.0	0	0
DCC3	828	4.01	.784	0	.0	28	0
DCC4	828	3.96	.816	0	.0	38	0
DCC5	828	2.45	1.103	0	.0	0	45
DCC6	828	3.39	.977	0	.0	32	0

DSP	828	1.08	.278	0	.0	.	.
FDA	828	1.53	.671	0	.0	0	24
POO	828	2.83	3.832	0	.0	1	0
GENDER	828	1.69	.526	0	.0	0	0
AGE	828	1.82	1.003	0	.0	0	69
ORDERS	828	1.55	.691	0	.0	0	0
QUAL.	828	3.64	1.250	0	.0	0	0
INCOME	828	2.15	1.307	0	.0	0	0
PROVIN.	828	5.38	2.620	0	.0	0	0

a. Number of cases outside the range (Q1 - 1.5*IQR, Q3 + 1.5*IQR).

The results of the missing value analysis in Table 20 indicate that some items have missing data, but there are no variables in the research data with 5% or more missing values. The T-Test tables required to analyse such data are not computed because the missing data was not significant and hence did not require such tests (Graham, 2009).

5.2 TEST OF NORMALITY

Mishra et al. (2019, p. 70) noted that "In inferential statistics, most predictions are for the future and generalisation about a population by studying a smaller sample" (Mishra et al., 2019; Sundaram & Hadjicostis, 2010). The null hypothesis for this set of normality is that the data are normally distributed. The null hypothesis is rejected if the p-value is below 0.05. If the data follows normal distribution: 68.2%, 95.4%, and 99.7% of observations lie between mean ±1SD, mean ±2SD, and mean ±3SD, respectively (Campbell et al., 2010). Assumptions of the normality were followed regardless of sample size. The research indicated that if continuous data follows a normal distribution, data must be presented in a mean value. Table 21, illustrates the transformed variables and the test of normality logged variables results.

Table 21: Transformed variables

Tests of Normality

	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	Df	Sig.	Statistic	df	Sig.
Home Delivery	.147	828	<,001	.888	828	<,001
Perceived Usefulness	.099	828	<,001	.966	828	<,001
Perceived Ease of Use	.121	828	<,001	.961	828	<,001
Security Assurance	.091	828	<,001	.964	828	<,001
Economic Benefits	.089	828	<,001	.980	828	<,001
Social Benefits	.099	828	<,001	.982	828	<,001
Trust in Platform	.091	828	<,001	.974	828	<,001
Intention to continue using DCC	.102	828	<,001	.974	828	<,001

a. Lilliefors Significance Correction

The Kolmogorov–Smirnov and Shapiro–Wilk tests indicated that the data does not follow a normal distribution as data is not normally distributed as the tests are less than 0.05 (Campbell et al., 2010). The researcher rejected the null hypothesis. The p-value is less than 0.05, and then the assumption was violated.

Table 22: Test of normality logged variables

Tests of Normality

	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	Df	Sig.	Statistic	df	Sig.
Home Delivery	.181	828	<,001	.740	828	<,001
Perceived Usefulness	.123	828	<,001	.878	828	<,001
Perceived Ease of Use	.140	828	<,001	.874	828	<,001
Security Assurance	.093	828	<,001	.896	828	<,001
Economic Benefits	.111	828	<,001	.910	828	<,001
Social Benefits	.114	828	<,001	.956	828	<,001
Trust in Platform	.112	828	<,001	.928	828	<,001
Intention to continue using DCC	.133	828	<,001	.905	828	<,001

a. Lilliefors Significance Correction

The researcher checked the transformed variables to see if they were normally distributed by logging to base 10 before performing the analysis. The testing results for the normality of the logged variables are shown in Table 22. Kolmogorov-Smirnov, which is used to test the normality of data above 100. The results show that significance values are less than 0.05, confirming that the logged transformed variables are not normally distributed.

5.3 DESCRIPTIVE ANALYSIS - SAMPLE CHARACTERISTICS

The study was conducted in South Africa's urban and peri-urban areas. The study enrolled 1739 participants who completed an online self-administered questionnaire on Qualtrics. The respondents responded voluntarily and were not offered any incentives. The data was cleaned up, and responses with a completion rate of at least 65% were included in the study. The remainder of the data was deleted. The responses that contained identical responses to all variables were deleted, as they reflected careless response patterns. This was accomplished using the data-cleaning procedures that Schwartz (1992) suggested, emphasising response patterns. Their responses were deleted due to their acquiescence. Following the cleaning procedure, 911 responses (53.3 percent) were deleted from the data received. The final analysis incorporated 827 responses from respondents who completed the online questionnaire. The variables in Table 23 are socio-demographic and are referred to as covariates in the study. The study included socio-demographic covariates as a construct. Although socio-demographic variables are theoretically more actionable than values, they are managerially actionable, e.g., market segmentation (Steenkamp & De Jong, 2010). The research incorporated socio-demographic variables, e.g., gender, age, income levels, provinces, and frequency of ordering food online. The age of respondents was measured in years, and the household income per

month was measured in South African currency, the Rand (ZAR). The educational qualification was measured based on the local education system and the categories used in different countries.

Table 23: Sample characteristics

Variable		Frequency	Percentage	Valid Percentage	Cumulative Percentage
Gender	Male	283	34.2	34.2	34.2
	Female	519	62.7	62.7	96.9
	Prefer not to say	26	3.1	3.1	100.0
Age	18 – 24	427	51.6	51.6	51.6
	25 – 34	200	24.2	24.2	75.7
	35 – 44	132	15.9	15.9	91.7
	45 – 54	64	7.7	7.7	99.4
	55 – 60	5	.6	.6	100.0
Orders per month	Less than 5 times	467	56.4	56.4	56.4
	6 -10 times	266	32.1	32.1	88.5
	11+ times	95	11.5	11.5	100.0
Educational qualification	Below Matric	7	.8	.8	.8
	Matric	243	29.3	29.3	30.2
	Diploma	74	8.9	8.9	39.1
	Degree	217	26.2	26.2	65.3
	Post graduate degree	287	34.7	34.7	100.0
Monthly income	Less than R5000	413	49.9	49.9	49.9
	R5001 - R10000	114	13.8	13.8	63.6
	R10001 - R15000	63	7.6	7.6	71.3
	R15001 - R20000	237	28.6	28.6	99.9
	Above R20000	1	.1	.1	100.0
Province	Limpopo	191	23.1	23.1	23.1
	Mpumalanga	16	1.9	1.9	25.0
	North West	16	1.9	1.9	26.9
	Eastern Cape	16	1.9	1.9	28.9
	Western Cape	20	2.4	2.4	31.3
	Northern Cape	12	1.4	1.4	32.7
	Gauteng	527	63.6	63.6	96.4
	Free State	12	1.4	1.4	97.8
	KwaZulu Natal	18	2.2	2.2	100.0

Source: compiled by researcher

The socio-demographic table shows the breakdown of the frequency distribution of six variables: gender, age, orders, educational qualifications, monthly income, and the province of respondents in South Africa from which the participants stayed. The frequency table for each socio-demographic variable listed the number of occurrences of each value within the variable, the frequency, percentage, and valid percentage accounting for missing cases, and the cumulative percentage for each succeeding value within the variable.

5.3.1 Gender of respondents

The pie chart was used to present the distribution of participants by gender, as shown in Figure 14. The study's findings indicate that participants were not evenly distributed by gender. Females dominated with 67.7 percent, while males came in second with 34.2%. 3,1% of respondents preferred not to disclose their gender identity.

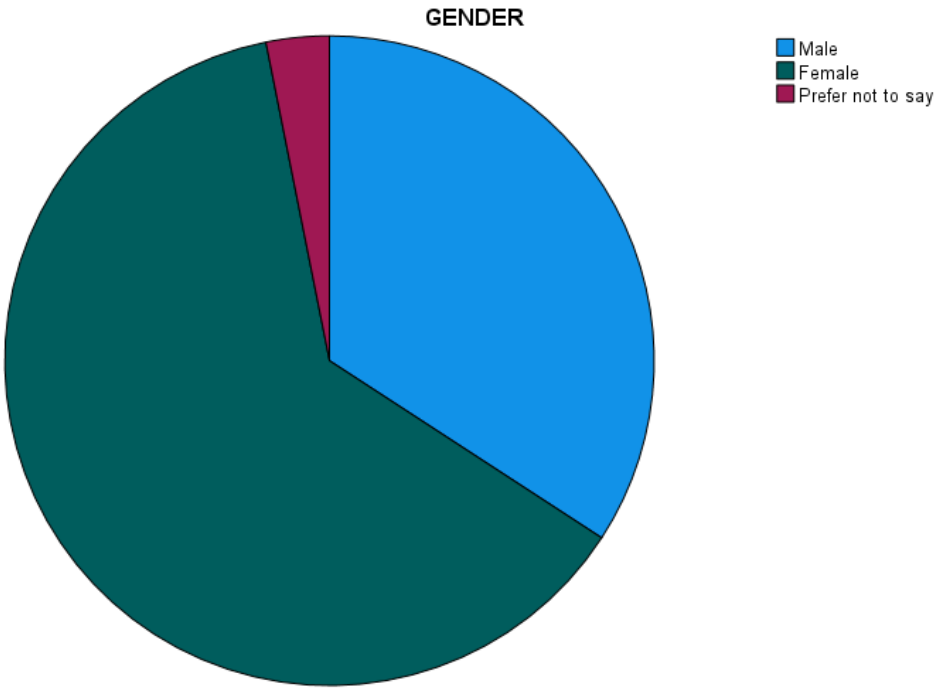


Figure 14: Gender of respondents

5.3.2 Age of respondents

Data was collected from adults at least 18, as indicated in Figure 15. The result showed that most participants were 18 – 24 years old and accounted for 51.6%. These were mainly high school and tertiary students and young adults who had started to take up work opportunities and enjoyed buying food online. The self-administered questionnaire was completed online

through a Qualtrics link from the Witwatersrand university ICT department. The elderly above 50 years did not complete the online self-administered questionnaire.

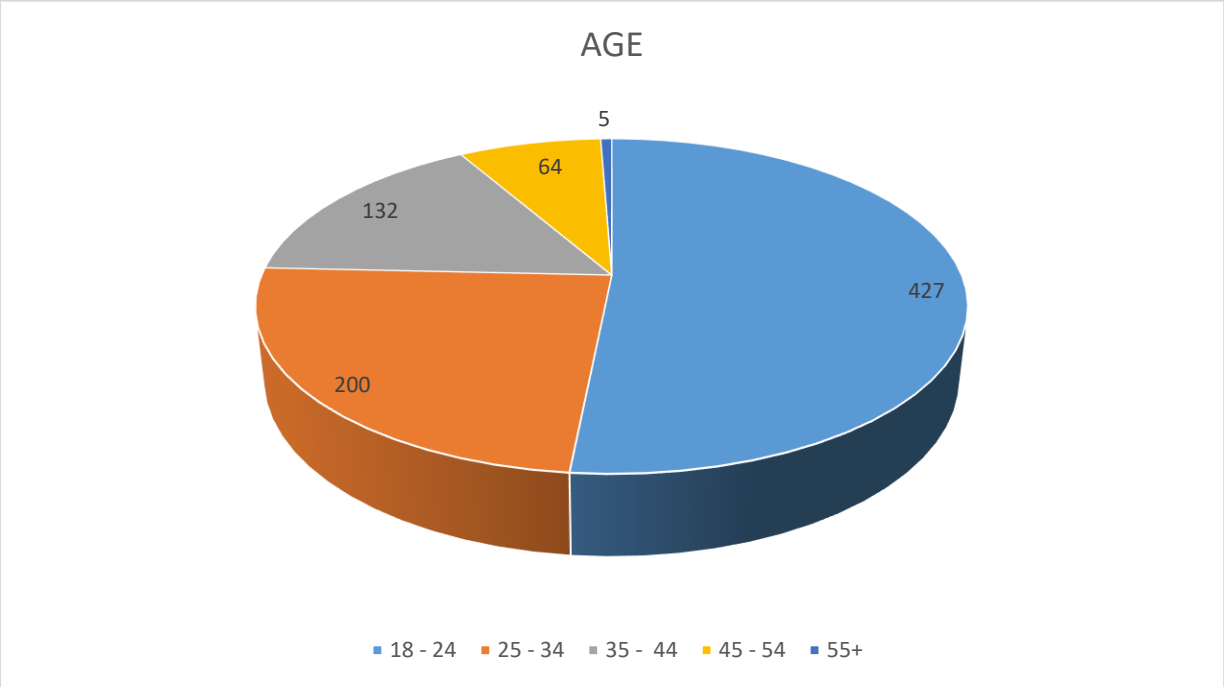


Figure 15: Age of respondents

The senior citizens above fifty-five constituted the smallest group of all the participants who prefer buying online using digital platforms. This could be because of not knowing how to complete the transactions, as most of the age group was born before the technology era.

5.3.3 Orders per month

The study found that 56.4% of the participants ordered food five times or less per month. The percentage of those who ordered more than 11 times was 11.5%. Most of the participants were found to be educated and managed to complete the self-administered questionnaire using the digital platform. The results are indicated in Figure 16 on a bar graph.

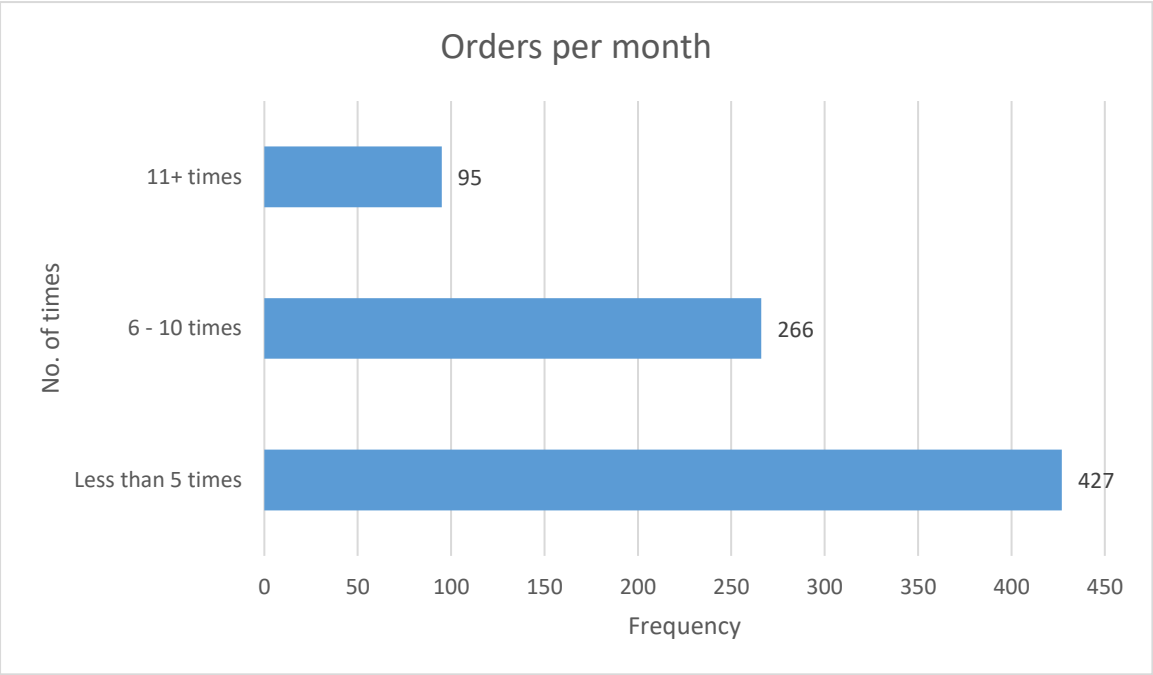


Figure 16: Orders per month

5.3.4 Educational qualifications

The degreed participants accounted for 34.7%, while those with matric or less were the least represented, with 0.8%, as indicated in Figure 17. The size of the matriculants was almost like the degreed participants. This reflects in the number of people who buy online. It shows that they are educated and they can read and write.

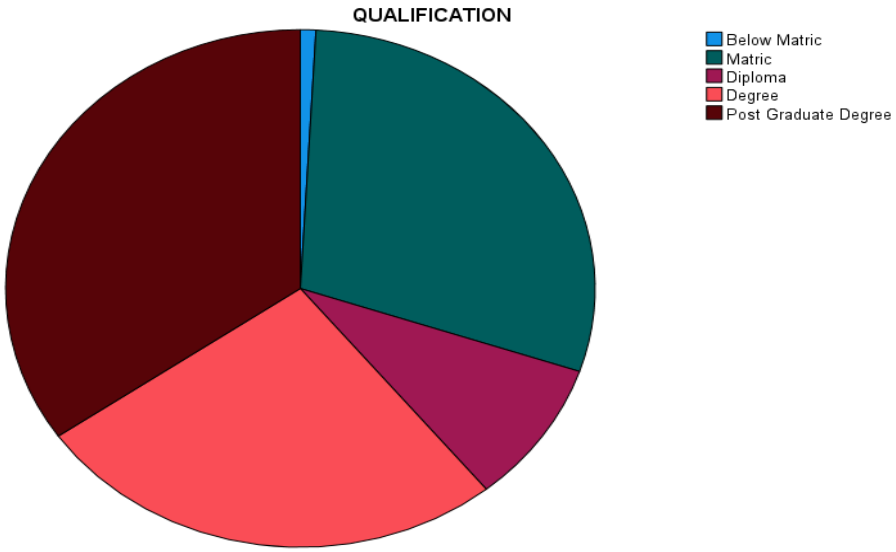


Figure 17: Educational qualifications

5.3.5 Monthly income

Income levels fell precipitously during the COVID-19 pandemic due to the government's strict lockdown measures aimed at containing the virus' spread. The overwhelming majority of consumers have lost their income sources, as shown in Figure 18. According to the findings, 49.9 percent of respondents earn less than R5000 monthly.

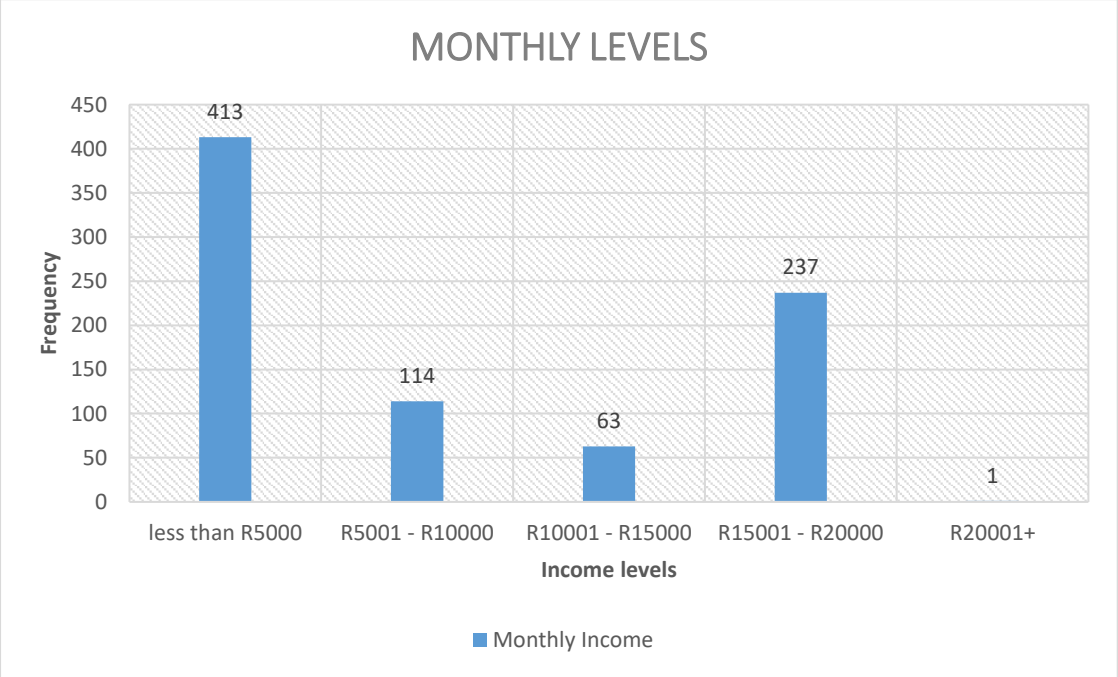


Figure 18: Monthly income

5.3.6 Province

Gauteng had the most participants (63.6 percent), while the Northern Cape and Free State had 1.4 percent. Gauteng province has the country's highest population, and the study's number of participants confirmed this narrative, as indicated in Figure 19. Other provinces were larger rural areas, but this differs from Gauteng; hence DCC business model thrives.

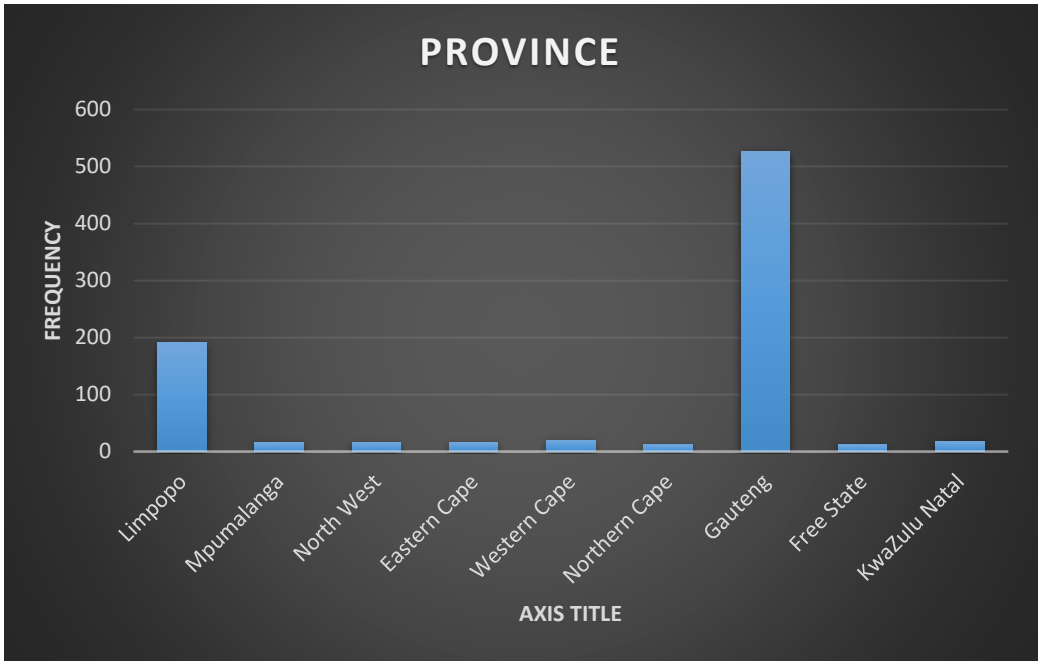


Figure 19: Provinces

Google's estimation of travel time considers the distance between the service provider, e.g., the restaurant, and the customer's physical location to be an important factor (Correa et al., 2019). This explains why service providers prefer urban areas compared to rural areas. The customers are not scattered in urban areas, unlike rural areas; hence the graph shows more participants in towns.

5.4 DESCRIPTIVE STATISTICS OF FOOD ORDERING APPS USAGE

The South African food delivery industry's respondents' profiles were presented in Table 27 to better understand them. The respondents were asked about their awareness of food delivery services. Service providers preferred a list of local and international brands, and the type of dish regularly bought online. Interesting results were profiled, as shown in the table. One of the big takings was that South African consumers preferred local brands (54.6%) to established international brands.

Table 24: South African food delivery respondents' profiles

Variable		Frequency	Percent	Valid Percent	Cumulative Percent
Four main food delivery service providers have a presence across the country. Please indicate if you use them regularly.	Yes	758	91.5	91.5	91.5
	No	70	8.5	8.5	100.0
	Total	828	100.0	100.0	
Please select one generic app which you use to order food online more often.	Mr Delivery	452	54.6	54.6	54.6
	UberEats	341	41.2	41.2	95.8
	OrderIn	11	1.3	1.3	97.1
	Bolt Food	24	2.9	2.9	100.0
	Total	828	100.0	100.0	
Identify the dish which you order more often.	Chicken	154	18.6	18.6	18.6
	Burgers	257	31.0	31.1	49.7
	Processed fish	13	1.6	1.6	51.3
	Pizza	330	39.9	39.9	91.2
	African tradition, e.g., Mola mogodu	19	2.3	2.3	93.5
	Asian cuisine	54	6.5	6.5	100.0
	Total	827	99.9	100.0	
	Missing	1	1		

5.4.1 Regular use of generic apps when ordering food

The researcher presented the data in the form of charts to make it possible to analyse specific constructs. From the study, 91.5% of the respondents use generic apps when buying products and services online. The study shows that about 8.5% of respondents use generic apps when ordering food. Rather, they order using restaurant-specific apps. The possible reason for choosing different apps is that South Africa has many rural provinces, and these generic apps might not be present in some parts of the country.

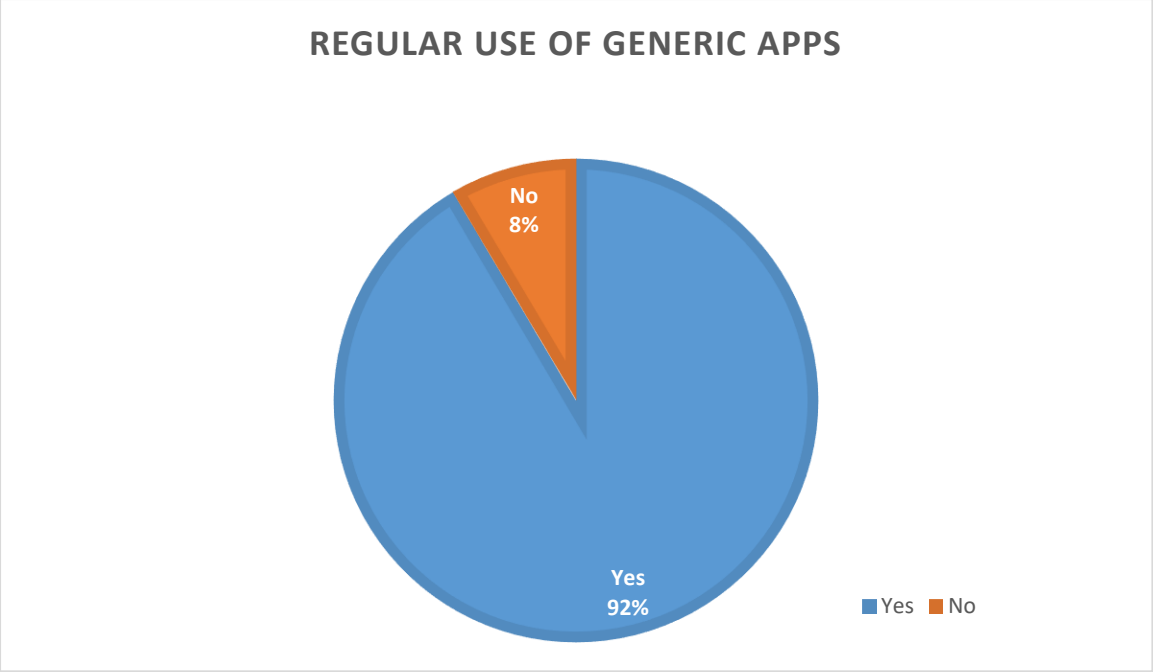


Figure 20: Regular use of generic apps

5.4.2 DCC generic apps

The researcher identified two international brands. i.e., Uber Eats and Bolt Food, and two local brands, i.e., Mr Delivery and OrderIn, operate in the food delivery industry across South Africa.

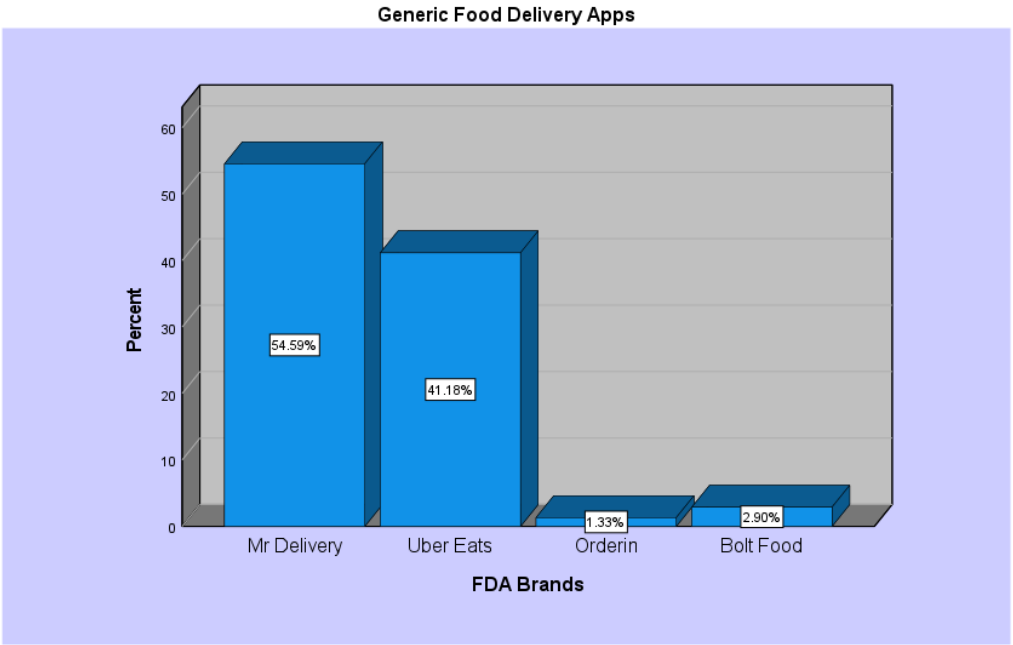


Figure 21: Generic apps

Mr Delivery was the favourite platform with 54.6%, followed by Uber Eats at 41.2%. These interesting findings indicate that consumers prefer local to well-established international

brands. This is good for local companies to achieve a bigger market share by offering what consumers want through understanding their culture and buying behaviour.

5.4.3 Type of food ordered

South African restaurants have many dishes from which consumers choose. Interesting results were noted in the study. Regarding the type of food the consumers bought, pizza topped the list with 39.9%, followed by burgers and chicken at 31.0% and 18.6%, respectively, whilst the least favourite dish was processed fish at 1.6% of the total respondents.

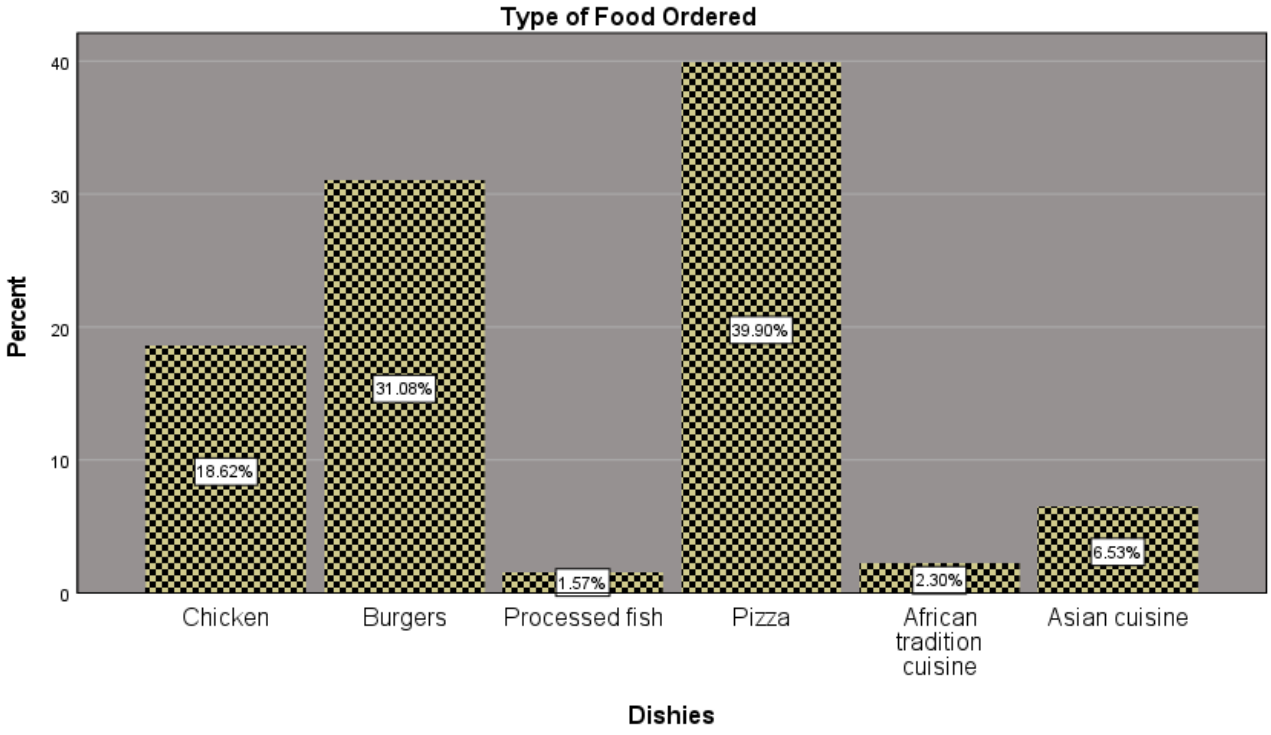


Figure 22: Types of dishes

The research noted that fast food consumption did not change during the lockdown. Bakaloudi et al. (2021) noted that the frequency of ordering and having food delivered at home varied as some studies show a decline while others show an increase. Pizza was the favourite among consumers.

5.5 DESCRIPTIVE STATISTICS OF ON MEASURES OF CONSTRUCTS

The attitudes of the study were home delivery, economic benefits, social benefits, security assurance and trust. Home delivery is negatively skewed, as shown in Table 25. The average mean statistics for home delivery is 4,278, which represents the *Agree* option, and the average

mean statistic for economic benefits is 3,3767. The average score of the respondents was neutral, where they neither disagreed nor agreed with the statements. The variance for all the items was four on a five-point Likert scale. The results showed that respondents responded to the extremes as data captured strongly disagreed, and others strongly agreed with the statements.

5.5.1 Descriptive statistics of attitudes

The constructs for the study which measured attitudes were economic benefits, social benefits and trust in the platform. Table 25 presents the attitudes statistics. The economic benefits had mean statistics ranging from 2.79 – 4.17, and the average was 3.317. Items EB1, EB2 and EB3 had mean statistics of less than 3. Here, the respondents disagreed with the statements favouring economic benefits. The results correlate well with the study's findings, obtained after running the structural equation modelling where the economic benefit was found to be insignificant. The social benefits' mean statistics were 3.18, and the mean, standard error was 0.035. The range was 4, and the skewness statistics were negative. Trust in the platform had a mean statistic ranging from 3.07 – 3.67, implying that respondents chose neutral as the preferred answer. The mean standard error was 0.0307, and the range was 4. The range implied that there were participants who chose extreme responses. Security assurance had a mean statistic of 3.563 and a range of 4. Most of the scores were condensed around neutral, implying that participants neither agreed nor disagreed with the statement.

Table 25: Attitudes Statistics

		N	Range	Mean		Std. Deviation	Variance	Skewness	
		Statistic	Statistic	Statistic	Std. Error	Statistic	Statistic	Statistic	Std. Error
HD1	Online delivery service is efficient.	827	4	4.29	.028	.799	.638	-1.959	.085
HD2	Online delivery firm sends the right food item.	827	4	4.26	.028	.813	.661	-1.884	.085
HD3	Delivery is quick.	827	4	4.24	.034	.975	.951	-1.572	.085
HD4	Delivered food is fresh.	827	4	4.31	.027	.771	.594	-1.644	.085
HD5	Online delivery services have a variety of dishes.	827	4	4.29	.031	.895	.801	-1.757	.085
EB1	I save money when I buy online.	828	4	2.94	.040	1.140	1.298	-.007	.085
EB2	My participation in online platform benefits me financially.	828	4	2.89	.038	1.106	1.224	.130	.085
EB3	Buying online improves my economic situation.	828	4	2.79	.037	1.073	1.151	.247	.085
EB4	Online buying saves me time.	828	4	4.17	.025	.708	.502	-.987	.085
EB5	Ordering online helps to lower travelling costs.	828	4	3.96	.031	.894	.800	-.984	.085
EB6	I do not benefit economically when I buy online.	827	4	3.15	.037	1.068	1.141	-.180	.085
SB1	Users of online food delivery platforms help each other by rating and reviewing the app.	827	4	3.76	.030	.862	.743	-.775	.085
SB2	Users of online food delivery platforms do not help each other by rating and reviewing the app.	828	4	2.69	.037	1.056	1.114	.456	.085
SB3	My friends and family approve of the use of online apps.	828	5	3.68	.031	.894	.800	-.712	.085
SB4	Online food delivery services allow me to have fun with others.	828	4	2.89	.039	1.130	1.277	.086	.085
SB5	People I value prefer that I use food delivery apps.	828	4	3.09	.036	1.028	1.056	-.072	.085
SB6	My role models recommend online apps when purchasing products and services.	828	4	3.03	.037	1.064	1.132	-.089	.085
SA1	Online food ordering website is trustworthy.	828	4	3.71	.028	.801	.641	-.511	.085
SA2	Online food ordering website has a policy on privacy and security.	828	4	3.81	.026	.748	.559	-.402	.085
SA3	I am aware of the details of the website's security and privacy policy.	828	4	3.14	.038	1.102	1.214	-.111	.085
SA4	I can remove my personal information from the website when I want to do so.	828	4	3.48	.033	.954	.910	-.332	.085
SA5	Consumer control of personal information lies at the heart of the consumer privacy of the website.	828	4	3.50	.030	.869	.756	-.327	.085
SA6	I must be aware of how my personal information will be used.	828	4	4.24	.029	.820	.673	-1.349	.085
SA7	Online food delivery service has an online privacy policy that is not clear.	827	4	3.06	.032	.924	.854	.097	.085
TP1	Based on my experiences with online food delivery services, the firms care about their customers.	827	4	3.67	.030	.849	.721	-.467	.085
TP2	Online food delivery service providers are honest.	828	4	3.55	.029	.821	.674	-.266	.085
TP3	Online food delivery service providers are not opportunistic.	818	4	3.07	.033	.958	.918	-.100	.085
TP4	Online food delivery firms have high integrity.	828	4	3.34	.029	.824	.679	-.141	.085
TP5	Based on my experience, online food delivery firms cannot be trusted sometimes.	827	4	3.08	.034	.991	.982	-.160	.085
TP6	Online firms keep the best interest of consumers.	828	4	3.43	.029	.825	.680	-.169	.085
Valid N (listwise)		827							

HD – Home Delivery; EB – Economic Benefits; SB – Social Benefits; SA – Security Assurance; TP – Trust in the Platform

5.5.2 Descriptive statistics of Cognitive Response (beliefs)

The cognitive response variables tested in the model were perceived usefulness (PU), perceived ease of use (PEOU) and security assurance. The valid number of responses was 827. The range was 4 for all the items, as shown in Table 26. The mean statistics for PU ranged from 3.41-4.21, and the standard error of skewness was 0.024 – 0.034. The standard error of skewness was 0.085 for all the items. The participants agreed with the questions asked per construct. Perceived ease of use had mean statistics ranging from 2.44 - 4.13. The average score was "agree", while the average standard error for the items was 0.028. The average standard deviation was 0.8094.

Table 26: Descriptive of cognitive response (beliefs)

		N	Range	Mean		Std. Deviation	Variance	Skewness	
		Statistic	Statistic	Statistic	Std. Error	Statistic	Statistic	Statistic	Std. Error
PU1	Online apps have a quicker response rate.	828	4	3.73	.028	.820	.672	-.456	.085
PU2	Ordering food online increases my productivity at work.	828	4	3.53	.034	.989	.977	-.390	.085
PU3	I regard online food ordering as useful.	828	4	4.11	.025	.717	.513	-.930	.085
PU4	The online ordering platform saves me time.	828	4	4.21	.026	.734	.539	-1.169	.085
PU5	The online ordering system is quick to complete the order.	828	4	4.06	.027	.771	.594	-.735	.085
PU6	Overall, using an online ordering system is more advantageous.	828	4	3.99	.027	.784	.615	-.678	.085
PEOU1	My interaction with the food ordering app is clear and understandable.	828	4	4.13	.024	.704	.495	-.818	.085
PEOU2	The food ordering app allows me to order what I want.	828	4	4.02	.028	.792	.627	-.877	.085
PEOU3	I find the app flexible to interact with.	828	4	3.96	.027	.783	.613	-.815	.085
PEOU4	I find the app easy to navigate.	828	4	4.07	.025	.723	.523	-.819	.085
PEOU5	The use of the app requires much thinking.	828	4	2.44	.036	1.045	1.093	.781	.085
Valid N (listwise)		827							

PU – Perceived Usefulness; PEOU – Perceived ease of use

5.5.3 Descriptive statistics behavioural intentions to continue using DCC

The valid tools measuring the phenomenon were 828. The mean statistic for *behavioural intention* was 3.534, which is neutral but also inclined to agree. The mean standard error ranges from 0.028 to 0.038. The data is negatively skewed, and the skewed standard error was 0.085. the range statistic for the data was 4. The results indicate that participants were happy to participate in the DCC platform. The mean statistic values of economic benefits are low compared to other constructs. The mean statistic score indicates that the majority were neutral or not agreeing with the item. These results tally with what was obtained in the SEM model, as economic benefits were insignificant and did not have an impact on the buying of food online using digitally mediated platforms. Table 27 summarises the behavioural intentions statistics.

Table 27: Behavioural Intentions statistics

		N	Range	Mean		Std. Deviation	Variance	Skewness	
		Statistic	Statistic	Statistic	Std. Error	Statistic	Statistic	Statistic	Std. Error
DCC1	I see myself buying food online in the future.	828	4	3.90	.033	.945	.892	-.690	.085
DCC2	I see myself increasing online purchasing activities in future.	828	4	4.09	.028	.800	.640	-1.043	.085
DCC3	If all things considered, I expect to continue ordering online.	828	4	4.01	.027	.784	.614	-.675	.085
DCC4	I would recommend online buying to my family and friends.	828	4	3.96	.028	.816	.666	-.714	.085
DCC5	I would not recommend online buying to my family and friends.	828	4	2.45	.038	1.103	1.217	.613	.085
DCC6	I see myself writing positive reviews on social media.	828	4	3.39	.034	.977	.954	-.314	.085
Valid N (listwise)		828							

DCC – Intention to continue using Digital Collaborative Consumption

5.6 COMMON METHOD VARIANCE ASSESSMENTS

When single respondent data from the same period on the same independent and dependent variable is collected, common method variance assessments (CMV) present a challenge (Chang et al., 2010). CMV is the variance attributable to the measurement technique rather than the constructs represented by the measure (Podsakoff et al., 2012). Procedurally, the questionnaire design ensures that items describing the same factor dimensions are recognised as per the recommendation (Podsakoff et al., 2012). The physical distance between predictors and criterion variables was increased to reduce respondents' tendency to use prior answers to fill gaps in completing the questionnaire. On the instructions to participate, confidentiality was emphasised. Names were not used, making identifying the person who completed the tool difficult. Participants were requested to be honest in their opinion about the research subject. The instructions clarified that all answers were acceptable as the main purpose was to get responses and analyse participants' views in the food delivery industry. Diamantopoulos et al. (2019) noted that stringent procedures in CMV reduce bias, but the guarantee is questionable. Statistical methods are recommended as a remedy against CMV. Chang et al. (2010) recommended multiple statistical approaches to minimise the bias attributed to CMV.

5.7 STRUCTURAL EQUATION MODELING

Structural equation modelling is a statistical methodology that takes a confirmatory approach to structural theory (Hair et al., 2020; Hair Jr et al., 2010). Structural equation modelling uses different types of models to predict relationships among hypothesised constructs to test the theoretical model using a quantitative approach. Structural equation modelling consists of two parts: the measurement model and the structural model. Linear structural equation modelling is viewed as a multivariate regression model used to run the SEM (Geiser, 2013; Geiser et al., 2021). Structural relationships between multiple dependent and independent variables can be analysed simultaneously. The latent factors in the model are measured by manifest variables, as in Table 28.

Table 28: Latent factors and measurement variables

Construct	Latent factors	Measurement variables
Home delivery	DH	DH1 -DH5
Economic benefits	EB	EB1 – EB6
Social benefit	SB	SB1 – SB6
Security assurance	SA	SA1 – SA7
Trust	TP	TP1 – TP6
Perceived usefulness	PU	PU1 – PU6
Perceived ease of use	PEOU	PEOU1 – PEOU5
Intention to continue using digital collaborative consumption	DCC	DCC1 – DCC6

5.7.1 The Structural Model

The structural model specifies the relationship pattern among independent and dependent variables, either observed or latent (Ho, 2013). A structural model allows directional predictions among independent or dependent variables and permits the researcher to model indirect effects. The structural model provides a direct test of the theory of interest.

5.7.2 Measurement Model Assessment

The measurement model "specifies the rule governing how the latent variables are measured in terms of observed variables and describe the measurement properties of the observed variable" (Ho, 2014, p. 423). The measurement model specifies the relationship between observed latent variables. The researcher noted that the measurement model tests the reliability of the observed variables employed to assess the latent variables. The measurement model that offers a poor fit to the data suggested that at least some of the observed indicator variables prevent the researcher from moving forward to the data analysis stage. It is evident that in the literature, there are many indices. However, the research focused on some indices in Table 35, which showed the model fit indices and recommended threshold to establish model adequacy (Muthén & Muthén, 2017; Steenkamp & Maydeu-Olivares, 2020). The research suggested that a combination of different indices determines acceptable model fitness. The indices that were less affected by sample size are the standardised root mean error of approximation and comparative fit index (Hooper et al., 2008) and were applied in the study. The researcher noted the advice from Hooper et al. (2008), who argued that although fit indices were an important guide, structural model fitness must be examined considering substantive theory since model

fit alone may prevent the fundamental theory testing. The strict application of fit indices was not emphasised since it may result in a type 1 error, where the researcher wrongfully rejects an acceptable model.

The assessment power was based mainly on the RMSEA to establish the goodness of fit for SEM analysis. The RMSEA estimates analysis score was 0.082, reflecting an adequate fit for the model. The RMSEA value of more than one is considered poor, which did not apply to the study. Structural Equation Modeling (SEM) as a multivariate data analysis was adopted for the study and was considered sophisticated, although it is becoming popular among consumer behaviour researchers (Gupta & Singh, 2015). The model fit is the degree to which the estimated covariance matrix matches the observed (sample) covariance matrix (Malhotra et al., 2012). The calculation compares the model to the no model to see how well it fits. The Chi-Square Test (X2) is a standard method for assessing overall model fit.

5.8 EVALUATION OF MEASUREMENT MODEL

Before evaluating the fit of the path model, the researcher had to specify the measurement model to verify all measurement variables to reflect on all observed constructs. CFA determines the fit of the measurement model. Geiser (2013, p. 51) noted that a structural equation modelling is commonly referred to as a CFA when only a non-directional path, such as latent regression or when the factors are assumed to be orthogonal, i.e., uncorrelated. A poor fit indicates a need for further refinement of the measurement model (Anderson & Gerbing, 1988; Gerbing & Anderson, 1985). The CFA determines the degree of model fit, the adequacy of the factor loading, standardised residuals, and explained variances for measurement variables. Ho (2013, p. 448) recommended that constructed measurement model and all factor loadings must be freed, i.e., estimated items are allowed to load on only one construct, i.e., no cross loading and latent constructs are allowed to correlate, i.e., equivalent to oblique rotation in exploratory factor analysis.

5.8.1 Purification of measurement variables

The measurement scales were purified to identify their dimensionality. The researcher first used the principal component in factor analysis with varimax rotation to condense data into factors. The ten variables were initially extracted. The researcher deleted the items with poor loading scores and performed another test for the second time. The items deleted were HD5,

EB4, EB6, SB1, SB2, SA1, SA6, SA7, TP5, PU4, PU5, PEOU5, and DCC 6. The second run extracted eight factors considered consistent with the hypothesised model.

5.8.2 Assessing Model Fit in Structural Equation Modeling

Many indices are used to assess the model fit of structural equation modelling and common cut-off values for acceptable fit (Hooper, 2008; Hu & Bentler, 1999; Hu et al., 2010). Structural equation modelling has become a standard tool in scientific disciplines for investigating the plausibility of theoretical models. The SEM help to explain interrelations among latent and manifest measurements.

5.8.2.1 Goodness of fit index (GFI)

The GFI measures how well the model fits compared to no model (Jöreskog & Sörbom, 1993, 1996). The index measure range from 0 (poor fit) to 1 (perfect fit), but theoretically, higher values are expected as they indicate a better fit, but no threshold has been established (Ho, 2014). Nusair and Hua (2010) noted that GFI should be equal to or greater than 0.90 for the model fit to be accepted, but other scholars, Hair Jr et al. (2020), strongly argued that a score of 0.6 is fairly acceptable.

5.8.2.2 Comparative fit index (CFI)

CFI is known as Bentler comparative fit index, which compares the existing fit with a null model that assumes the latent variables in the model are uncorrelated (Geiser, 2013; Geiser, 2020; Geiser et al., 2021). In addition, Geiser (2013) noted that CFI belongs to the family of incremental fit indices that compares the fit of the target model to the fit of the baseline model, i.e., the independence model. CFI varies from 0 to 1. A larger CFI is acceptable. For a good model, the CFI should be larger than 0.90 to accept the model. This threshold indicates that the model can produce 90% of the core variation in the data (Blunch, 2015).

5.8.2.3 Root Mean Square Error of Approximation (RMSEA)

RMSEA measures the discrepancy pedigree of freedom (Ho, 2014, p. 425). The value is the representative badness of fit when the proposed model is estimated in population. A value of 0 indicates the best fit and a higher value indicates the worst fit. Values from 0.08 to 0.10 indicate mediocre fit; those greater than 0.10 are poor fit (MacCallum et al., 1996). A good model should have an RMSEA value smaller than 0.05. A p-value is used to test the null hypothesis that RMSEA ≤ 0.05.

The measurement model "specifies the rule governing how the latent variables are measured in terms of observed variables and describe the measurement properties of the observed variable" (Ho, 2014, p. 423). The measurement model specifies the relationship between observed latent variables. The researcher noted that the measurement model tests the reliability of the observed variables employed to assess the latent variables. The measurement model that offers a poor fit to the data suggested that at least some of the observed indicator variables prevent the researcher from moving forward to the data analysis stage. It is evident that in the literature, there are many indices. However, the research focused on some indices in Table 29, which showed the model fit indices and recommended threshold to establish model adequacy (Muthén & Muthén, 2017; Steenkamp & Maydeu-Olivares, 2020). The research suggested that a combination of different indices determines acceptable model fitness. The indices that were less affected by sample size are the standardised root mean error of approximation and comparative fit index (Hooper et al., 2008) and were applied in the study. The researcher noted the advice from Hooper et al. (2008), who argued that although fit indices were an important guide, structural model fitness must be examined considering substantive theory since model fit alone may prevent the fundamental theory testing. The strict application of fit indices was not emphasised since it may result in type 1 error, where the researcher wrongful rejects an acceptable model. The assessment power was based mainly on the RMSEA to establish the goodness of fit for SEM analysis. The RMSEA estimates analysis score was 0.082, reflecting an adequate fit for the model. The RMSEA value of more than 1 is considered poor, which did not apply to the study. Structural Equation Modeling (SEM) as a multivariate data analysis was adopted for the study and was considered sophisticated, although it is becoming popular among consumer behaviour researchers (Gupta & Singh, 2015). The model fit is the degree to which the estimated covariance matrix matches the observed (sample) covariance matrix (Malhotra et al., 2012). The Chi-Square Test (X^2) is a standard method for assessing overall model fit.

Table 29: SEM Model Fitness Indices Recommended Threshold

Fit Index	Traditional cut off levels	Additional notes
Absolute fit indices Chi-square χ 2	Low χ 2 compared to degrees of freedom with an insignificant p-value (p>0.05).	The significance of the test is commonly ignored. Change in the Chi-square difference test is useful for nested models.
Relative χ 2 (χ2 /df)	Chi-square to degrees of freedom ratio (χ2 /df) of 3:1 or 2:1 or less highlights good fit.	Sensitive to sample size.
RMR	Better when RMR is small; 0 highlights perfect fit.	Based on residuals. It is unstandardized.
Root Mean Square Error of Approximation (RMSEA)	Values less than 0.07 acceptable.	Good with parsimonious models. Suggested cut-offs: good = <.05, adequate = < 0.08, poor = >.1.
Standardized Root Mean Square Residual (SRMR)	Values less than 0.08 acceptable.	The standardized form of RMR. Interpretation is easier because it is standardized.
Tucker-Lewis Index (TLI)	Values greater than 0.95 indicates a good fit.	Non-normed; favors parsimonious models. Mostly values > .9 indicate adequate fit.
Comparative Fit Index (CFI)	Values greater than 0.95 indicates a good fit.	Normed. Ranges between 0 and 1. Mostly values > .9 indicate adequate fit

Adapted from Hooper et al. (2008); Hu and Bentler (1999)

Gupta and Singh (2015) included goodness of fit, the badness of fit, and incremental fit indices as necessary indices which must be used to measure the model fit for structural equation modelling. The indices for the model were the comparative fit index (CFI = 0.898), Turkey Lewis (TLI = 0.862), and standardised root mean error of approximation (RMSEA = 0.082), which showed an adequate fit for the model.

5.8.2.4 Tucker-Lewis Index (TLI)

The TLI belongs to incremental fit indices and compares the target model's fit to the independence model's fit. The TLI should be larger than 0.90 for a good model fit.

5.8.2.5 Standardised Root Mean Square Residual (SRMR

The SRMR is a standardised measure for evaluating the model (Geiser, 2013; Geiser et al., 2021). Small SRMR values indicate that observed variances, covariances and means are well reproduced by the model on average. Values below 0.05 indicate a good fit for the model.

5.8.3 Improving model fit

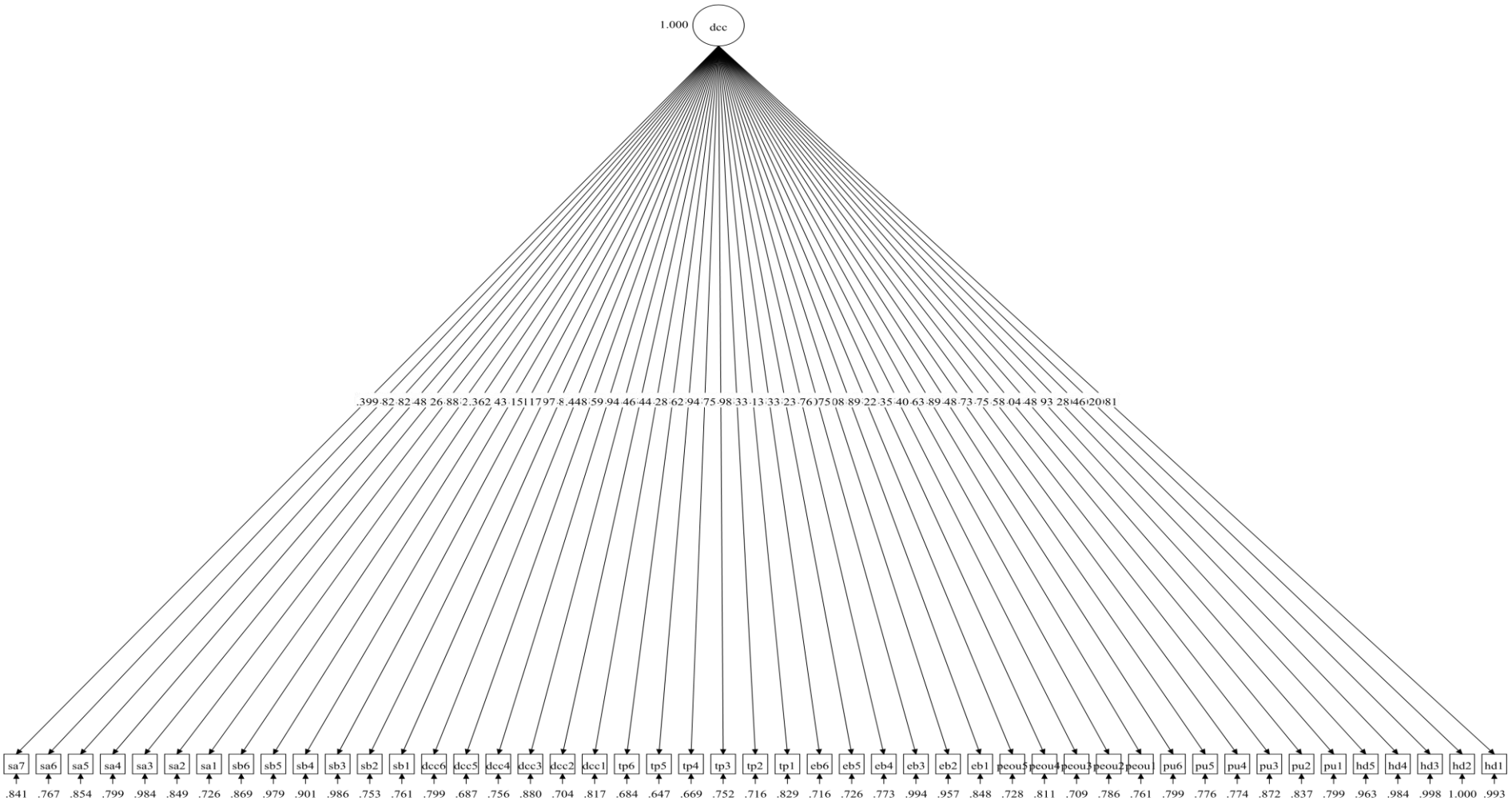
Most initial models are unsatisfactory (Ho, 2014; Jöreskog & Sörbom, 1993). The model modification was done by freeing fixed parameters. The process was done by freeing one at a time until the researcher was satisfied with the revised model.

5.8.4 Item to total correlation

Item-to-total correlation measures the correlation of each item to the sum of the remaining items. The approach improves the internal consistency of the construct. The approach assumes the total score is valid and indicates the item's convergent validity (Bell et al., 2022).

5.9 FIRST-ORDER CONFIRMATORY FACTOR ANALYSIS (CFA)

Harman's factor analysis was used to determine the possibility of ascribing all data to one factor. The first-order CFA, known as the general factor model, loads all scales onto a common factor. The single factor model had a bad fit X2 (df) = 18732.258; p (X2) = 0.0000 CFI/TLI = 0.379/0.354; RMSEA (90% confidence interval) 0.099 (0.097; 0.101); SRMR (Standard Root Mean Square Residual = 0.084; and Akaike (AIC) = 132260,677. The model suggests that all eight scales assess a single latent dimension, including only random measurement error and indictor-specific variance. If the general factor model had fit the data well, the researcher would have assumed that it was unnecessary to distinguish between variables.



HD = Home Delivery; S N = Social Norms; PU = Perceived Usefulness; PEOU = Perceived Ease of Use; EB = Economic Benefits; SA = Security Assurance; SB = Social Benefits; TP = Trust in the Platform; PI = Perceived Impact.

Figure 23: Single factor (g-factor) model

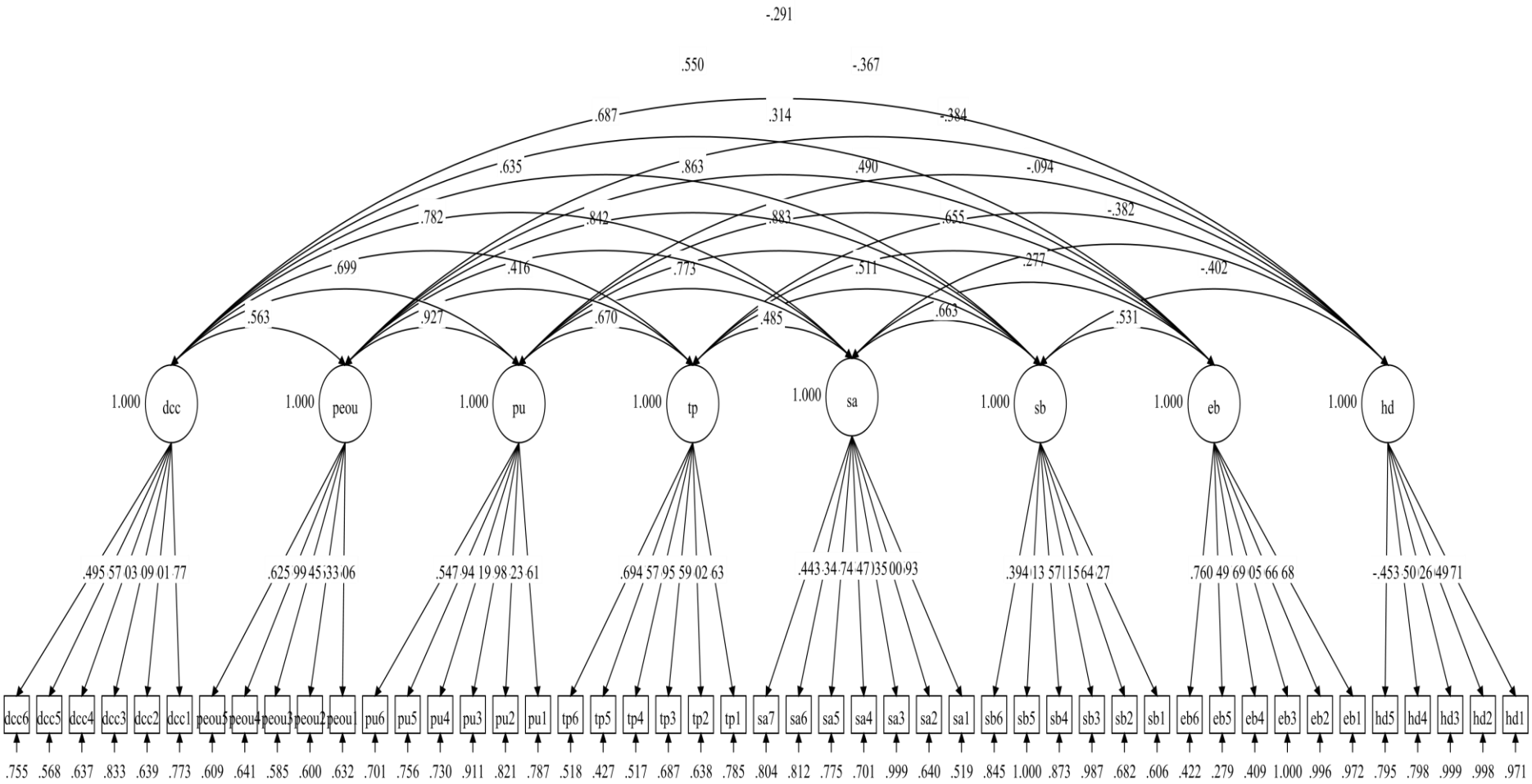
The single factor (g-factor) model for the 10-factor variables with unstandardised Mplus parameter estimates. The superscript [f] indicates that the first indicator's factor loading was fixed to 1 to identify the metric of the latent variable.

5.9.1 Model fit

The result of the model shows that the single factor model has a bad fit X^2 (df) = 18732.258; p (X^2) = 0.0000 CFI/TLI = 0.379/0.354; RMSEA (90% confidence interval) 0.099 (0.097; 0.101); SRMR (Standard Root Mean Square Residual = 0.084; and Akaike (AIC) = 132260,677. The single-factor model did not fit the need to test the ten-factor model, as shown in Figure 11.

5.9.2 Eight-factor model

The other model, Figure 24, contains eight latent factors suggesting that all the scales measure ten distinct dimensions of DCC. A thorough statistical comparison of the two models allows the researcher to determine whether a one- or ten-factor model is more appropriate to represent what the scales measure. The covariances between ten latent variables in the model were not explicitly specified in the Mplus input file. By default, Mplus estimates all covariances between exogenous factors automatically (Geiser, 2012). The tech 4 option in the command allows outputting the estimated covariance and correlation matrices for the latent factors for both one-factor and eight-factor models.



HD = Home Delivery; PU = Perceived Usefulness; PEOU = Perceived Ease of Use; EB = Economic Benefits; SA = Security Assurance; SB = Social Benefits; TP = Trust in the Platform

Figure 24: Eight Factor Model

5.9.3 Model fit

The proposition of chi-square over the degree of freedom was above the 3.0 threshold. The chi-square value is 0, which means the model did not fit the data well by the test. The model did not fit the observed variance-covariance. The size of the chi-square value is smaller in 8 factors than in 1 factor., showing an improvement in model fit for eight factors. The 8-factor hypothesised model, however, did not meet the required range for the researcher to proceed with SEM and path analysis. The researcher had to run a second-factor analysis model and drop the factors with poor loadings. The CFA was then run, and it showed an improved model fit. Table 30 shows the model fit indices for one-factor and ten-factor models.

Table 30: Model Fit Statistics for the One and Ten-factor models

	One factor	Ten factors
X^2 (df)	18723,258	1859.042
P (X^2)	0.0000	0.000
CFI/TLI	0.379/0.818	0.818/0.795
RMSEA (90% confidence interval)	0.099 (0.097; 0.0101)	0.057 (0.055; 0.060)
P (RMSEA $\leq$0.05)	0.000	0.006
SRMR (Standardized Root Mean Square Residual)	0.084	0.068
Akaike (AIC)	132260,677	74700.285

The 10-factor model for the variables with unstandardised Mplus parameter estimates (latent correlations are given in parentheses). The superscript f indicates the factor loadings that were fixed to 1 to identify the metric of the latent variables. The Figures show that most of the standardised loadings are above 0.7, which shows a good fit. The correlations are shown on the curved lines linking different constructs. Correlation values are less than 0.8, as recommended by scholars. Under the boxes on the model, the values show the estimated error variances.

Research has shown that adherence to stringent procedures may reduce bias due to CMV, but it cannot be entirely guaranteed (Diamantopoulos et al., 2019). Statistical approaches are recommended as a remedy against CMV so that the results are not biased (Diamantopoulos et al., 2019; Malhotra, 2006). Chang et al. (2010) recommend multiple statistical approaches to minimise the bias potentially attributable to CMV. Notably, Harman's one-factor analysis was

first used to determine if the data variance could reasonably be ascribed to a single factor. This was implemented in a CFA by specifying all the items on a common factor (Malhotra et al. 2006). The results in Table 22 indicate that the one-factor model is a poor fit while the ten-factor model is a good fit.

5.10 MEASUREMENT MODEL ANALYSIS

The measurement model was tested using the factor analysis, correlation matrix and Bartlett's test of sphericity.

5.10.1 Factor Analysis

The study was designed to investigate the drivers of DCC in an emerging market. Forty-seven statements were drawn to reflect the sub-categorical distinctions of (1) home delivery, (2) economic benefits, (3) social benefits, (4) Security assurance, (5) Trust in the platform, (6) Perceived usefulness, (7) Perceived ease of Use, and (8) Intention to continue using DCC. The researcher ran factor analysis models twice. The first model was not fitting well, as it had 11 factors. The researcher deleted the items that were not loading well and ran for the second time. The items deleted were HD5, EB4, EB6, SB1, SB2, SA1, SA6, SA7, TP5, PU4, PU5, PEOU5, and DCC 6. A new model with eight factors was extracted before data analysis, as shown in Table 33.

5.10.2 Correlation Matrix

The correlation matrix (see Annexure D) reveals a fairly high correlation between 8 variables retained to measure drivers or digital collaboration consumption in an emerging market. The intercorrelations between the variables are greater than 0.33. Given the high intercorrelations between variables, the hypothesised factor model appears to be appropriate, as indicated in annexure D.

5.10.3 Bartlett's test of Sphericity

Test the antiquities of the correlation matrix, i.e., The correlation matrix is significant correlations among at least some variables (Ho, 2013). The observed correlation matrix is expected to have a small diagonal coefficient if the variables are independent. Bartlett's test of sphericity tests that the matrix is an identity matrix and assumes that all the diagonal terms are 1 and all off-diagonal terms are 0 (Ho, 2013).

In the present test, as indicated in Table 31, Bartlett's test of sphericity has a value of 8331.48, and the associated degree of significance is smaller than 0.001. the results indicate that the hypothesis that the correlation matrix is an identity is rejected. The alternative hypothesis is accepted, and the study indicates that the correlation matrix is not an identity.

Table 31: KMO and Bartlett's Test

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.899
Bartlett's Test of Sphericity	Approx. Chi-Square	8331.480
	df	561
	Sig.	.000

5.10.4 Communalities

The communality section presents the commonality of each variable that used the proportion of variance in each variable accounted for by the common factors (Ho, 2013). That principal component method of factor extraction allows the computation of many factors based on the number of variables available. All the variants of each variable are accounted for only when all factors are included in the solution of the principal component method. Research has indicated that the proportion of variance accounted for by the common factors, or simply the community 0f variable, is always 1 for all the variables, as shown in Table 32.

Table 32: Communalities

Communalities

	Initial	Extraction
HD1	1.000	.491
HD2	1.000	.544
HD3	1.000	.319
HD4	1.000	.462
PU1	1.000	.405
PU2	1.000	.491
PU3	1.000	.536
PU6	1.000	.568
PEOU1	1.000	.578
PEOU2	1.000	.590
PEOU3	1.000	.621
PEOU4	1.000	.618
SA2	1.000	.504
SA3	1.000	.487
SA4	1.000	.509
SA5	1.000	.481
EB1	1.000	.723
EB2	1.000	.743
EB3	1.000	.693
EB5	1.000	.479
SB3	1.000	.404
SB4	1.000	.473
SB5	1.000	.679
SB6	1.000	.602
TP1	1.000	.571
TP2	1.000	.614
TP3	1.000	.509
TP4	1.000	.549
TP6	1.000	.572
DCC1	1.000	.599
DCC2	1.000	.604
DCC3	1.000	.690
DCC4	1.000	.607
DCC5	1.000	.393

Extraction Method: Principal Component Analysis.

5.10.5 Total variance explained

The Total variance explained output represents the number of common factors extracted, the eigenvalues associated with these factors, the percentage of total variance accounted for by each factor and the cumulative percentage of total variance accounted for by the factors Ho (2013) as indicated by Table 33.

Table 33: Eight-factor structure

Total Variance Explained

Component	Initial Eigenvalues Total	% of Variance	Cumulative %	Extraction Sums of Squared Loadings Total	% of Variance	Cumulative %	Rotation Sums of Squared Loadings Total
1	7.684	22.600	22.600	7.684	22.600	22.600	4.473
2	2.839	8.350	30.950	2.839	8.350	30.950	3.586
3	1.740	5.119	36.069	1.740	5.119	36.069	3.574
4	1.518	4.465	40.534	1.518	4.465	40.534	3.119
5	1.479	4.350	44.884	1.479	4.350	44.884	1.737
6	1.251	3.680	48.564	1.251	3.680	48.564	3.211
7	1.186	3.489	52.053	1.186	3.489	52.053	3.441
8	1.010	2.971	55.024	1.010	2.971	55.024	3.725
9	.989	2.908	57.933				
10	.875	2.574	60.507				
11	.853	2.508	63.014				
12	.822	2.418	65.432				
13	.790	2.322	67.754				
14	.750	2.207	69.961				
15	.746	2.194	72.155				
16	.723	2.127	74.282				
17	.710	2.089	76.372				
18	.675	1.986	78.357				
19	.635	1.869	80.226				
20	.598	1.759	81.985				
21	.584	1.719	83.703				
22	.558	1.640	85.344				
23	.550	1.618	86.962				
24	.513	1.509	88.470				
25	.473	1.393	89.863				
26	.460	1.352	91.215				
27	.452	1.330	92.545				
28	.412	1.213	93.757				
29	.404	1.188	94.945				
30	.391	1.149	96.095				
31	.373	1.096	97.191				
32	.361	1.061	98.252				
33	.333	.979	99.231				
34	.262	.769	100.000				

Extraction Method: Principal Component Analysis.

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

The total variance explained output extracted eight variables. In determining the number of factors to be extracted from the data, the researcher examined the eigenvalues associated with each of the factors extracted. The criterion of retaining only factors with eigenvalues of 1 or greater, the first eight factors were retained for rotation. The eight factors accounted for 22.600%, 8.350%, 5.119%, 4.465%, 4.350%, 3.680%, 3.489% and 2.971%. The cumulative initial eigenvalues of eight components are 55.024% cumulative of the total variance. The remaining factors accounted for 44,976% of the variance. The researcher concluded that the eight-factor model is adequate to represent the data.

5.10.6 The Scree Plot

The scree plot depicted in Figure 25 assisted in determining the study's factor count. Scholars defined a scree plot as a graphical tool to determine the number of significant components of factors to consider in a principal component or factor analysis (Frey, 2018). Similarly, the researcher identified ten factors from the diagram, which were then used to analyse the relationships. The procedure was carried out by visualising the magnitude of variability associated with each principal component analysis component. Cattell (1966) is a heuristic graphic method that entails two steps: "(a) plotting the eigenvalues (*y*-axis) against the components (*x*-axis) and (b) inspecting the shape of the resulting curve to identify the point at which the curve abruptly changes shape". The researcher determined the point at which the line levels off and then read the indicated number of factors. The standard application extracted eight factors from the data.

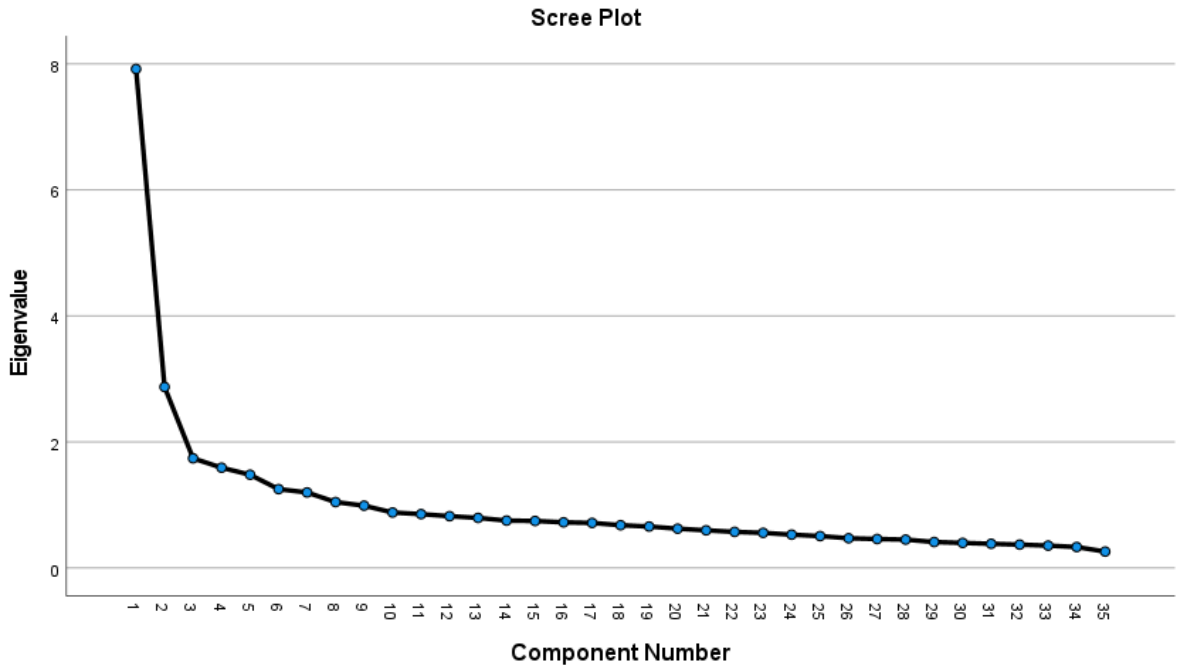


Figure 25: Scree Plot

The scree plot depicted was used to identify eight factors for the study, which were then analysed to determine model fit. The scree plot suggests an eight-factor solution.

5.10.7 Component matrix

As shown in Table 34, the component matrix represents the unrotated component analysis factor matrix and presents the correlation that relates to the eight factors using the well-known "eigenvalues > 1.00" rule. The coefficients are known as the factor loadings, indicating how closely the variables are related (Ho, 2013). Although the fixtures are rotated, i.e., extracted based on the proportion of total variance explained, output from the data showed that a significant cross-loading has occurred. The scree plot depicted was used to identify eight factors for the study, which were then analysed to determine model fit.

Table 34: Component Matrix

Component Matrix[a]

	Component							
	1	2	3	4	5	6	7	8
TP2	.625			-.357				
TP6	.582			-.355				
PEOU3	.576							
DCC3	.573	-.426	-.380					
TP4	.558			-.350				
DCC4	.557	-.337	-.371					
TP1	.556			-.386				
PU6	.554			.381				
PEOU2	.553							
DCC2	.552		-.459					
SB5	.534	.334						
SB6	.505							
PU3	.503	-.331						
DCC1	.499	-.466						
PEOU1	.497	-.417						
EB5	.492							
SA3	.491							
PU1	.490							
PU2	.478							-.355
TP3	.473	.362						
PEOU4	.461	-.428						
SA2	.441					.373		
SB3	.421							
SA4	.420		.347				-.361	
SB4	.417							
SA5	.409						-.359	
EB2	.493	.536						
EB3	.502	.522						
EB1	.463	.506						
DCC5		.392						
HD2					.534			
HD1					.487			
HD4					.408			
HD3					.386			

Extraction Method: Principal Component Analysis.

a. 8 components extracted.

The principal component analysis extracted eight components from the model. This supports the results extracted from the scree plot and the rotated component matrix.

5.10.8 Rotated Component Matric

The rotated component matric presents eight rotated factors, as indicated in Table 36. The rotated structure shows several cross-loaded items. Researchers suggest three ways of dealing with cross-loaded items, including deleting the cross-loaded item (Ho, 2014). The researcher deleted the cross-loaded items, resulting in clean factors that make it easier to interpret.

Table 35: Rotated Component Matrix

Rotated Component Matrix[a]

	Component							
	1	2	3	4	5	6	7	8
TP2	.704							
TP1	.695							
TP4	.674							
TP6	.670							
TP3	.617							
DCC3		.754						
DCC1		.704						
DCC2		.697						
DCC4		.696						
DCC5		-.561						
PEOU 4			.736					
PEOU 1			.699					
PEOU 3			.697					
PEOU2			.664					
PU4				.661				
PU6				.634				
PU3				.588				
PU1				.580				
PU2				.564				
EB1					.808			
EB2					.805			
EB3					.760			
EB5					.500			
SB5						.748		
SB6						.709		
SB4						.605		
SB3						.444		
SA4							.660	
SA5							.653	
SA2							.619	
SA3							.596	
HD2								.672
HD1								.665
HD4								.541
HD3								.476

Extraction Method: Principal Component Analysis.
Rotation Method: Varimax with Kaiser Normalization.

a. Rotation converged in 7 iterations.

All the cross-loaded items were deleted before the interpretation. Deleting the cross-loaded items helped to clarify the factors and make interpretation easier. Factor 1 contains five items and measures trust in the platform. Factor 2 contains items and measures the intention to continue using DCC. Factor 3 contains four items measuring perceived ease of use. Factor 4 contains five items which measure perceived usefulness. Factor 5 contains four items measuring the economic benefits of participating in DCC business. Factor 6 contains four items measuring social benefits. Factor 7 contains four factors measuring security assurance, and factor 8 measures home delivery. The eight-factor model represents a combination of original factors and adequately reflects the underlying factor structure of the drivers of the DCC model.

5.11 EVALUATION OF MEASUREMENT MODEL

The measurement model was evaluated using the confirmatory factor analysis to determine the level of model fit.

5.11.1 Confirmatory factor analysis (CFA)

Factor analysis presupposes that all variables in a measurement tool are highly correlated (Ho, 2013). Structural equation modelling (SEM) is "referred to as confirmatory factor analysis (CFA), when only non-directional relationships, such as covariances and correlations, are assumed between the latent variables in the structural model" (Geiser 2012 p. 3). CFA determines whether a collection of measures has the specified dimensionality, e.g., one, two, three factorials, or more. According to Muthén and Muthén (2017), CFA investigates relationships between observed and continuous latent variables. CFA is known as item response theory (IRT) analysis when the observed variables are categorical (Fox, 2020). CFA with multiple indicators and multiple causes (MIMIC) models are those in which the relationships between factors are investigated to appreciate measurement invariance and population heterogeneity (Muthén & Asparouhov, 2012). SEM models include those that estimate regressions among continuous latent variables, as indicated in Figure 26.

Confirmatory factor analysis (CFA) was done using the Mplus version 7 software. The process group all the factors together which are commonly used. The CFA was used to test whether a set of measures has a specifically hypothesised dimensionality (Geiser, 2020). The researcher assigned the eight factors within a set of hypothesised dimensions, and factor loadings were extracted (Hair Jr et al., 2020; Hair Jr et al., 2017). The CFA was instrumental in improving the model fit. After the researcher assessed model fit using CFA, the SEM was performed using

the Mplus version 7 software package to test the structural paths of the hypothesised model. Chi-squared test ($\chi 2$) The most fundamental measure of overall fit is the likelihood-ratios chi-square statistic (Ho, 2014; Jöreskog & Sörbom, 1993). A significant chi-square value leads to the rejection of the null hypothesis. The chi-square value, the degree of freedom and the p-value are also reported. Chi-square statistics are sensitive to departures from the multivariate normal of observed variables. The data demonstrate a good model fit after the purification of the model by dropping factors with poor loadings.

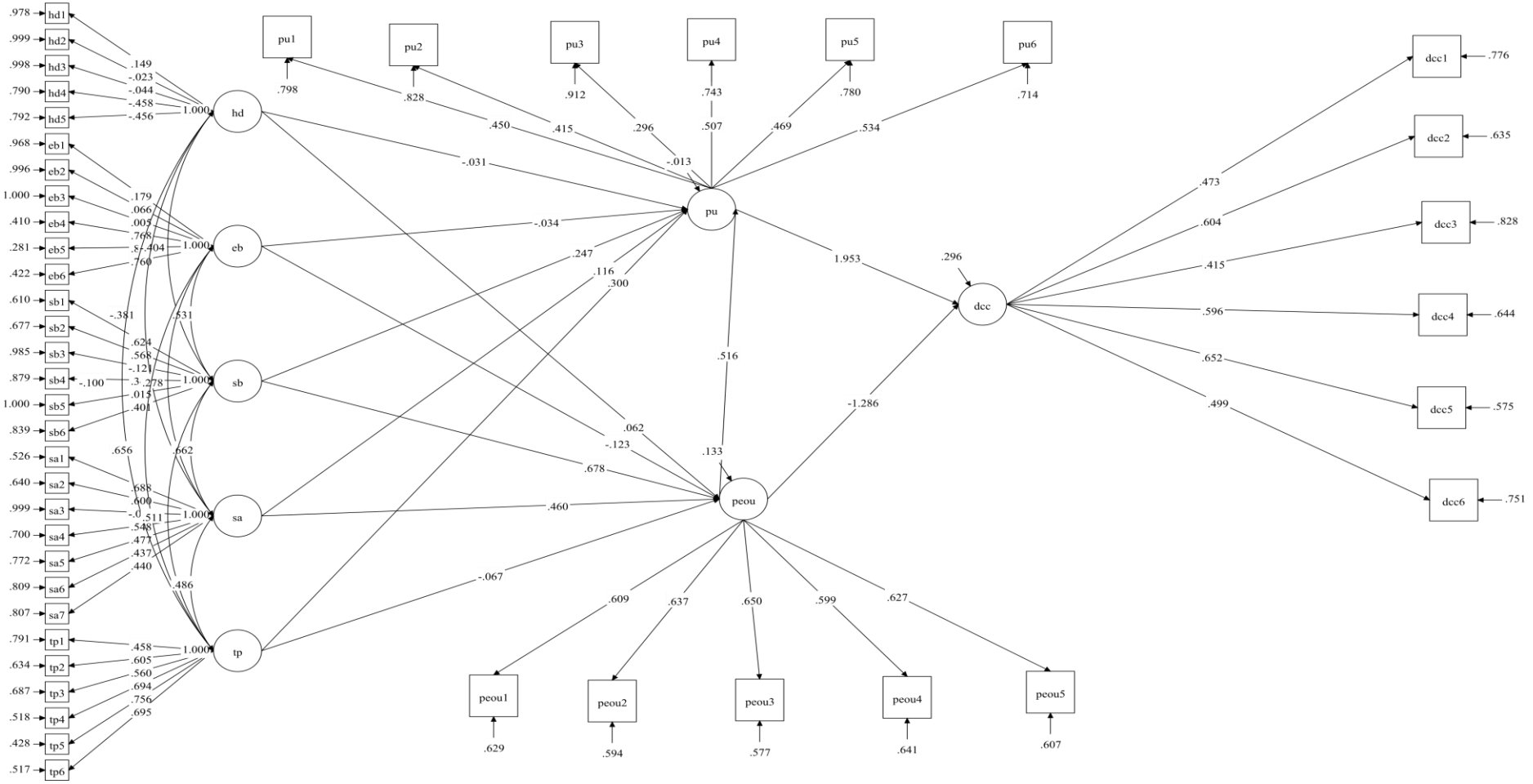


Figure 26: Confirmatory factor analysis

HD = Home Delivery; PU = Perceived Usefulness; PEOU = Perceived Ease of Use; EB = Economic Benefits; SA = Security Assurance; SB = Social Benefits; TP = Trust in the Platform

The CFA model indicates the standardised items for each latent variable. Except for economic benefits, which were not significant, most of the variables were significant. Structural equation modelling has the measurement and the structural part of the model. A multivariate regression model describes the relationship between a set of observed dependent variables and continuous latent variables in CFA and SEM (Hair Jr et al., 2020; Muthén & Asparouhov, 2012). The structural model describes three relationships in multivariate regression equations: relationships among factors, observed variables, and factors and observed variables (Hair Jr et al., 2017; Muthén & Asparouhov, 2012; Muthén & Muthén, 2017).

5.11.2 Model fit

The proposition of chi-square over the degree of freedom was above the 3.0 threshold. The chi-square value is 0, which means the model did not fit the data well by the car square test. The model did not fit the observed variance-covariance. The size of the chi-square value is smaller in 8 factors than in 1 factor., showing an improvement in model fit for eight factors. The 8-factor hypothesised model, however, did not meet the required range for the researcher to proceed with SEM and path analysis. The researcher had to run a second-factor analysis model and drop the factors with poor loadings. The CFA was then run, and it showed an improved model fit. The model Chi-square test results of 585.583 (365), CFI (0.908), TLI (0.896), and the standardised root mean square residual of 0.051 indicated that the model was well fitted.

5.11.3 Factor loading per item

Table 36 shows factor loading per item for the DCC for the whole sample. The standardised factor loadings are all above 0.8, showing a good fit for the model. The SMRM with a value of 0.068 had an acceptable fitness level. The fit indices could be improved by collecting more data from the respondents. However, the researcher had to work with what was there. To improve model fit, the researcher identified factors loading poorly, which were dropped from the final model.

Table 36: Factor loading per item

Construct	Item Code	Scale item	Standardised factor loading
Home Delivery	HD1	Online delivery service is efficient.	.900
	HD2	Online delivery firm sends the right food item.	.899
	HD3	Delivery is quick.	.900
	HD4	Delivered food is fresh.	.899
	HD5	Online delivery services have a variety of dishes.	.899
Perceived	PU1	Online apps have a quicker response rate.	.897
Usefulness	PU2	Ordering food online increases my productivity at work.	.897
	PU3	I regard online food ordering as useful.	.897
	PU4	The online ordering platform saves me time.	.897
	PU5	Online ordering system is quick to complete the order.	.898
	PU6	Overall, using online ordering system is more advantageous.	.897
Perceived Ease of	PEOU1	Online apps have a quicker response rate.	.898
Use	PEOU2	Ordering food online increases my productivity at work.	.897
	PEOU3	I regard online food ordering as useful.	.897
	PEOU4	The online ordering platform saves me time.	.898
	PEOU5	Online ordering system is quick to complete the order.	.900
Security Assurance	SA1	Online food ordering website is trustworthy.	.897
	SA2	Online food ordering website has a policy on privacy and security.	.898
	SA3	I am aware of the details of the website's security and privacy policy.	.897
	SA4	I can remove my personal information from the website when I want to do so.	.898
	SA5	Consumer control of personal information lies at the heart of the consumer privacy of the website.	.898
	SA6	I must be aware of how my personal information will be used.	.899
	SA7	Online food delivery service has an online privacy policy that is not clear.	.901
Economic Benefits	EB1	I save money when I buy online.	.897
	EB2	My participation in online platform benefits me financially.	.897
	EB3	Buying online improves my economic situation.	.897
	EB4	Online buying saves me time.	.897
	EB5	Ordering online helps to lower travelling costs.	.897
	EB6	I do not benefit economically when I buy online.	.902
Social Benefits	SB1	Users of online food delivery platform help each other by rating and reviewing the app.	.898
	SB2	Users of online food delivery platform do not help each other by rating and reviewing the app.	.900
	SB3	My friends and family approve of the use of online apps.	.898
	SB4	Online food delivery services allow me to have fun with others.	.897
	SB5	People I value prefer that I use food delivery apps.	.896
	SB6	My role models recommend online apps when purchasing products and services.	.897
Trust in the	TP1	Based on my experiences with online food delivery services, the firms care about their	.897
Platform		customers.	
	TP2	Online food delivery service providers are honest.	.897

	TP3	Online food delivery service providers are not opportunistic.	.897
	TP4	Online food delivery firms have high integrity.	.897
	TP5	Based on my experience, online food delivery firms cannot be trusted sometimes.	.901
	TP6	Online firms keep the best interest of consumers.	.897
Intention to	DCC1	I see myself buying food online in the future.	.898
continue Using	DCC2	I see myself increasing online purchasing activities in future.	.897
DCC	DCC3	If all things considered, I expect to continue ordering online.	.897
	DCC4	I would recommend online buying to my family and friends.	.897
	DCC5	I would not recommend online buying to my family and friends.	.901
	DCC6	I see myself writing positive reviews on social media.	.896

Table 36 shows factor loading per item for the DCC for the whole sample. The standardised factor loadings are all above 0.8, showing a good fit for the model. Chi-square values (p = 0.000) are significant and can be corrected by adding more responses to the model. The researcher deleted the factors which were not loading properly, and the process helped to improve the revised model.

5.12 DCC MODIFIED MODEL

After deleting the factors with poor factor loadings, the researcher ran the CFA for the second time with items that loaded to the researcher's satisfaction, as indicated in Figure 27.The items deleted were HD5, EB4, EB6, SB1, SB2, SA1, SA6, SA7, TP5, PU4, PU5, PEOU5, and DCC 6. The results were pleasing as there was evidence of improved model fit.

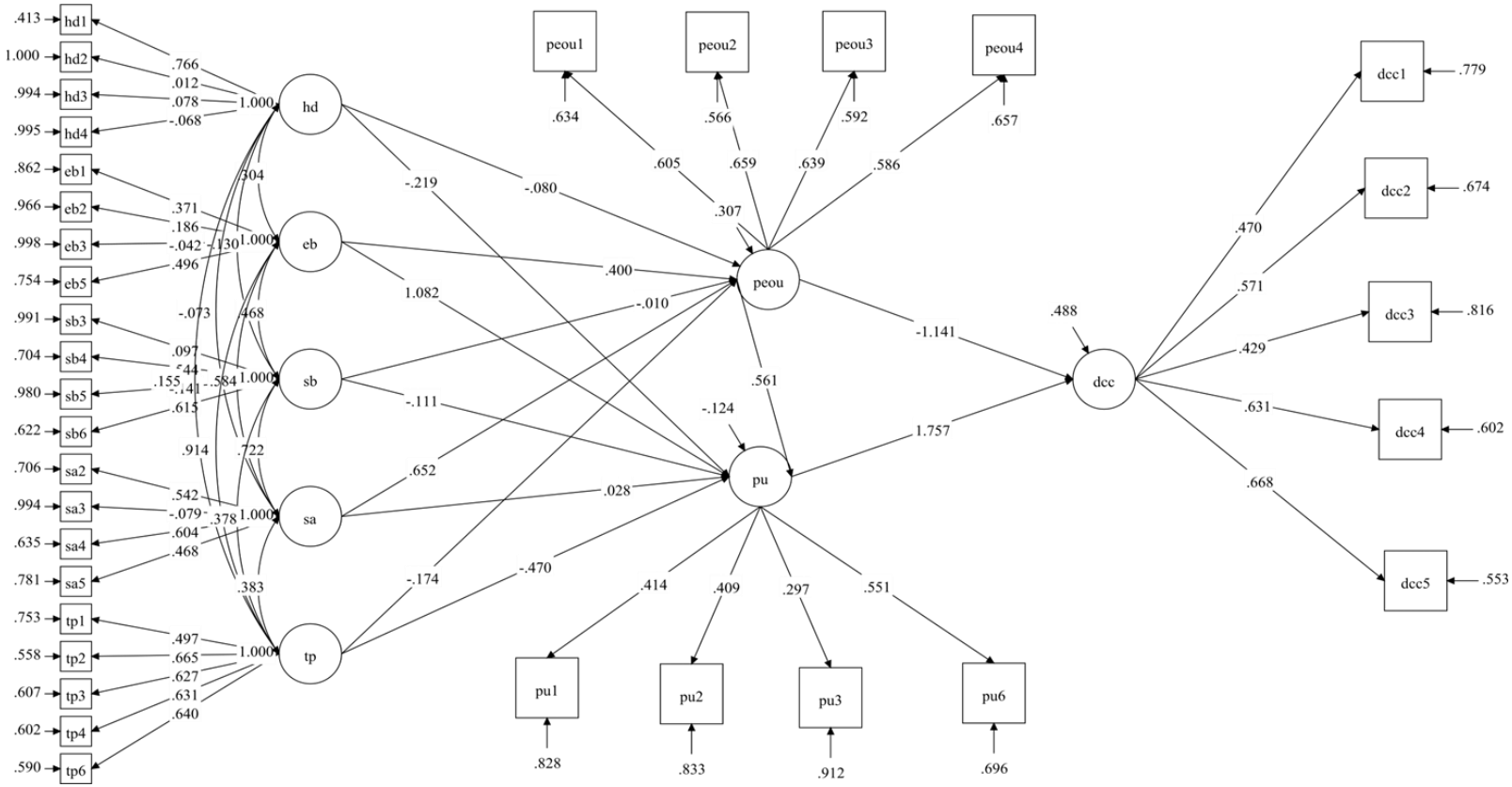


Figure 27: CFA model with deleted items

HD = Home Delivery; PU = Perceived Usefulness; PEOU = Perceived Ease of Use; EB = Economic Benefits; SA = Security Assurance; SB = Social Benefits; TP = Trust in the Platform

5.12.1 Model fit – Improved model

The proposition of the chi-square over the degree of freedom is above the 3.0 threshold, and the chi-square value is 0.001, which means the model did not fit the observed variance-covariance matrix well by the chi-square test; however, the model shows different results with other indices. The researcher used other baseline comparison fit indices. Ho (2013) compares the fit of the hypothesised model to the null or independent model. The baseline comparison fit indices of Comparative Fit Index (CFI) = 0.910; Tucker-Lewis Index (TLI) = 0.875; Standardised Root Mean Square Residual (SRMR) =0.034; Root Mean Square Error of Approximation (RMSEA) (90% confidence Interval = 0.073 (0.047;0.101) had a good fit. This suggested that the hypothesised conceptual model converged well and could represent data collected in the DCC market in South Africa.

In employing fit indices to evaluate the model fit, Marsh et al. (2004) warned researchers about using indices as a thumb rule. The conventional cut-off values, e.g., of 0.90 fit incremental indices, may not work well with the various types of indices., sample sizes, estimators, or distributors (Ho, 2014, p. 443). When deciding the validity of the model, the researcher must consider other aspects of the model, such as adequacy and interreducibility parameter estimates, model complexity, and substantive and theoretical issues underlying the model (Ho, 2013, 2014; Hu & Bentler, 1999).

5.13 VALIDITY

The term "validity" refers to how well a test accurately assesses the characteristics it is designed to investigate, as determined by external criteria (Karros, 1997). The Spearman rank-order correlation coefficient was used to assess the concurrent validity between the constructs. The study's results were not normally distributed as suggested by the Kolmogorov – Smirnov test, as shown in Table 16. According to Weber et al. (2018), the following criteria for measuring instrument validity are taken into account: p>0.25 was considered low, p>0.25-0.50 was considered moderate, p>0.50-0.75 was considered good, and p > 0.75 was considered excellent. The study's validity results showed significant correlations for two-tailed tests at both the 0.01 and 0.05 levels. Except for economic benefits, the p-values ranged from good to excellent.

Table 37: Spearman Rank Order Correlation Validity Test

		Home_DeL	Per_Usef	Per_EOU	Sec_Assu	Econ_Ben	Soc_Ben	Trust_Pl	Intend_ to continue using DCC	Covariates	Total
Home_DeL	Correlation Coefficient	1.000	.260**	.219**	.196**	.160**	.059	.110**	.145**	-.057	**.310****
	Sig. (2-tailed)	.	.000	.000	.000	.000	.089	.002	.000	.099	**.000**
	N	828	828	828	828	828	828	828	828	828	806
Per_Usef	Correlation Coefficient	.260**	1.000	.481**	.340**	.397**	.366**	.296**	.465**	.063	**.675****
	Sig. (2-tailed)	.000	.	.000	.000	.000	.000	.000	.000	.072	**.000**
	N	828	828	828	828	828	828	828	828	828	806
Per_EOU	Correlation Coefficient	.219**	.481**	1.000	.368**	.280**	.319**	.326**	.356**	-.063	**.560****
	Sig. (2-tailed)	.000	.000	.	.000	.000	.000	.000	.000	.070	**.000**
	N	828	828	828	828	828	828	828	828	828	806
Sec_Assu	Correlation Coefficient	.196**	.340**	.368**	1.000	.281**	.314**	.356**	.328**	-.075*	**.541****
	Sig. (2-tailed)	.000	.000	.000	.	.000	.000	.000	.000	.031	**.000**
	N	828	828	828	828	828	828	828	828	828	806
Econ_Ben	Correlation Coefficient	.160**	.397**	.280**	.281**	1.000	.396**	.391**	.352**	-.098**	**.627****
Spearman's rho	Sig. (2-tailed)	.000	.000	.000	.000	.	.000	.000	.000	.005	**.000**
	N	828	828	828	828	828	828	828	828	828	806
Soc_Ben	Correlation Coefficient	.059	.366**	.319**	.314**	.396**	1.000	.450**	.409**	-.108**	**.647****
	Sig. (2-tailed)	.089	.000	.000	.000	.000	.	.000	.000	.002	**.000**
	N	828	828	828	828	828	828	828	828	828	806
Trust_Pl	Correlation Coefficient	.110**	.296**	.326**	.356**	.391**	.450**	1.000	.406**	-.145**	**.604****
	Sig. (2-tailed)	.002	.000	.000	.000	.000	.000	.	.000	.000	**.000**
	N	828	828	828	828	828	828	828	828	828	806
Inten_to continue using DCC	Correlation Coefficient	.145**	.465**	.356**	.328**	.352**	.409**	.406**	1.000	.047	**.676****
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000	.000	.	.178	**.000**
	N	828	828	828	828	828	828	828	828	828	806
Covariates	Correlation Coefficient	-.057	.063	-.063	-.075*	-.098**	-.108**	-.145**	.047	1.000	**.103****
	Sig. (2-tailed)	.099	.072	.070	.031	.005	.002	.000	.178	.	**.003**
	N	828	828	828	828	828	828	828	828	828	806
Total	Correlation Coefficient	.310**	.675**	.560**	.541**	.627**	.647**	.604**	.676**	.103**	**1.000**
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000	.000	.000	.003	**.**
	N	806	806	806	806	806	806	806	806	806	806

**. Correlation is significant at the 0.01 level (2-tailed).*. Correlation is significant at the 0.05 level (2-tailed).

According to validation studies, the sample size for the Spearman rank correlation coefficient was determined using a two-tailed $\alpha \leq 0.05$, statistical power greater than 80%, and a correlation threshold value of 0.50. According to Ho (2013), the Spearman rank-order correlation coefficient computation is not affected by asymmetrical distributions or the presence of outliers. No correlation exists, so the null hypothesis is true, and rs = 0. In the alternative hypotheses, there is a relationship p>0. The researcher compared the critical value (DF) with the obtained value in the output for every variable. Evidence shows the relationship between the variables and the measurement instrument is valid. Except for the covariates, which were insignificant, the Spearman rank-order correlation validity test revealed a significant correlation at the 0.01 level 2-tailed and 0.05 level 2-tailed for all the model's latent variables. There was no correlation between social benefits and home delivery.

5.13.1 Discriminant validity assessment

Determining discriminant validity is critical in research with latent variables and multiple items representing the construct (Hamid et al., 2017). The criterion proposed by Fornell and Larcker (1981) is the most widely used in research. A high discriminant validity indicates that a construct is distinct and reflects an underlying phenomenon not expressed by other constructs in the instrument. Standardised covariances (correlations r) are easier to interpret because they are restricted to a standardised range ($-1 \leq r \leq +1$) (Geiser, 2012). The standardised factor loadings on the Mplus model results appear under BY, and the latent factor correlations under WITH. It was seen that all eight latent factors of DCC are positively correlated ($x \leq r \leq x$), which shows little discriminant validity among the constructs.

5.14 RELIABILITY TESTING

Examining the test's internal consistency enabled the researcher to identify items inconsistent with the test's ability to measure latent variables. The study evaluated the measuring instrument's reliability using the split-half technique and Cronbach's alpha. These two steps were critical in the model's analysis.

5.14.1 Split-half technique

The split-half technique establishes a correlation between the two halves of the tests. A higher correlation is preferred to indicate the internal consistency measure of the data and vice versa. Table 37 shows the split-half coefficient method used to determine the measuring instrument's reliability.

Table 38: Split-Half Coefficient

Reliability Statistics

Cronbach's Alpha	Part 1	Value	.840
		N of Items	24[a]
	Part 2	Value	.735
		N of Items	23[b]
	Total N of Items		47
Correlation Between Forms			.721
Spearman-Brown Coefficient	Equal Length		.838
	Unequal Length		.838
Guttman Split-Half Coefficient			.822

a. The items are: HD1, HD2, HD3, HD4, PU1, PU2, PU3, PU6, PEOU1, PEOU2, PEOU3, PEOU4, SA2, SA3, SA4, SA5, EB1, EB2, EB3, EB5, SB3, SB4, SB5, SB6.

b. The items are: SB6, TP1, TP2, TP3, TP4, TP6, DCC1, DCC2, DCC3, DCC4, DCC5, HD5, PU4, PU5, PEOU5, SA1, SA6, SA7, EB4, EB6, SB1, SB2, TP5, DCC6.

The first and second halves of the reliability statistics. Cronbach's alpha for part 1 is 0.840, while part 2 has a value of 0.735. The correlation between forms is 0.700, and Spearman-Brown coefficients for equal and unequal lengths are 0.838 and 0.838, respectively. The Guttman split-half Coefficient is 0.822, indicating that the measuring tool is internally consistent, leading the researcher to conclude that the data was reliable.

5.14.2 Cronbach's alpha

Cronbach's alpha reliability is a widely used measure of internal consistency reliability (Bonett & Wright, 2015; Ho, 2013). To ensure reliability, internal consistency was determined before the test was used in the research (Tavakol & Dennick, 2011). George and Mallery (2019) established the alpha thump rule: > 0.9 (excellent), > 0.8 (Good), > 0.7 (Acceptable), > 0.6 (Questionable), > 0.5 (Poor), and 0.5 (Unacceptable). Other researchers contended that an alpha greater than 0.7 indicates good scale reliability (Schrepp, 2020). The researcher used the item analysis procedure to compensate for unreliable items to improve Cronbach's alpha score.

Table 39: Cronbach's alpha

Reliability Statistics

Cronbach's Alpha	N of Items
.893	47

The Cronbach's alpha of 0.893 was based on unstandardised items, as indicated in Tables 38 and 39 on item statistics. The 0.33 criterion determined items to keep and discard from the measuring instrument. The value obtained is considered reliable, and the values are acceptable for the set of items and show internal consistency.

Table 40: Item Total Statistics

		Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
Home Delivered	HD1	202.35	444.480	.122	.	.907
	HD2	202.38	442.077	.190	.	.906
	HD3	202.41	441.861	.156	.	.907
	HD4	202.34	441.573	.217	.	.906
	HD5	202.36	439.808	.229	.	.906
Perceived Usefulness	PU1	202.92	433.154	.450	.	.904
	PU2	203.13	430.185	.442	.	.904
	PU3	202.54	435.763	.430	.	.904
	PU4	202.43	434.785	.454	.	.904
	PU5	202.58	435.118	.421	.	.904
	PU6	202.66	432.258	.501	.	.903
Perceived Ease of Use	PEOU1	202.52	437.203	.392	.	.904
	PEOU2	202.63	433.235	.467	.	.904
	PEOU3	202.68	432.694	.490	.	.904
	PEOU4	202.57	437.474	.372	.	.905
	PEOU5	204.22	441.644	.150	.	.907
Security Assurance	SA1	202.93	434.017	.439	.	.904
	SA2	202.84	436.305	.396	.	.904
	SA3	203.51	426.809	.465	.	.903
	SA4	203.17	433.641	.370	.	.905
	SA5	203.14	434.490	.386	.	.904
	SA6	202.40	441.788	.199	.	.906
	SA7	203.59	449.578	-.030	.	.908
Economic Benefits	EB1	203.72	427.474	.436	.	.904
	EB2	203.76	426.234	.478	.	.903
	EB3	203.85	426.325	.492	.	.903
	EB4	202.48	435.393	.451	.	.904
	EB5	202.69	432.170	.436	.	.904
	EB6	203.49	452.366	-.094	.	.910
Social Benefits	SB1	202.89	437.729	.301	.	.905
	SB2	203.96	440.626	.170	.	.907
	SB3	202.97	434.456	.374	.	.904
	SB4	203.76	428.009	.429	.	.904
	SB5	203.56	426.219	.519	.	.903
	SB6	203.63	426.121	.504	.	.903
Trust in the Platform	TP1	202.98	432.352	.460	.	.904
	TP2	203.10	430.799	.525	.	.903
	TP3	203.57	431.334	.429	.	.904
	TP4	203.31	432.499	.468	.	.904
	TP5	203.55	448.804	-.013	.	.908
	TP6	203.23	431.168	.508	.	.903
Intention to continue using DCC	DCC1	202.56	435.831	.381	.	.904
	DCC2	202.75	430.128	.464	.	.904
	DCC3	202.63	433.601	.460	.	.904
	DCC4	202.69	433.157	.456	.	.904
	DCC5	204.20	446.976	.023	.	.909
	DCC6	203.27	427.913	.507	.	.903

Following Steenkamp and Maydeu-Olivares's (2021) recommendations, the researcher deleted items inconsistent with improving the model fit and the measuring instrument's reliability (Ho, 2013). The 0.33 criterion rejected items inconsistent with the other measuring instrument's internal consistency when deciding which to keep and discard. After removing some inconsistent items, the study found that the model fit was improved, with a Cronbach's alpha score of 0.903. The model's new score is a perfect match. Validity tests were conducted using the improved model fit latent variables.

5.15 GENERIC CORRELATION ANALYSIS

The correlation analysis describes the relationship or association between two or more quantitative variables (Gogtay & Thatte, 2017). The analysis assumed the two quantitative variables had a straight line or linear relationship. The positive linear correlation coefficient of +1 indicates that the two variables are perfectly related. Table 40 summarises these relationships using the Spearman rank-order correlation validity test. The test was chosen due to the non-normal distribution of the data. A correlation coefficient of -1 shows that the variables are perfectly related in a negative direction and vice versa.

In contrast to an experiment, no variables were manipulated in this study. The study collected data on naturally occurring events, purchasing behaviour, and personality characteristics to determine whether the measured scores correlate. Table 40 summarises the correlations between the study's latent variables. The table included the composite reliability coefficient (CRC), the construct's median values, standard deviation, and Cronbach's alpha.

Table 41: Correlations

Construct		CRC	Mean	SD	Alpha	1	2	3	4	5	6	7	8	9	10
Home Delivery	1	0.601	4.18	2.865	.835	1.000									
Social Norms	2	0.601	3.52	.636	.809	.200**	1.000								
Perceived Usefulness	3	0.611	3.94	.540	.810	.260**	.422**	1.000							
Perceived Ease of Use	4	0.568	3.72	.491	.817	.219**	.355**	.481**	1.000						
Security Assurance	5	0.572	3.56	.465	.817	.196**	.366**	.340**	.368**	1.000					
Economic Benefits	6	0.667	3.32	.579	.814	.160**	.412**	.397**	.280**	.281**	1.000				
Social Benefits	7	0.355	3.19	.583	.812	.059	.448**	.366**	.319**	.314**	.396**	1.000			
Trust in Platform	8	0.595	3.36	.530	.814	.110**	.326**	.296**	.326**	.356**	.391**	.450**	1.000		
Impact	9	0.472	3.41	.597	.814	.102**	.403**	.346**	.297**	.310**	.415**	.424**	.392**	1.000	
Intention to CC	10	0.661	3.63	.525	.812	.145**	.437**	.465**	.356**	.328**	.352**	.409**	.406**	.365**	1.000

N = 827; **. Correlation is significant at the 0.01 level (2-tailed). *. Correlation is significant at the 0.05 level (2-tailed).

Table 40 shows Spearman's correlation matrix. Social benefits do not correlate significantly with home delivery. Covariates were found not to have any significant relationship with all the latent variables.

5.16 STRUCTURAL MODEL AND HYPOTHESIS TESTING

The researcher tested the model fit of the structural model, followed by testing of hypothesis using ANOVA. The structural model improved model fit when PU was correlated with PEOU. The results of hypothesis testing are presented in tables and figures.

5.16.1 Structural path modelling

Testing indirect effects in path analysis and SEM is crucial (Wang & Wang, 2019). Mplus computes the standard errors (SEs) of indirect effects using the multivariate data method by default when using the MODEL INDIRECT or MODEL CONSTRAINT commands (Sobel, 1982). Path analysis is widely used in social science theories because it incorporates hypotheses about variables' direct and indirect effects on one another. Indirect effects, also known as mediated effects, are mediated by other variables. When a path model contains one or more variables that are both dependent and independent simultaneously, mediated effects are present (Geiser, 2012). The model's direct and indirect effects of latent constructs were measured using mediation. The model estimations all converge predictably. The parameter estimates for the hypothesised structural path and the goodness-of-fit test are presented in figures 28 and 29.

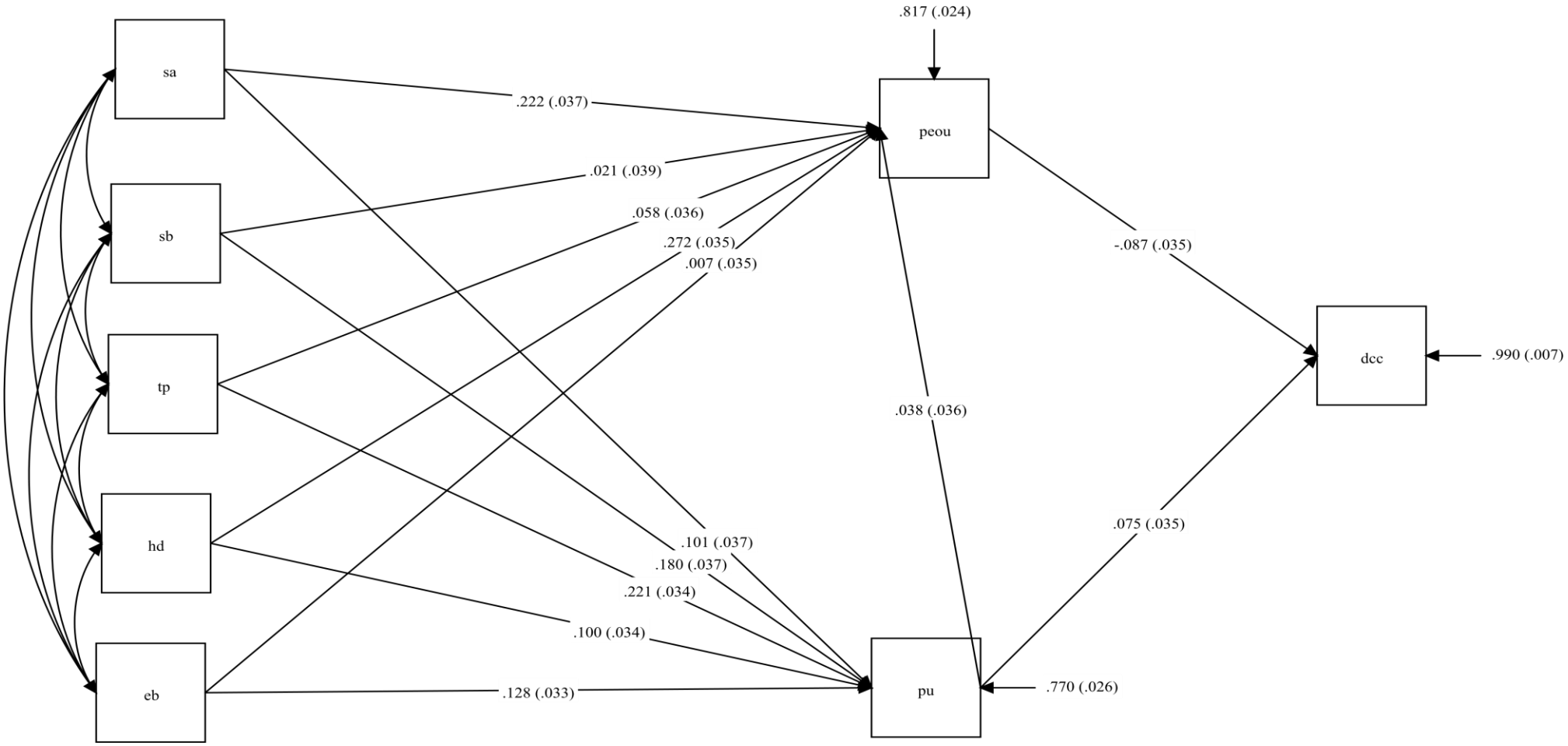


Figure 28: DCC Model

Note: HD = Home Delivery; PU = Perceived Usefulness; PEOU = Perceived Ease of Use; EB = Economic Benefits; SA = Security Assurance; SB = Social Benefits; TP = Trust in the Platform; DCC = Intention to continue using DCC

The indexes for the samples are specified as chi-square (X2) = 136.705, degrees of freedom (df) = 21, p-value = 0.0000; Standardised Root Mean Square Residual (RMSEA) = 0.082; CFI = 0.898; TLI = 0.862; and Standard Root Mean Square Residual Value (SMR) = 0.052 which showed an acceptable model fit, although more data needs to be added to have a perfect fit model. It was observed that the Comparative Fit Index (CFI) and Tucker–Lewis Index (TLI) are below the generally recommended threshold of greater than .90 for an excellent fit. The researcher noted that model complexity was recognised to have a detrimental impact on incremental fit indices. Similar studies with complex models where indices did not fit well include (Baumgartner & Steenkamp, 1996; Burgess & Steenkamp, 2011). Hooper et al. (2008) noted that although fit indices are an important guide, structural model fitness must be examined considering substantive theory since model fit alone may prevent the fundamental theory testing aim of the structural equation modelling. Research by Weston and Gore (2006) notes that the strict application of fit indices may sometimes result in type 1 error, wrongly rejecting an acceptable model. The assessment of power was based mainly on the root mean square of approximation (RMSEA) to establish the goodness of fit for SEM analysis. Figure 29 indicates the path estimates of the final model.

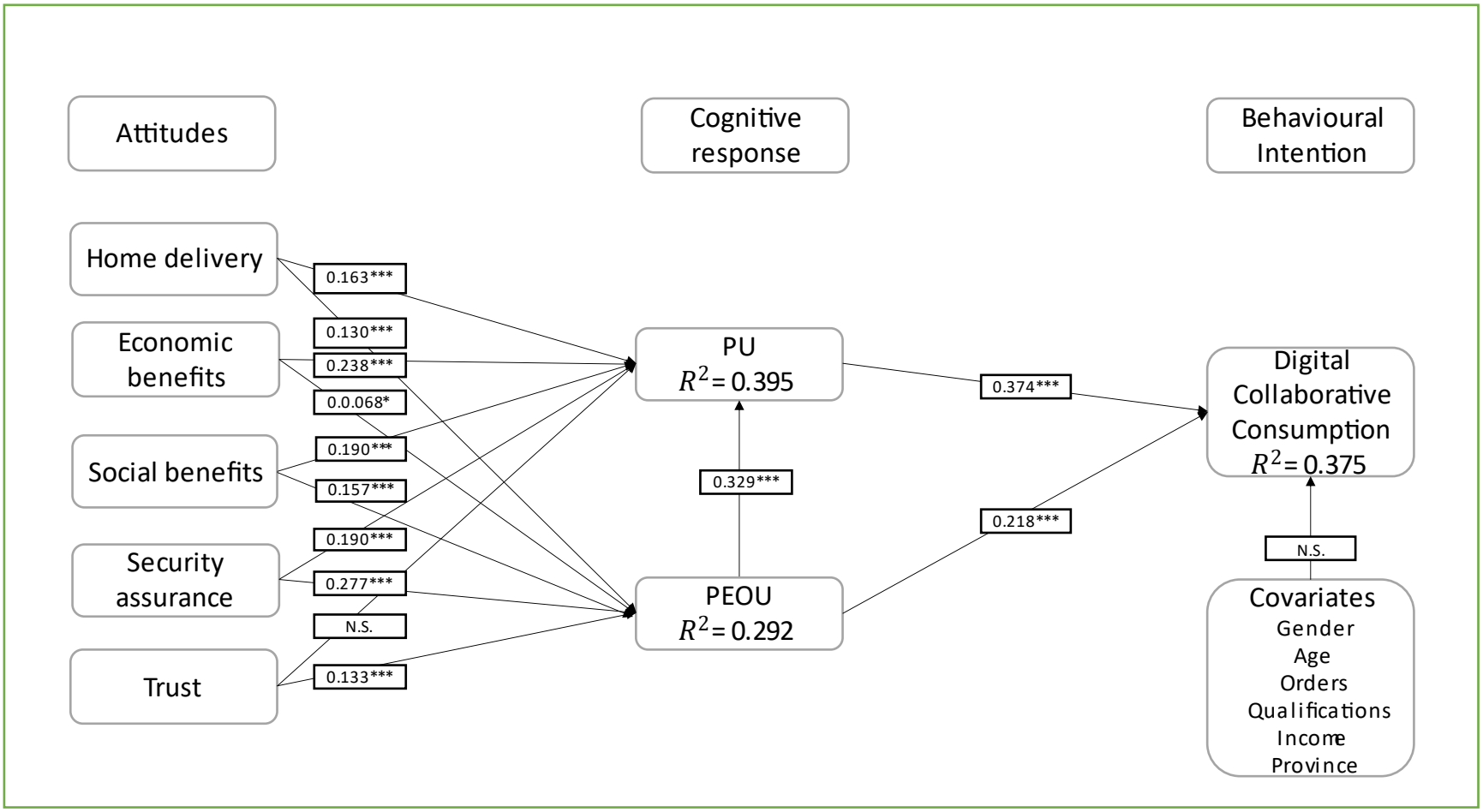


Figure 29: Path Estimates of the DCC business Model

*p < 0.10; **p < 0.05; ***p < 0.01
Note N.S. = Not Significant

The Chi-Square value of 0.0000 in the model is statistically significant. This indicates a statistical discrepancy between the model and the actual underlying structure of the data. This implies that the model does not fit the model well. The Chi-square value must be non-significant for the model to fit, which can be achieved by increasing the data. The normed chi-square value, which equals the chi-square index divided by the degrees of freedom (PCMN/DF), is supposed to be below 3. The model violates the assumption. This index was found to be less sensitive to sample size. Modindices improved the initial measurement model, which had poor loading. The standardised estimates above 0.4 were considered acceptable. Non-significant items with poor loadings were removed from the data to improve the measurement model. The R^2 was significantly greater than zero, and the p-value was less than 0.05. This means the regression was significant.

The model's criterion or dependent variable was the intention to continue using the DCC business model, also called digital collaborative consumption (DCC). The predictors or independent variables of the model are home delivery, perceived usefulness, perceived ease of use, security assurance, social benefits, economic benefits, and trust in the platform. The R^2 = 0.395 was obtained for the predictors, which were mediated through perceived usefulness. The R2 = 0.292 was obtained for the predictors of DCC, which were moderated through perceived ease of usefulness. The R2 = 0.375 accounted for DCC predictors in the model. The model accounted for 37.5% of the intention to continue using digital collaborative consumption variance. R square measures the amount of variance in the dependent variable that the independent variables on predictors account for when taken as a group.

R^2 is significantly greater than zero, as shown in Figure 29. If the p-values are less than 0.05, the test is significant, and R^2 is significantly greater than zero. The overall regression model is significant. F (8, 819) is the regression and residual effect, equal to 63,998, which was reported. The P-value was 0.000 and less than 0.05. R squared equalled 0.375, F (8,819) = 63,998; $p < 0.000$; R^2 = 0,375. After taking the eight predictors together, the regression analysis was statistically significant. The coefficient table summarised (Table 42) the confidence interval for the model.

Table 42: Coefficient Table

Model	Standardized Coefficients Beta	T-value	Sig.	95,0% Confidence Interval for B Lower Bound	Upper Bound	SIG./N.S.
Attitudes						
H1a: HD → PU	0.163	5.428	P < 0.001	0.072	0.198	***
H1b: HD → PEOU	0.130	4.269	P < 0.001	0.072	0.195	***
H2a: EB → PU	0.238	6.868	P < 0.001	0.142	0.262	***
H2b: EB → PEOU	0.065	1.829	P = 0.068	-0.004	0.113	*
H3a: SB → PU	0.190	5.320	P < 0.001	0.066	0.190	***
H3b → PEOU	0.157	4.311	P < 0.001	0.072	0.192	***
H4a: SA → PU	0.190	5.611	P < 0.001	0.040	0.191	***
H4b: SA → PEOU	0.277	8.007	P < 0.001	0.220	0.364	***
H5a: TP → PU	0.031	0.870	P = 0.384	-0.081	0.056	N.S.
H5b: TP → PEOU	0.133	3.630	P < 0.001	0.057	0.190	***
Cognitive Response						
H6 PU → PEOU	0.329	10.201	P < 0.001	0.299	0.432	***
H7: PU → DCC	0.218	6.257	P < 0.001	0.160	0.307	***
H8: PEOU → DCC	0.374	10.714	P < 0.001	0.297	0.430	***
Covariates						
Covariates → DCC	0.045	1.496	P = 1.35	-0.10	0.073	N.S.

*p < 0.10; **p < 0.05; ***p < 0.01

Note. N.S. = Not Significant; HD = Home Delivery; PU = Perceived Usefulness; PEOU = Perceived Ease of Use; EB = Economic Benefits; SA = Security Assurance; SB = Social Benefits; TP = Trust in the Platform; DCC = Intention to continue using DCC

The results show that almost all the hypotheses were supported except for trust in the platform, and on antecedents, cognitive responses and behavioural intention are all supported. Hypotheses testing attitudes were all not supported as H5a (Trust in the platform had a non-significant effect on perceived usefulness) was not supported. The model supported the other two hypotheses on attitudes. The covariates variables did not support the model, and those supported had weak associations.

5.17 HYPOTHESIS TESTING

A conceptual framework and a set of hypotheses were set in chapter 1. The results from the hypotheses test are discussed in the section. The researcher employed the Pearson Chi-Square to test of association between latent variables. The results of the hypotheses are summarised in Table 43.

Hypothesis 1

H1a: Home delivery positively influences perceived usefulness.

H1b: Home delivery positively influences perceived ease of use.

To begin with, the researcher hypothesised that home delivery would be positively associated with perceived utility and ease of use. The findings indicated that consumers in emerging markets who engage in digital collaborative consumption prefer home delivery of food purchased online. Home delivery is positively associated with PU and PEOU. The parameter estimates indicate that for PU and PEOU, respectively, ($\beta = 0.163$, $t = 5.428$; $p < 0.001$) and ($\beta = 0.130$, $t = 4.269$; $p < 0.001$). Home delivery is critical for DCC consumers because it protects them from public places and ensures compliance with COVID-19 regulations. Businesses must provide consumers with food packaged in an environmentally friendly manner.

Hypothesis 2

H2a: Economic benefits positively influence perceived usefulness.

H2b: Economic benefits positively influence perceived ease of use.

For food consumption online, the researcher hypothesised that there would be a significant and positive relationship between economic benefits, perceived usefulness, and perceived ease of use. According to the empirical results ($\beta = 0.238$, $t = 6.868$, $p < 0.001$), the direction of the

effects was supported for PU. The empirical results for PEOU ($\beta = 0.065$, $t = 1.829$, $p < 0.068$) supported a 90% level of significance. Economic benefits had a low score on PEOU as compared to PU. Many academics found economic benefits supporting the intention to continue consuming collaboratively (Tussyadiah, 2015; Barnes & Mattsson, 2016; Wei et al., 2021). This study had strong evidence to reject the null hypothesis and accept the alternative hypothesis.

Hypotheses 3

H3a: Social benefits positively influence perceived usefulness.

H3b: Social benefits positively influence perceived ease of use.

According to the findings, social benefits have a positive impact on DCC. Social benefits are positively associated with PU and PEOU. The parameter estimates indicate that for PU and PEOU, respectively, ($\beta = 0.190$, $t = 5.320$; $p = 0.000$) and ($\beta = 0.157$, $t = 4.311$; $p < 0.001$). There is a strong significant, and positive effect on social benefits toward PU and PEOU. Consumers in emerging markets benefit from the impact of reported attitudes on behaviour. Social platforms, according to customers, enable different stakeholders to collaborate on the same platform and improve service delivery.

Hypothesis 4

H4a: Security assurance positively influences perceived usefulness.

H4b: Security assurance positively influences perceived ease of use.

The researcher hypothesised that security assurance positively influences PU and PEOU. The parameter estimates indicated that PU and PEOU, respectively, are influenced by security assurance ($\beta = 0.190$, $t = 5.611$; $p < 0.001$) and ($\beta = 0.277$, $t = 8.007$; $p < 0.001$). The results indicated that consumers are happy with the DCC business model as the systems used are reliable, safe, and secure from online attacks (Rehman et al., 2018). The use of a special prototype database was instrumental in protecting consumer information.

Hypothesis 5

H5a: Trust in the platform positively influences perceived usefulness.

H5b: Trust positively influences perceived ease of use.

The researcher hypothesised that *trust in the platform* positively influences perceived usefulness and perceived ease of use. The relationship was positively significant for perceived ease of use and non-significant for perceived usefulness. The test results show that Trust in the platform is positively related to PEOU ($\beta = 0.133$, $t = 3.630$, $p < 0.001$; supported) and for perceived usefulness ($\beta = 0.031$, $t = 0.870$, $p = 0.384$; not supported). The findings correlate with the earlier work of Marinković et al. (2020), and Zhu et al. (2017), who noted that trust in DCC platforms increased as consumers make online purchases. Trust is a strong motivating factor for consumers to buy food online.

Hypothesis 6

H6: Perceived ease of use positively influences perceived usefulness.

In the model's latent variables for the cognitive response, PU was found to have a significant and positive effect on PEOU (H6: $\beta = 0.329$, $t = 10.201$, $p < 0.001$). The findings support the earlier work of Davis (1989b), which noted that perceived ease of use has a causal effect on perceived usefulness.

Hypothesis 7

H7: Perceived usefulness positively influences the intention to continue using digital collaborative consumption.

The researcher hypothesised that perceived usefulness positively influences the intention to continue using digital collaborative consumption. The relationship was found to be positively significant. The test results show that perceived usefulness positively relates to the intention to continue using DCC ($\beta = 0.218$, $t = 6.257$, $p < 0.001$; supported. The results support the work of Kim and Yoon (2021), who found that perceived usefulness promotes consumers' intention to use online food delivery services. The attitudes towards continuance intention were found to be promoted by PU (Yeo et al., 2017). The results indicate that technology improves the adoption of the DCC business model.

Hypothesis 8

H8: Perceived ease of positive intention to continue using digital collaborative consumption.

The researcher hypothesised that perceived ease of use positively influences the intention to continue using DCC. The relationship was found to be positively significant. The test results

show that perceived ease of use support DCC (β = 0.374, t = 10.714, p < 0.001; supported). The results support the intention of consumers to continue using the DCC business model.

5.17.1 Covariates

Lastly, the researcher introduced covariates, i.e., gender, age, order frequency, educational qualification, household income and province from which the respondent is based in South Africa. The covariates were brought to control the confounding variables in the model. The findings show that all covariates had no significant relationship intention to continue using DCC. The test results (covariates: Beta = 0.045, t = 1,496, p = 1,35; not supported) were insignificant to the model. However, these results suggest that gender, age, educational qualification, and province are not significant factors determining behavioural responses. Frequency of order and income levels were found to have a weak effect on the intention to continue using digital collaborative consumption. Many respondents were found in urban provinces of South Africa, and they have much spending power compared to consumers in rural provinces. Table 43 summarises the results of the hypotheses.

Table 43: Summary of hypotheses results

	Hypothesis	P-Value	Remarks
H1a	Home delivery positively influences perceived usefulness.	***	Supported
H1b	Home delivery positively influences perceived ease of use.	***	Supported
H2a	Economic benefits positively influence perceived usefulness.	***	Supported
H2b	Economic benefits positively influence perceived ease of use.	*	Supported
H3a	Social benefits positively influence perceived usefulness.	***	Supported
H3b	Social benefits positively influence perceived ease of use	***	Supported
H4a	Security assurance positively influences perceived usefulness.	***	Supported
H4b	Security assurance positively influences perceived ease of use.	***	Supported
H5a	Trust positively influences perceived usefulness.	0.384	N.S.
H5b	Trust positively influences perceived ease of use.	***	Supported
H6	Perceived ease of use positively influences perceived usefulness.	***	Supported
H7	Perceived usefulness positively influences the intention to continue using digital collaborative consumption.	***	Supported
H8	Perceived ease of use positively influences the intention to continue using digital collaborative consumption.	***	Supported
	Covariates	1.35	N.S.

N.S. – Not significant; *p < 0.10; **p < 0.05; ***p < 0.01

The summary in Table 43 confirms that seven hypotheses were supported, whilst (H5a) trust in the platform was not supported, and the covariates were not supported. Some of the supported hypotheses confirm the major findings of the study.

5.18 TEST OF MEDIATION: TOTAL, DIRECT AND INDIRECT EFFECTS

The statistical significance of indirect effects is of interest when mediated effects are the subject of the study (Geiser, 2012). For the researcher to determine the causal pathway through which some focal variable X links to some outcome variable Y through one or more intervening pathways in the data set, there is a need to run a mediation test (Montoya & Hayes, 2017; Preacher & Hayes, 2008). In the mediation analysis, the influence of X on Y when M or 'c' is controlled refers to the indirect effect, as shown in Figure 16. The total effect of X on Y is identified as *c*, where the total effect is the sum of the direct and indirect effects: $c = a \times b +$

c. The constants a, b and c indicate the regression (path) coefficient. The model contains one indirect effect, expressed as the product of *a x b*. The variable names used are given in parentheses. Indirect effects, also known as mediated effects, are mediated by other variables. When a path model contains at least one variable that is simultaneously dependent and independent, mediated effects are present (Geiser, 2012). Intermittent or mediator variables are those variables that can be analysed using either manifest or latent path analyses.

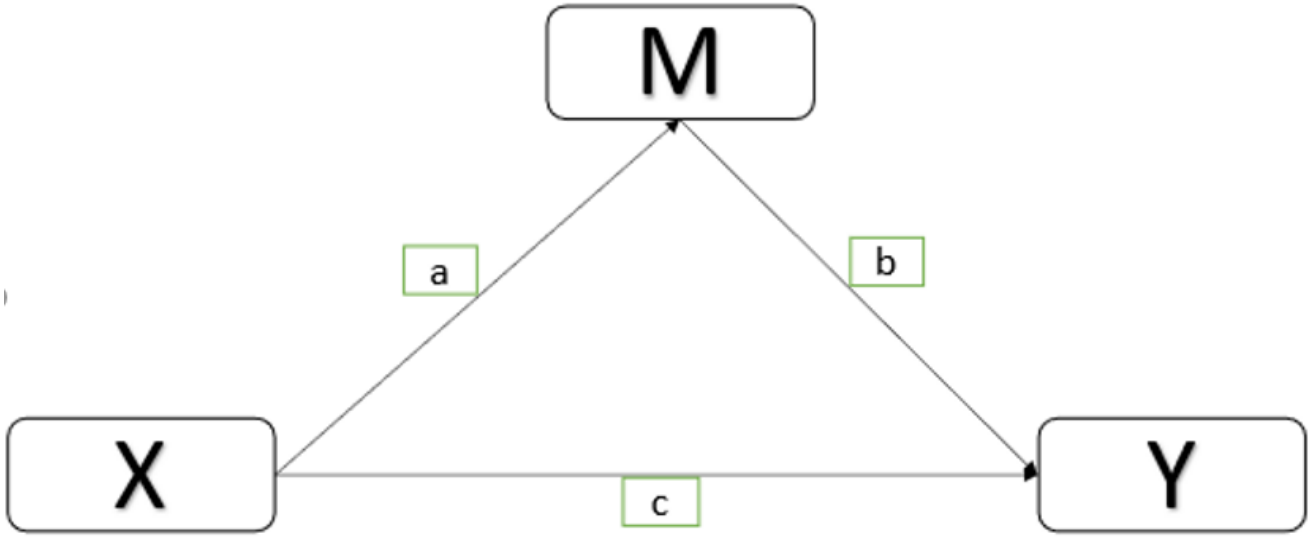


Figure 30: Simple Mediation Model

In the model, M is a mediator variable because it is a dependent variable with regards to variable X but an independent variable with regards to variable Y. in simple terms, M receives an effect from X (path a). At the same time, send an effect out to Y (path *b*). Hence M partly mediates the effect on X and Y, a mediator variable. X's indirect or mediated effect on Y can be quantified as a product of a times b (MacKinnon & Luecken, 2008; MacKinnon et al., 2020). Variable X directly affects Y, expressed through the path coefficient C. Full mediation occurs when the direct effect c is not significant. However, the indirect *a x b* is significant, which means the indirect effect through the mediator is the only effect present. The effect of the independent variable on the outcome variable occurs completely with the help of another variable, the mediator (Hayes & Preacher, 2014). When the direct effect c and the indirect effect *a x b* are significant, partial mediation is achieved (Hayes, 2009, 2017, 2018). In the current study, the researcher tested the mediation process as shown in Tables 44-53 and annexures E - M, where the standardised total, total indirect, specific indirect and indirect

effects on the preference of DCC were examined. The researcher adopted the improved bootstrapping bias correlated confidence interval approach in SEM with Mplus version 7, using 95% confidence interval levels and 2000 samples approach (Xie et al., 2018). When the chi-square is zero with zero degrees of freedom, the test is not useful to evaluate the model fit. The results for the direct and indirect effect of attitudes on behavioural intentions are presented in Tables 44-53.

The estimated total effect is the sum of the estimated direct and indirect effects. The use of conventional significance tests for indirect effects was found to be in practice (Geiser, 2013; Geiser, 2020; Geiser et al., 2021). This product is not normally distributed, making conventional tests insignificant (MacKinnon & Luecken, 2008; MacKinnon et al., 2020). MacKinnon and Luecken (2008) recommended using asymmetric confidence intervals based on bootstrap methods to significantly test indirect effects. The researcher estimated confidence intervals based on bias-corrected bootstrap methods by including the bootstrap in the analysis and output: interval (bootstrap). The keyword bootstrap refers to the bias-corrected version of the bootstrap recommended by (MacKinnon et al., 2004). The conventional bootstrap confidence interval was obtained using the command output (bootstrap).

5.18.1 Effects from Home delivery to DCC

The effects of home delivery on the intention to continue using DCC are presented in Tables 44 and 45 and Annexures E and F, which describe the relationships after mediating through perceived usefulness and perceived ease of use.

Table 44: Effects of HD on DCC via PU

CONFIDENCE INTERVALS OF STANDARDISED TOTAL, TOTAL INDIRECT, SPECIFIC INDIRECT, AND DIRECT EFFECTS (STDYX Standardization)									
				BOOTSTRAP BIAS-CORRECTED METHOD (99%) and (95%)					
	Standardised estimates	S.E.	Est. / S.E.	Lower 0.5%	Lower 2.5%	Upper 2.5%	Upper 0.5%	P - value	SIG./ N.S.
Effects from HD to DCC (via) PU									
Total effects	0.007	0.035	0.195	-0.083	-0.061	0.075	0.096	0.846	N.S.
Total indirect effects	-0.031	0.010	-3.194	-0.056	-0.050	-0.012	-0.006	0.001	***
Direct effects DCC HD	0.038	0.036	1.056	-0.054	-0.032	0.107	0.129	0.291	N.S.
Specific indirect effects									
DCC PU HD	-0.031	0.010	-3.194	-0.054	-0.032	0.107	0.129	0.001	***

*p < 0.10; **p < 0.05; ***p < 0.001
Note. N.S. - Not Significant; HD - Home Delivery; PU – Perceived Usefulness; DCC – Intention to continue using Digital Collaborative Consumption

Under the columns, Lower 0.5% and upper 0.5%, the lower and upper limits are 99% confidence intervals around each parameter estimate, respectively. The lower 2.5% and upper 2.5% columns contain the lower and upper bounds of 95% confidence intervals, respectively. According to the bias-corrected bootstrap confidence interval, the estimated direct effect from home delivery to intention to continue using DCC is (-0.054;0.129) and (-0.050; 0.001) for 99% and 95% confidence intervals, respectively. The results show that total and specific indirect effects of DCC via PU and HD are significant for the model, while total and direct effects are insignificant. The effects of home delivery on the intention to continue using DCC are presented in Table 45 and annexure E. The results, therefore, indicate that home delivery has a significant total indirect and specific indirect effect on the intention to continue using DCC. In contrast, DCC's total and direct effects via PU have insignificant effect.

The direct and indirect effect of DCC from home delivery via perceived ease of use was of interest to the researcher, and the results are shown in Table 45 and Annexure F.

Table 45: Effects of HD on DCC (via PEOU)

	CONFIDENCE INTERVALS OF STANDARDISED TOTAL, TOTAL INDIRECT, SPECIFIC INDIRECT, AND DIRECT EFFECTS (STDYX Standardization)								
				BOOTSTRAP BIAS-CORRECTED METHOD (99%) and (95%)					
	Standardised estimates	S.E.	Est. / S.E.	Lower 0.5%	Lower 2.5%	Upper 2.5%	Upper 0.5%	P - value	SIG./ N.S.
Effects from HD to DCC (via PEOU)									
Total effects	0.007	0.035	0.195	-0.083	-0.061	0.075	0.096	0.846	N.S.
Total indirect effects	0.024	0.010	0.195	-0.003	0.004	0.044	0.050	0.021	**
Direct effects DCC HD	-0.017	0.036	-0.468	-0.110	-0.087	0.054	0.076	0.640	N.S.
Specific indirect effects									
DCC PEOU HD	0.024	0.010	2.308	-0.003	0.004	0.044	0.050	0.021	**

*p < 0.10; **p < 0.05; ***p < 0.001

Note. N.S. - Not Significant; HD - Home Delivery; PU – Perceived Ease of Use; DCC – Intention to continue using Digital Collaborative Consumption

The bias-corrected bootstrap confidence interval recommended by (MacKinnon et al., 2004) was used in the model. The estimated total effect of home delivery (HD) on the intention to continue using DCC is (-0.083; 0.096) and (-0.061; 0.075) for 99% and 95% confidence intervals, respectively. The results show that the total and direct effects of HD to DCC mediated via PEOU are not significant for the model. Home delivery's total indirect and specific indirect effects on the intention to continue using DCC mediated through PEOU have a significant effect at a 95% confidence interval. The results, therefore, indicate that home delivery has a significant total indirect and specific indirect effect on DCC via PEOU, whilst total and direct effects have an insignificant relationship on DCC mediated through PEOU.

5.18.2 Effects from Economics benefits to intention to DCC

The confidence interval of standardised effects of economic benefits on the intention to continue using DCC mediated through perceived usefulness is presented in Table 46 and annexure G.

Table 46: Effects of EB on DCC (via PU)

	CONFIDENCE INTERVALS OF STANDARDISED TOTAL, TOTAL INDIRECT, SPECIFIC INDIRECT, AND DIRECT EFFECTS (STDYX Standardization)								
				BOOTSTRAP BIAS-CORRECTED METHOD (99%) and (95%)					
	Standardised estimates	S.E.	Est. / S.E.	Lower 0.5%	Lower 2.5%	Upper 2.5%	Upper 0.5%	P - value	SIG./ N.S.
Effects from EB to DCC (via PU)									
Total effects	0.193	0.033	5.771	0.107	0.128	0.259	0.279	0.000	***
Total indirect effects	0.007	0.004	1.669	-0.004	-0.001	0.007	0.014	0.095	*
Direct effects DCC EB	0.186	0.033	5.566	0.100	0.120	0.251	0.272	0.000	***
Specific indirect effects									
DCC PU EB	0.007	0.004	1.669	-0.004	-0.001	0.016	0.018	0.095	*

*p < 0.10; **p < 0.05; ***p < 0.001

Note. N.S. - Not Significant; EB – Economic Benefits; PU – Perceived Usefulness; DCC – Intention to continue using Digital Collaborative Consumption

According to the bias-corrected bootstrap confidence interval, the estimated total effects of home economic benefits (EB) on the intention to continue using digital collaborative consumption (DCC) is (0.107; 0.279) and (0.128; 0.259) for 99% and 95% confidence interval respectively. The results show that standardised total and direct effects of DCC via perceived usefulness are significant for the model at 99%. Specific indirect effects and total indirect effects of economic benefits on DCC via PU are significant at a 95% confidence interval. In short, the results of the model indicate that economic benefit has a significant direct, as well as a significant indirect effect on the intention to continue using DCC.

5.18.3 Effects from EB to DCC

The confidence interval of standardised effects of economic benefits on the intention to continue using digital collaborative consumption DCC are presented in Table 47 and Annexure H, moderated through perceived ease of use.

Table 47: Effects of EB on DCC (via PEOU)

	CONFIDENCE INTERVALS OF STANDARDISED TOTAL, TOTAL INDIRECT, SPECIFIC INDIRECT, AND DIRECT EFFECTS (STDYX Standardization)								
				BOOTSTRAP BIAS-CORRECTED METHOD (99%) and (95%)					
	Standardised estimates	S.E.	Est. / S.E.	Lower 0.5%	Lower 2.5%	Upper 2.5%	Upper 0.5%	P - value	SIG./ N.S.
Effects from EB to DCC (via PEOU)									
Total effects	0.193	0.033	5.771	0.107	0.127	0.259	0.279	0.000	***
Total indirect effects	0.005	0.013	0.410	-0.028	-o.020	0.031	0.039	0.682	N.S.
Direct effects DCC EB	0.188	0.036	5.228	0.095	0.117	0.258	0.280	0.000	***
Specific indirect effects									
DCC PEOU EB	0.005	0.013	0.410	-0.028	-o.020	0.031	0.039	0.682	N.S.

*p < 0.10; **p < 0.05; ***p < 0.001

Note. N.S. - Not Significant; EB – Economic Benefits; PEOU – Perceived Ease of Use; DCC – Intention to continue using Digital Collaborative Consumption

The researcher used the bias-corrected bootstrap confidence interval to estimate the total effect of economic benefits (EB) on the intention to continue using digital collaborative consumption (DCC) and found the estimates (0.107; 0.279) and (0.127; 0.259) for 99% and 95% confidence interval respectively. The results show that the total and direct effects of economic benefits on DCC are significant for the model. Total indirect effects and specific indirect effects are not significant for the model. In summary, the results indicate that economic benefit has a significant total effect and direct effect on DCC at 99%, whilst total indirect and specific indirect effect has no significant effect when moderated through perceived ease of use.

5.18.4 Effects of Social benefits on DCC

The confidence intervals of standardised effects of social benefits on the intention to continue using digital collaborative consumption moderated through perceived usefulness have been presented in Table 48 and Annexure I.

Table 48: Effects of SB on DCC (via PU)

	CONFIDENCE INTERVALS OF STANDARDISED TOTAL, TOTAL INDIRECT, SPECIFIC INDIRECT, AND DIRECT EFFECTS (STDYX Standardization)								
				BOOTSTRAP BIAS-CORRECTED METHOD (99%) and (95%)					
	Standardised estimates	S.E.	Est. / S.E.	Lower 0.5%	Lower 2.5%	Upper 2.5%	Upper 0.5%	P - value	SIG./ N.S.
Effects from SB to DCC (via PU)									
Total effects	0.141	0.034	4.126	0.053	0.074	0.207	0.228	0.000	***
Total indirect effects	0.001	0.004	0.369	-0.009	-0.006	0.009	0.012	0.712	N.S.
Direct effects DCC SB	0.139	0.034	4.108	0.052	0.073	0.205	0.226	0.000	***
Specific indirect effects									
DCC PU SB	0.001	0.004	0.369	-0.009	-0.006	0.009	0.012	0.712	N.S.

*p < 0.10; **p < 0.05; ***p < 0.001

Note. N.S. - Not Significant; SB – Social Benefits; PU – Perceived Usefulness; DCC – Intention to continue using Digital Collaborative Consumption

The model was tested using the bias-corrected bootstrap confidence interval. The estimated total effect of social benefits (SB) on the intention to continue using DCC is (0.053; 0.228) and (0.074; 0.207) for 99% and 95% confidence intervals, respectively. The results showed that the total and direct effects of DCC from social benefits mediated through perceived usefulness are significant for the model. Specific indirect effects and total indirect effects from social benefits to DCC are not significant. Therefore, the overall results of the model indicate that social benefit has a significant total effect and direct effect on the model as well as an insignificant effect on total direct and specific indirect effect mediated through perceived usefulness.

The confidence intervals of the standardised total, total indirect, specific indirect, and direct effects from social benefits to intention to continue using digital collaborative consumption are presented in Table 49 and Annexure J.

Table 49: Effects of SB on DCC (via PEOU)

	CONFIDENCE INTERVALS OF STANDARDISED TOTAL, TOTAL INDIRECT, SPECIFIC INDIRECT, AND DIRECT EFFECTS (STDYX Standardization)								
				BOOTSTRAP BIAS-CORRECTED METHOD (99%) and (95%)					
	Standardised estimates	S.E.	Est. / S.E.	Lower 0.5%	Lower 2.5%	Upper 2.5%	Upper 0.5%	P - value	SIG./ N.S.
Effects from SB to DCC (via PEOU)									
Total effects	0.141	0.034	4.126	0.053	0.074	0.207	0.228	0.000	***
Total indirect effects	0.013	0.010	1.290	-0.013	-0.007	0.032	0.038	0.197	N.S.
Direct effects DCC SB	0.128	0.035	3.602	0.036	0.058	0.197	0.219	0.000	***
Specific indirect effects									
DCC PEOU SB	0.013	0.010	1.290	-0.013	-0.007	0.032	0.038	0.197	N.S.

*p < 0.10; **p < 0.05; ***p < 0.001

Note. N.S. - Not Significant; SB – Social Benefits; PEOU – Perceived Ease of Use; DCC – Intention to continue using Digital Collaborative Consumption

The model was tested using the bias-corrected bootstrap confidence interval. The estimated total effect of social benefits (SB) on the intention to continue using DCC is (0.053; 0.228) and (0.074; 0.207) for 99% and 95% confidence intervals, respectively. The results show that the total and direct effects of DCC from social benefits mediated through perceived ease of use are significant for the model. Specific indirect effects and total indirect effects from social benefits to DCC are not significant. Therefore, the overall results of the model indicate that social benefit has a significant total effect and direct effect on the model, as well as an insignificant effect on total indirect and specific indirect effects mediated through perceived ease of use.

5.18.5 Effects of security assurance on DCC

The confidence intervals of the standardised total, total indirect, specific indirect, and direct effects from security assurance to intention to continue using digital collaborative consumption are presented in Table 50 and Annexure K mediated through perceived usefulness.

Table 50: Effects of SA on DCC (via PU)

CONFIDENCE INTERVALS OF STANDARDISED TOTAL, TOTAL INDIRECT, SPECIFIC INDIRECT, AND DIRECT EFFECTS (STDYX Standardization)									
				BOOTSTRAP BIAS-CORRECTED METHOD (99%) and (95%)					
	Standardised estimates	S.E.	Est. / S.E.	Lower 0.5%	Lower 2.5%	Upper 2.5%	Upper 0.5%	P - value	SIG./ N.S.
Effects from SA to DCC (via PU)									
Total effects	0.057	0.035	1.647	-0.032	-0.011	0.125	0.146	0.100	*
Total indirect effects	-0.104	0.015	-6.823	-0.143	-0.133	-0.074	-0.064	0.000	***
Direct effects DCC SA	0.161	0.035	4.629	0.071	0.093	0.229	0.250	0.000	***
Specific indirect effects									
DCC PU SA	-0.104	0.015	-6.823	-0.143	-0.133	-0.074	-0.064	0.000	***

*p < 0.10; **p < 0.05; ***p < 0.001

Note. N.S. - Not Significant; SA – Security Assurance; PU – Perceived Usefulness; DCC – Intention to continue using Digital Collaborative Consumption

The estimated total effect of security assurance (SA) on the intention to continue using digital collaborative consumption is (-0.032; 0.146) and (-0.011; 0.1257) for 99% and 95% confidence intervals, respectively. The results show that the total and direct effects of DCC of security assurance mediated through the perceived usefulness are less significant for the model. Direct effects, specific indirect effects and total indirect effects of security assurance on DCC are significant at a 99% confidence level. Therefore, the overall results of the model indicate that security assurance has a weak significant total effect on the model, whilst a strong significant effect exists on total indirect, direct effects and specific indirect effects mediated through perceived usefulness.

The confidence intervals of the standardised total, total indirect, specific indirect, and direct effects of security assurance on the intention to continue using digital collaborative

consumption are presented in Table 51 and Annexure L, mediated through perceived ease of use.

Table 51: Effects of SA on DCC (via PEOU)

	CONFIDENCE INTERVALS OF STANDARDISED TOTAL, TOTAL INDIRECT, SPECIFIC INDIRECT, AND DIRECT EFFECTS (STDYX Standardization)								
				BOOTSTRAP BIAS-CORRECTED METHOD (99%) and (95%)					
	Standardised estimates	S.E.	Est. / S.E.	Lower 0.5%	Lower 2.5%	Upper 2.5%	Upper 0.5%	P - value	SIG./ N.S.
Effects from SA to DCC (via PEOU)									
Total effects	0.094	0.034	2.721	0.005	0.026	0.161	0.182	0.006	**
Total indirect effects	0.013	0.007	1.773	-0.006	-0.001	0.028	0.033	0.076	*
Direct effects DCC SA	0.080	0.035	2.289	-0.010	0.012	0.149	0.171	0.022	**
Specific indirect effects									
DCC PEOU SA	0.013	0.007	1.773	-0.006	-0.001	0.028	0.033	0.076	*

*p < 0.10; **p < 0.05; ***p < 0.001
Note. N.S. - Not Significant; SA – Security Assurance; PEOU – Perceived Ease of Use; DCC – Intention to continue using Digital Collaborative Consumption

The researcher used the bias-corrected bootstrap confidence interval to estimate the total effect of security assurance (SA) on the intention to continue using digital collaborative consumption (DCC) and found the following estimates (0.005; 0.182) and (0.026; 0.161) for 99% and 95% confidence interval, respectively. The results show that total effects and directions from security assurance to DCC are strongly significant for the model. The total indirect and specific indirect effects have a weak significant effect on the model. In summary, the results indicate that security assurance has a strong significant total effect and direct effect on DCC at 95%, whilst total indirect and specific indirect effect has a weak significant effect at 90% when moderated through perceived ease of use.

5.18.6 Effects of Trust in the platform on DCC

The confidence intervals of the standardised total, total indirect, specific indirect, and direct effects from security assurance to intention to continue using digital collaborative consumption are presented in Table 52, and annexure M is mediated through perceived usefulness.

Table 52: Effects of TP on DCC (via PU)

	CONFIDENCE INTERVALS OF STANDARDISED TOTAL, TOTAL INDIRECT, SPECIFIC INDIRECT, AND DIRECT EFFECTS (STDYX Standardization)								
				BOOTSTRAP BIAS-CORRECTED METHOD (99%) and (95%)					
	Standardised estimates	S.E.	Est. / S.E.	Lower 0.5%	Lower 2.5%	Upper 2.5%	Upper 0.5%	P - value	SIG./ N.S.
Effects from TP to DCC (via PU)									
Total effects	0.105	0.034	3.052	0.016	0.038	0.172	0.193	0.002	**
Total indirect effects	0.010	0.005	2.067	-0.003	0.001	0.020	0.023	0.039	**
Direct effects DCC TP	0.095	0.034	2.755	0.006	0.027	0.162	0.183	0.006	**
Specific indirect effects									
DCC PU TP	0.010	0.005	2.067	-0.003	0.001	0.020	0.023	0.039	**

*p < 0.10; **p < 0.05; ***p < 0.001

Note. N.S. - Not Significant; TP-Trust in the Platform; PU – Perceived Usefulness; DCC – Intention to continue using Digital Collaborative Consumption

The model was tested using the bias-corrected bootstrap confidence interval. The estimated total effect on Trust in the platform (TP) to intention continue using digital collaborative consumption (DCC) is (0.016; 0.193) and (0.038; 0.175) for 99% and 95% confidence intervals, respectively. The results show that total effects, total indirect effects, direct effects, and specific indirect effects mediated through perceived usefulness are significant for the model. Specific indirect effects and total indirect effects from social benefits to DCC are not significant. Therefore, the overall results of the model indicate that all the effects estimated in the model are significant.

The confidence intervals of the standardised total, total indirect, specific indirect, and direct effects from security assurance to intention to continue using digital collaborative consumption are presented in Table 53 and annexure N mediated through perceived ease of use.

Table 53: Effects of TP on DCC (via PEOU)

	CONFIDENCE INTERVALS OF STANDARDISED TOTAL, TOTAL INDIRECT, SPECIFIC INDIRECT, AND DIRECT EFFECTS (STDYX Standardization)								
				BOOTSTRAP BIAS-CORRECTED METHOD (99%) and (95%)					
	Standardised estimates	S.E.	Est. / S.E.	Lower 0.5%	Lower 2.5%	Upper 2.5%	Upper 0.5%	P - value	SIG./ N.S.
Effects from TP to DCC (via PEOU)									
Total effects	0.105	0.034	3.051	0.016	0.037	0.172	0.193	0.002	**
Total indirect effects	0.016	0.011	1.535	-0.011	-0.004	0.037	0.043	0.125	N.S.
Direct effects DCC TP	0.089	0.036	2.468	-0.004	0.018	0.159	0.181	0.014	**
Specific indirect effects									
DCC PEOU TP	0.016	0.011	1.535	-0.011	-0.004	0.037	0.043	0.125	N.S.

*p < 0.10; **p < 0.05; ***p < 0.001

Note. N.S. - Not Significant; TP - Trust in the Platform; PEOU – Perceived Ease of Use; DCC – Intention to continue using Digital Collaborative Consumption

According to the bias-corrected bootstrap confidence interval, the estimated total effect from Trust in the platform (TP) to intention to continue using digital collaborative consumption (DCC) is (0.016; 0.193) and (0.037; 0.172) for 99% and 95% confidence interval, respectively. The results show that the total and direct effects of trust in the platform are significant for the model at 95%. The model's specific indirect and total indirect effects are not significant. Therefore, the overall results indicate that trust in the platform has significant total and direct effects. Total indirect and specific indirect effects have no significant effect when moderated through perceived ease of use.

The researcher estimated the confidence interval based on the bias-corrected bootstrap methods as suggested by (MacKinnon et al., 2004). The manifest-path diagrams showing the mediation are presented in annexures xxx. Overall mediation results indicate that all the attitudes mediated through perceived usefulness and ease of use had significant and non-significant effects on DCC at some point.

5.19 CHAPTER SUMMARY

The study's descriptive and inferential statistical results have been presented in this chapter. The reliability tests, confirmatory factor analysis, fit indices, and mediation analysis of the variables' direct and indirect effects were conducted. The initial model had a low score on model fit, and the research had to remove the items with low factor loading and which improved

the model fit. The results of hypothesis testing indicated that trust in the platform's economic benefits had non-significant effects on perceived usefulness and perceived ease of use, respectively. Covariates were found to be having a non-significant effect on the model. Total effects from the attitudes to intention to continue using digital collaborative consumption were meditated through perceived usefulness and perceived ease of use. In addressing the key research questions, the model identified important drivers of digital collaborative consumption in the food delivery industry. The key drivers were found to be the attitudes of the model, which are home delivery, economic benefits, social benefits, security assurance, cognitive response (beliefs), i.e., perceived usefulness, perceived ease of use and security assurance. Trust in the platform was found to be a deterrent to DCC in the model; however, when moderated by perceived ease of use, it supported the hypothesis. Covariates were found to be insignificant in the model. In a nutshell, the model fit was improved after realising that the initial model fit was unsatisfactory (Ho, 2014; Jöreskog & Sörbom, 1993). The model modification was done by freeing fixed parameters. The process was done by freeing one at a time until the researcher was satisfied with the revised model.

CHAPTER 6

DISCUSSION OF RESULTS

6.0 INTRODUCTION

The descriptive statistics and hypotheses testing results were presented in the preceding chapter. The current chapter covers the discussion of the results. The interpretation and explanation of key findings assisted in addressing the research questions highlighted in the first chapter of the thesis. The researcher linked the findings from the study to the existing literature on digital collaborative consumption. The discussion chapter acknowledges the potential flaws of the study encountered while extracting the meaning of the findings. The conceptual framework proposed several hypotheses, tested using the structural equation modelling and interpreted to conclude the relationships. The study is based on digital collaborative consumption in the food delivery industry sector of the emerging South African market, grounded in research objectives.

The section is arranged so that the discussions will be centred around the four sections of the model: antecedents, cognitive response, attitudes, and behavioural intention. Regarding this objective, the study sought to establish DCC drivers in the food delivery industry of an emerging market. By 'drivers', the study sought to unearth both the facilitating and deterrent drivers of DCC in the food delivery industry of South Africa. Researchers noted that DCC's continuous growth and development had outpaced the traditional brick-and-mortar business model (Ali et al., 2021; Rahman et al., 2018). Drawing from the TAM and TRA, the study developed and tested the DCC research model. The findings of the study supported the hypotheses.

6.1 ATTITUDES

The enduring organisation of beliefs, feelings and behavioural tendencies towards socially significant objects, symbols and events are referred to as attitudes (Haddock & Maio, 2017; Hogg et al., 2017; Vaughan & Hogg, 2010). The study analysed attitudes to understand how they impact digital collaborative consumption in the food delivery industry. Attitudes, also as

expected, positively influenced behavioural response. According to the evidence gathered from the field and with specific reference to the current study, attitudes played a small degree compared to other relationships observed between constructs. The results supported previous studies on attitudes compared to the actual behaviour in the food delivery industry.

6.1.1 Impact of Home delivery on perceived usefulness and perceived ease of use

Home delivery and social norms were the antecedents of the model. The findings of the research support earlier work of Baubonienė and Gulevičiūtė (2015), who noted that consumers prefer DCC as it offers discount prices, customised customer service, access to salespeople who are specialised in the area and the availability of tracking the orders. The current study proved that antecedents strongly influence attitudes towards food delivery in emerging markets. Home delivery (H1a - H1b not rejected) had a strong positive relationship with perceived usefulness and PEOU, confirming strong motivation in the latent variables. Home delivery is a logistic element within the e-commerce transactions where food is purchased online from retail outlets and delivered at home, work or any other convenient place as requested by the client.

The firms must establish virtual restaurants that attract customers who buy food online. The study noted that consumers prefer home delivery to reduce traffic on the road and contribute to protecting the environment. Such consumers are referred to as green customers. Home delivery was found to be a sustainable business model among environmentally conscious consumers. Social norm was the other antecedent variable. The tests from the model noted that the variable is a strong motivator towards digital collaborative consumption. Social norms had a strong positive association with other latent variables. The hypotheses tested showed that home delivery strongly predicts attitudes towards the intention to continue using the digital collaborative consumption business model.

6.1.2 Impact of economic benefits on perceived usefulness and perceived ease of use

Economic benefits regarding saving money and time were reported, significantly affecting behavioural intention to continue using DCC (H2a and H2b). The hypotheses were supported as the study's findings indicated that economic benefit significantly impacts perceived usefulness and ease of use. The finds support the work of Li and Wen (2019), who found a significant relationship between economic benefits and perceived usefulness. Phuphisith and

Kurisu (2022) noted that economic benefits include money saving. The study noted that the digital collaborative consumption business model provides employment opportunities to members of the community: chefs, administration staff, delivery people and programmers behind online space advertising. Several consumers participate in supporting local businesses in their community. Akram et al. (2018) noted that consumers prefer to buy online because of convenience. The results imply that economic benefits predict PU and PEOU, which supports the intention to continue using the DCC business model.

6.1.3 Impact of social benefits on perceived usefulness and perceived ease of use

Social benefits were significant in the study (H3a and H3b). Digital collaborative consumption is considered a mode of consumption preferred by the environmentally and ecologically conscious (Hamari et al., 2016). Results from the study supported the narrative that the intention to continue using DCC is a sustainable business model and increases customer participation in emerging markets. Enjoyment is pivotal in attitude formation and behavioural intention (Bashir & Madhavaiah, 2015). Consumers bought food online because the process was considered fan and link customers who interact and become online community members. The increasing movement towards DCC was motivated by value access, which had recently increased and proved to be an alternative mode of DCC instead of ownership of goods and services (Eckhardt & Bardhi, 2016). The social benefit was indirectly found to be a significant predictor of digital collaborative consumption. Business managers must advertise their products and services on different online platforms to let consumers know their presence in the competitive market. 'Take-a-lot' was popular and favourable with its brand, Mr Delivery, among food buyers in the South African market. Online buying is now popular and a cost-effective way to transform buying patterns in emerging markets which helps to increase environmental and social sustainability among consumers (Yamin et al., 2019). Several scholars noted that descriptive messages about a high prevalence of a target behaviour could be a more effective way to change consumption behaviour (Gerber & Rogers, 2009; Gerber et al., 2018). The research noted that consumers prefer environmentally friendly food delivery services to reduce pollution. The environmentally conscious consumers indicated that they preferred to buy online to reduce carbon emissions on the roads.

6.1.4 impact of security assurance on perceived usefulness and perceived ease of use

The study found security assurance to predict perceived usefulness and perceived ease of use (H4a and H4b). The results support the work of Abu-Shanab (2017), who found perceived usefulness and ease of use significant predictors of security assurance. The consumers view the DCC business model as safe to use. Data security and privacy standards were found to be crucial in the business model. Pantazopoulos et al. (2018) noted that security assurance is a degree of confidence that the security requirements of an information technology system are satisfied.

The study found that consumers were more concerned with their online security concerns. Consumers highlighted that businesses must not compromise security assurances and must be defined as free from danger, risk, or doubt. Platform providers must comply with the Protection of Personal Information Act (POPIA) when communicating and storing customers' information. The need to safeguard information captured from online platforms cannot be over-emphasised. The research notes several DCC platforms providing authentication control measures to ensure both parties are confident of the other party's identity. Non-repudiation control prevents vendors and consumers from denying their participation in the transaction. Privacy was found to be a key concern in the study, and there is a need to control information to ensure that individuals not authorised to access that information are barred from doing so. Disclosure of information must be authorised by all the parties concerned. Confidentiality must be enforced to restrict access to communicated data among players on DCC platforms. Data integrity must be established as a control measure to avoid deletion and modification without permission.

6.1.5 Impact of trust on perceived usefulness and perceived ease of use

Consumers select and access full information about the menu from different restaurants online using DCC platforms. Consumers are more empowered by technology to access online shops and restaurants anytime to compare prices and close the sale. The results noted that trust is a positive predictor of perceived ease of use (H5b). On the other hand, trust was found to have no significant relationship with perceived usefulness (H5a). Information systems scholars identified four determinants of trust in literature: security, situational anomaly, vendor familiarity, and structural assurance (Akram et al., 2018; Gefen et al., 2003). Hidayanto et al. (2014), who wrote extensively on building trust, noted difficulties for businesses in building e-

commerce trust compared to consumers trusting the physical store. The findings noted that trust has two fundamental characteristics, i.e., cognitive and emotional, and manifests in social experiences (Kim & Park, 2013).

Cognitive trust is built in the minds of the consumers as they believe they desire to depend on the capability and consistency of service providers (Punyatoya, 2018). Results from the study show that consumers emphasised three main categories of trust in the platform: integrity, benevolence, and competence. Consumers indicate that they accumulate cognitive trust by directly observing company actions and their services. Emotional trust is gained through emotional relationships or interactions between consumers and the firm. Research notes that consumers first study the firm's website's structure before completing the buying process. Firms must put security features on the website, such as a security policy that must be read and accepted, security guarantees to prevent either party from rejecting the agreements that have been entered, and a more protection mechanism for the customers who buy online. Research notes that customers' perception of security protection increases customer trust when the consumer's perception of protection has increased. The study noted that increased security perception by consumers results in decreased risk as perceived consumers buy food using digitally mediated platforms (Hidayanto et al., 2014). The firms must foster a good reputation to increase customer trust. Structural assurance emerged as crucial as customers expect to see guarantees, promises, regulations and legal initiatives on the website. Data must be encrypted to ensure customers do not lose their privacy, confidentiality, identity and even money from their accounts.

6.2 COGNITIVE RESPONSE

The original TAM referred to attitudes toward using technology as cognitive responses. According to the TAM, cognitive response constructs such as PU, the degree to which a user believes that using a particular technology improves performance, influence users' decisions about a particular technology, buying food online using digitally mediated platforms. Lim (2018) viewed PEOU as the degree to which consumers use the DCC apps when buying food online is painless. External factors influenced DCC consumers' personal views on the PU and PEOU when purchasing decisions on a digitally mediated platform, influencing the actual use of DCC apps and related technologies (Fussell & Truong, 2021; Venkatesh et al., 2003). The TAM requires the integration of extended and contextualised motivational influences that explain emerging realities around users and integration with technology.

6.2.1 Impact of perceived usefulness on perceived ease of use

Perceived usefulness strongly correlated with perceived ease of use (H6). The study showed that the TAM components assume multidimensionality to account for the complexities of user behaviour in the digital collaboration consumption environment. According to the findings, such cognitive responses, which are referred to as beliefs, are PU and PEOU. According to the findings, the two latent cognitive response variables influenced the intention to continue using the DCC business model. The findings from the study support the earlier work of Lim (2018), who concluded that the technology acceptance model should be assessed to understand the peculiarities of user interaction with DCC apps in a technology-mediated platform marked by evolving socioeconomic changes and continuing technological proliferation, which ultimately results in increased opportunities. The cognitive response latent variables positively impacted the intention to continue using the DCC business model, specifically referring to the food delivery industry. The research found that PEOU had a causal effect on PU. The PEOU, referred to as the confidence level of someone using a DCC application when buying food online, does not use strong effort (Davis, 1989a). According to Taylor and Strutton (2010), PEOU has both direct and indirect effects on the intention to consume collaboratively. PU is the level of individual belief that using technology increases work performed by DCC consumers. These findings confirm the results of the earlier studies on DCC (Kanchanatanee et al., 2014). The researcher noted that some participants in the study experimented with the use of technology, i.e., they downloaded the food ordering applications and bought food online, as the first experience during the interaction process when data was being collected. Most of the participants in the DCC study found the whole process ease than expected.

6.2.2 Impact of perceived usefulness and perceived ease of use on intention to continue using DCC.

The results from the model indicate that PU and PEOU (H7 and H8) are strong predictors of intention to continue using the DCC business model. The observed relationships indicate a strong relationship between PU and PEOU on intention to continue using the DCC business model. Chai and Yat (2019) noted that an important element in changing consumers' attitudes and intentions to buy food online is only done by establishing acceptance of technology usage. The researcher challenges the firms to develop applications that are easy to use. Consumers noted unwillingness to shop on a poorly designed and developed website, difficult to understand and very slow downloading speed. The website design must be simple and understandable by ordinary consumers for an easy shopping experience. The study noted that

perceived usefulness and perceived ease of use are predictors of intention to continue using the DCC business model.

6.3 BEHAVIOURAL INTENTIONS

6.3.1 Impact of covariates on intention to use DCC

The model included additional predictors, referred to as covariates and sometimes not denoted in the model (Hayes, 2018). The work of Gerber et al. (2018) and Gerber and Rogers (2009) found formal statistics tests on covariates to be insignificant. In the study, a significance test for the covariates of digital collaborative consumption in the food delivery industry was found to be insignificant.

The study's findings indicated that covariates do not significantly impact the intention to continue using DCC. The study included covariates to predict relationships of latent factors in the structural equation modelling, and the overall results were insignificant. The covariates were found to be affecting consumer behaviour, although directions were inconsistent across studies (Steenkamp & Maydeu-Olivares, 2021; Steenkamp & Gielens, 2003).

6.4 CHAPTER SUMMARY

The study's findings were discussed in relation to the existing literature on DCC. Anchored on the study's objectives and relevant hypotheses proposed, the current chapter discussed the study's results concerning drivers of DCC drivers in an emerging market, with a special interest in the food delivery industry in South Africa. The relevant hypotheses and the research objectives formed the basis of the discussion. As noted by the SEM and path analysis results, the trust in the platform did not predict perceived usefulness as a driver of DCC in emerging markets. Customers use new technology if they believe that they get added value from the new technology (Rouibah et al., 2011; Tan & Teo, 2000). Perceived usefulness was found to play an important role in the success or failure of the business (Wilson et al., 2021). The next chapter focuses on the overall summary of the research report and conclusions, recommendations, implications, and the academic, policymakers, and business.

CHAPTER 7

SUMMARY, CONCLUSIONS, RECOMMENDATIONS AND STUDY IMPLICATIONS

7.0 INTRODUCTION

An overview of all the key issues raised previously in the thesis is presented in the chapter. The report's key findings are emphasised upon which the researcher came up with the conclusions. This chapter summarises the theses' conceptual, theoretical and practical implications. The following sequence will be followed: discussions, conclusions, and recommendations for future research. The discussion was on drivers of deterrents of DCC in an emerging market with a special interest in the South African food delivery industry. The dissertation draws heavily on the technology acceptance model to explain the key findings. The study developed a roadmap as an intervention tool in policy-making for academics, industry and government.

7.1 SUMMARY OF THE THESIS REPORT

This study aimed to evaluate the impact of DCC in the food delivery industry in emerging markets, focusing on South Africa. More specifically, the study was aimed at assessing the drivers of digital collaborative consumption, assessing the deterrents of digital collaborative consumption among consumers in the food delivery industry, assessing the impact of the DCC business model in the food delivery industry, and developing a conceptual model which explains and predict consumer attitudes and buying intentions towards food delivery services.

The first chapter of the thesis laid down the background of the study, a description of an emerging market context where the research was done, a description of the objectives and the research approach, and contributions and set the context and general tone of the write-up. A comprehensive literature review on digital collaborative consumption was discussed in chapter two. The concept of digital collaborative consumption was viewed as a social-economic model primarily based on the swapping and trading of goods and services. The focus was on using and not ownership. The drivers of DCC discussed in the literature were economic benefits, social benefits, interactivity, borderless marketplace, enjoyment and sustainability. Trust in the

platform, technological dimension and perceived utility were the barriers to DCC identified. The distinct characteristics of the digital collaborative marketplace discussed include sustainability, a sense of joint ownership and social bonds (Petruzzi et al., 2020). Online food delivery was described by Li et al. (2020) as a system based on ICT where the customers place their orders on the system and receive the goods offline. The researcher covers innovation theory and how new technology is accepted in the DCC marketplace in emerging markets.

Chapter three focused on the theoretical and conceptual framework. The technology acceptance model was the overarching theory the researcher probed and synthesised various theories underpinning the DCC framework in emerging markets. The theoretical framework of the research was developed through a rigorous process of reviewing literature and previous empirical studies. The hypotheses developed were crucial to test whether the model worked out as suggested. The researcher borrowed some items constructs from other models and theories, including the overarching theory, TAM (Davis et al., 1989); Trait theory (Jayawickreme et al., 2019); Behaviourist theory (Kassarjian, 1971; Singh & Khosla, 2020); Values theory (Schwartz et al., 2012), Rokeach Value theory (Rokeach, 1973, 1975); Theory of buyer behaviour (Howard & Sheth, 1969) and the Expectancy value model (Abraham & Barker, 2015) were all instrumental in developing the conceptual model. The new model had four parts: the antecedents, cognitive response referred to as beliefs, attitudes, and behavioural responses, through which eleven hypotheses were developed to sufficiently address the research questions.

Chapter four presented an account of the research methodology. The chapter addressed the research context as a general study plan, population and sampling method, data collection, ethical consideration, scale development, validity and reliability. In addressing research objectives, the quantitative method was used. The link for the self-administered questionnaires was shared with respondents through various online platforms, and data was collected on the Qualtrics platform. The internal validity of the study was determined by testing Cronbach's Alpha. The test results were (0.910) and showed high internal reliability and consistency. The chapter describes how research ethics was conducted to ensure compliance with university rules and policies. The Human Research Ethics Committee (HREC-Non Medical) of the University of the Witwatersrand granted the researcher permission to conduct the study. Data was collected from the members of the public who bought food online. Respondents were

allowed to agree or disagree with participating in the study. The collected data was analysed on Mplus version 7. At last, the novel contributions of the study were discussed.

Chapter five was mainly presenting descriptive and inferential statistical analyses of the study. The results of the study were presented, analysed and explained in detail. The researcher cleaned the data by removing responses that were partially completed. The questionnaires completed at 65% and above were considered for the study. The researcher noted ten questionnaires were in this group, and other responses were completed at 100%. Structural equation modelling as a multivariate data analysis was used in the study to analyse relations (Gupta & Singh, 2015). Data were tested for normality using Kolmogorov-Smirnov and Shapiro-Wilk approaches. The model was tested for mediation by focusing on total, direct and indirect effects.

The researcher discussed the results in chapter six, guided by research objectives, existing theories, and knowledge. The study identified DCC drivers in emerging markets as delivery, social norms, PU, PEOU, security assurance, and trust issues on the DCC platform provider. The study's findings were discussed in relation to the existing literature on digital collaborative consumption in an emerging market, focusing on the food delivery industry in South Africa.
Finally, chapter seven summarises the research report, conclusions, and recommendations. The chapter discussed the implications for various stakeholders, including business managers, researchers, and policymakers.

7.2 EVALUATION OF THEORETICAL OBJECTIVES

The theoretical objectives were realised through a literature review. The study formulated primary objectives from which theoretical and empirical objectives were derived, as indicated in chapter 1, section 1. The study's primary objective is to investigate the influence of drivers and deterrents of digital collaborative consumption in the food delivery industry.
A literature review of the research context and variables forms the bases for establishing the theoretical objectives. For the current study, the theoretical objectives formulated are as follows:

- To conduct a literature review on attitudes toward digital collaborative consumption, economic benefits, social benefits, security assurance and trust in the platform.

- To conduct a literature review on cognitive response variables (beliefs), i.e., perceived usefulness and perceived ease of use, towards DCC.
- To conduct a literature review on digital collaborative consumption.
- To conduct literature on innovation theory and other theories which affect the DCC business model.

Theoretical objective 1

The theoretical objective was realised in chapter 2 of the study. The concept was covered in sections ranging from 2.5 – 2.13. and 3.6.1.1 – 3.6.1.5. The main aspects discussed are the drivers of DCC, which include economic benefits, social benefits, interactivity, and the barriers of DCC, which include trust, assurance, convenience, technology, and accessibility.

Theoretical objective 2

A literature review on cognitive response, i.e., perceived usefulness and perceived ease of use, was covered in chapter 3. The sections which covered theoretical objective 2 are 3.6.2.1 – 3.6.2.2. Perceived usefulness was found to be promoting consumers' intention to use online food delivery services (Kang & Namkung, 2019). Perceived ease of use predicted the intention to continue using the DCC platform.

Theoretical objective 3

The theoretical objective of DCC was achieved in sections 2.1 – 2.3. The term digital collaborative consumption refers to the coordination in acquiring, distributing and using products and resources (Belk, 2014). The DCC business model takes place between two parties, the consumer and service provider and the triadic exchange occurs between the consumer, platform and service provider (Benoit et al., 2017). The intention to continue consuming collaboratively was found to be relevant in the emerging market.

Theoretical objective 4

The theoretical objective was addressed in chapter 2, section 2.5. The content covered includes the definition of innovation, conditions enabling innovation, innovation adoption and M-commerce and smartphones. Adams et al. (2016) established a model which shows the consequences of consumer resistance to adopting new technology, including postponement, opposition or rejection. To understand consumer reactions to innovation in the food delivery

industry, the researcher used past studies and publications to get information about consumer reactions to new technology. The research noted that technology in the food delivery industry started to be witnessed in the 1950s (BeMiller, 2009). Reviewing past studies gave the researcher a clear insight into the development of new technology (Dahlberg et al., 2008). From past studies, the researcher discovered that the food delivery industry has been undergoing radical innovation since the 1950s, as shown in Figure 31. The study identified two phases of technological development, and these are non-technological and technological innovation. Non-technological innovation dominated before 1998, and technological innovation dominated after the same period. The industry witnessed great strides in technological change. Using Roger's study on innovation, the study realised that there are different types of consumers in the market. Some consumers love technology as they are regarded as early adopters. The study recommends that DCC businesses engage with consumers to improve service delivery. The literature classified consumers as early adopters and late adopters (Rogers, 2004). Early adopters were found to have adopted innovation between 1993 and 2010, the period classified as the Solomon era and saw the development of applications in the food industry. Online platforms influenced the exponential growth of the food delivery industry during that time.

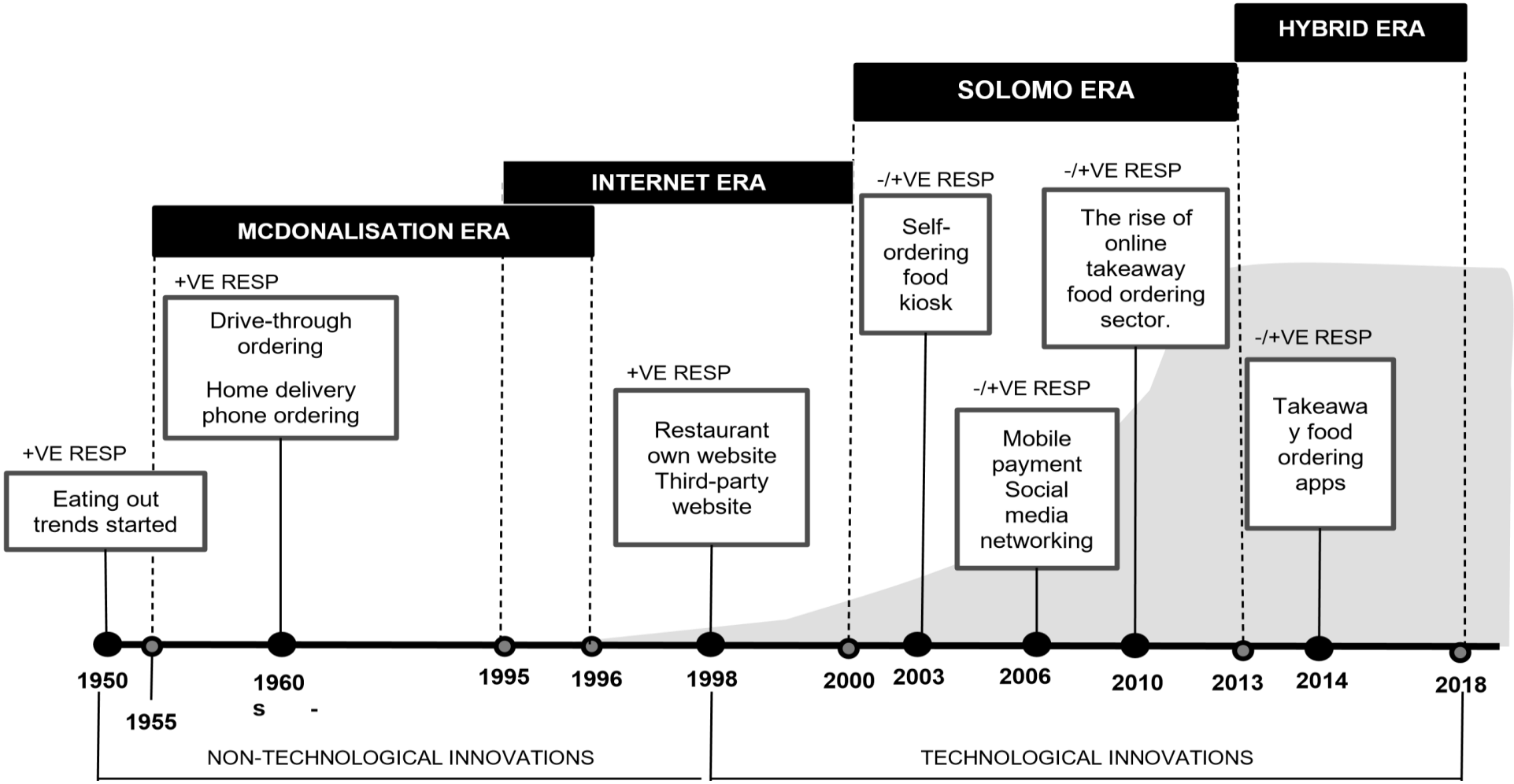


Figure 31: Development of innovation in the food delivery industry

Source: Adapted from Boyer et al. (2003); Hishamuddin (2021); Thakran and Verma (2013)

7.3 EVALUATING EMPIRICAL OBJECTIVES

The empirical objectives are based on, concerned with, and verifiable by observation or experience rather than theory or pure logic (Soanes & Stevenson, 2004), as outlined in chapter 1, section 1.7. The study's empirical objectives were based on relationships between the variables measured. The empirical objectives posited were as follows:

- To investigate the influence of economic benefits on perceived usefulness and perceived ease of use in the South African food delivery industry.
- To investigate the influence of social benefits on perceived usefulness and perceived ease of use.
- To investigate the influence of security assurance on perceived usefulness and perceived ease of use in the South African food delivery industry.
- To investigate the influence of trust in the platform on perceived usefulness and perceived ease of use.
- To investigate the effect of perceived usefulness on DCC in the South African food delivery industry.
- To investigate DCC's perceived ease of use in the South African food delivery industry.
- To establish the impact of covariates, i.e., age, gender, qualifications, and province, on DCC.

To achieve the study's empirical objectives 7, structural equation modelling was conducted to establish the theorised relations between the latent constructs. The study results were summarised in chapter 6 using tabulations and interpretations. The empirical results show a positive relationship between the seven hypotheses except for H5a, which was not significant. The researcher modelled the effect of the moderator, which was represented by covariates, and they were found to be insignificant.

7.4 EVALUATING THE HYPOTHESES

Based on the hypothesised model, the study formulated the hypotheses outlined in chapter 1, section 1.7. The researcher tested the hypotheses; the results are presented in chapter 6 of the study.

Table 54: Hypotheses

H1a	Home delivery positively influences perceived usefulness.
H1b	Home delivery positively influences perceived ease of use.
H2a	Economic benefits positively influence perceived usefulness.
H2b	Economic benefits positively influence perceived ease of use.
H3a	Social benefits positively influence perceived usefulness.
H3b	Social benefits positively influence perceived ease of use
H4a	Security assurance positively influences perceived usefulness.
H4b	Security assurance positively influences perceived ease of use.
H5a	Trust positively influences perceived usefulness.
H5b	Trust positively influences perceived ease of use.
H6	Perceived ease of use positively influences perceived usefulness.
H7	Perceived usefulness positively influences the intention to continue using digital collaborative consumption.
H8	Perceived ease of use positively influences the intention to continue using digital collaborative consumption.

All eight hypotheses were tested using structural equation modelling, and the outcomes are presented in Table 55. Seven hypotheses were supported, and only one (H5a) was not supported. The study did not support the covariates which moderated the model.

Table 55: Hypotheses and Outcomes

	Hypothesis	P-Value	Remarks
H1a	Home delivery positively influences perceived usefulness.	***	Supported
H1b	Home delivery positively influences perceived ease of use.	***	Supported
H2a	Economic benefits positively influence perceived usefulness.	***	Supported
H2b	Economic benefits positively influence perceived ease of use.	*	Supported
H3a	Social benefits positively influence perceived usefulness.	***	Supported
H3b	Social benefits positively influence perceived ease of use	***	Supported
H4a	Security assurance positively influences perceived usefulness.	***	Supported
H4b	Security assurance positively influences perceived ease of use.	***	Supported
H5a	Trust positively influences perceived usefulness.	0.384	N.S.
H5b	Trust positively influences perceived ease of use.	***	Supported
H6	Perceived ease of use positively influences perceived usefulness.	***	Supported
H7	Perceived usefulness positively influences the intention to continue using digital collaborative consumption.	***	Supported
H8	Perceived ease of use positively influences the intention to continue using digital collaborative consumption.	***	Supported
	Covariates	1.35	N.S.

N.S. – Not significant; *p < 0.10; **p < 0.05; ***p < 0.01

7.3 CONCLUSIONS

The study aimed to address the research objectives posed in the introduction chapter. The four research objectives are: (1) To assess the drivers of DCC among consumers in the food delivery industry, (2) To assess the deterrents of DCC among consumers in the food delivery industry, (3) To assess the impact of the DCC business model in the food delivery industry, and (4) To develop a conceptual model which explains and predict consumer attitudes and buying intentions towards food delivery services. The study addressed the formulated research objectives, and the following conclusions were drawn from the findings and discussions:

7.3.1 Drivers of digital collaborative consumption

Based on the empirical results, the study concluded that home delivery, social norms, perceived ease of use, and security assurance are significant drivers for DCC. Home delivery ($p<0.01$ $=0.0000$) and social norms ($p<0.01$ $=0.0000$) were significant. The total effects from home delivery to the intention to consume collaboratively were significant. The standardised effects were 0.274 and were significant. The cognitive response, i.e., beliefs variables, were perceived usefulness ($p<0.01$ $=0.0000$), perceived ease of use ($p<0.01$ $= 0.0001$), and security assurance ($p<0.01$ $=0.0000$) were found to be key drivers towards online food delivery services. Attitudes were found to be motivators, and the latent variables on the model were social benefits ($p<0.01$ $=0.0000$) and trust in the platform ($p<0.01$ $=0.0000$) and economic benefits ($p<0.05$ $=0.0001$). However, the Trust in the platform was found to be insignificant when predicting perceived usefulness. Consumers emphasised privacy and security concerns. The study concluded that social norms, vendor image and security policy encouraged consumers to trust online firms and continue buying from these platforms. Findings from the literature added some DCC drivers to the list, including heavy advertising, which can be perceivably tagged along with price as bait to increase the market and customer base.

7.3.2 Deterrents of digital collaborative consumption

The study concluded that economic benefits, poor website design and interactivity were the main DCC deterrents. The current study found that economic benefits ($p<0.05$ $=0.02$) were non-significant towards digital collaborative consumption. The economic benefits were operationalised as cost-saving, money-saving, perceived utility and economic value. However, consumers in South Africa found these insignificant as far as buying food online is concerned. The research noted that consumers focused on ethical behaviour and trust in the platform as the key factors to consider when buying online. Economic benefit was perceived as a deterrent factor as consumers preferred other variables. Respondents red-flagged poor website design and slow downloading time as deterrents when buying online, deterring continuous use of online platforms in emerging markets.

Furthermore, website interactivity was found to be a deterrent factor as consumers struggle to navigate without difficulties. Consumers want to send and receive messages when an enquiry has been made. In this regard, the website's synchronicity and two-way communication features were deterrent factors, as consumers could not get feedback quickly.

Digital collaborative consumption emerged as the key to improving living standards in communities. Digital collaborative consumption promoted the easy formation of online-based communities for sharing information. Mobile apps enabled instant messaging and facilitated information sharing at a faster rate. The DCC business model enabled customers to take active roles in the DCC marketplace.

Word of mouth and personal recommendations were deemed major reasons people engage in digital collaborative consumption. Another positive factor of the business model where poverty reduction in communities as underutilised resources was turned into cash cows, e.g., cars and houses, which are used to generate extra income for the households. Many people are employed in various capacities, such as drivers, chefs and administrators in restaurants and call centres and improved service delivery. The DCC business model was affected by network breakdowns because of continuous load-shedding (power cuts). The businesses were encouraged to have virtual private networks (VPN) to overcome network breakdowns and use generators as backups during power failures.

7.3.3 The impact of the DCC business model in the food delivery industry

Participants in the study indicated they were happy with DCC as it creates employment for the general public, especially in emerging markets. Working-class participants indicated their pleasure with the system as it reduced their time buying food outside their workplace. Unemployment reduction was a key contribution to the economy and improving citizens' socio-economic conditions. Going to private residents was found to be a cause for concern as delivery workers end up being hurt or injured by criminals.

7.4 RECOMMENDATIONS

Digital collaborative consumption is an effective business model to survive in highly competitive marketplaces by using digitally mediated platforms. The study has shown that DCC platforms mainly rely on urban transport system networks to support their commercial operations, hence synchronising the DCC applications with many transport operators to ensure good service delivery. The researcher recommended collecting data in different cities or countries where digital collaboration platforms exist. This will make it possible to understand

consumers' cultural differences and preferences and customer satisfaction with the product and service offered.

7.4.1 Adopt digitally mediated business platforms

Despite the evident befits associated with DCC business modelling, some South African businesses have either not fully adopted or have not yet adopted the business model. The study recommends that businesses adopt digitally mediated business platforms to create a database of loyal customers. This will result in positive digital word-of-mouth communications on different media platforms by sharing customer comments. To enhance the business model, targeting celebrities endorsing the business model assists the communication process, as it is part of the marketing mix. The success of products and services in emerging market communities is successful with low-cost marketing techniques, including above-the-line and below-the-line initiatives (Mattsson et al. (2017). The business managers must create a pyramid of customers to enable marketing metric experts to group customers from the database, target loyal customers, and have high lifetime value. The business model must be expanded to include non-food delivery services.

7.4.2 Build an online community

The researcher recommends that businesses and other stakeholders, such as website developers, marketers, and suppliers, build a cohesive community of online consumers. Through these online communities, firms share information fast, and they will get market responses, comments and reviews. The study noted that online communities of sharers give rise to a sense of belonging that enables the creation of online buying habits.

7.4.3. Engage in online marketing research

The firms should ensure that they conduct market research to understand the needs of the consumers. It emerged from the findings that marketing to the right group was essential as most online consumers are environmentally conscious. Literature also unearthed that these environmentally conscious consumers focus on reduced consumption (McDonald et al., 2015); hence they prefer buying online to save the environment. Such a structural assurance mechanism prevents poor service delivery on the part of the firms.

7.4.4 Provide a legal framework for DCC

Managers must provide policies and a legal framework enabling transactions and resource use management. Mattsson et al. (2017) noted that a secure payment mechanism is key to DCC's trust. The managers must ensure appropriate insurance policies are in place. The business managers must provide accurate information to the users and ensure that proper reputation systems, user identification and tracking are in place. Managers and the personnel working with the public must be aware of serious issues which impede the large scale of digital collaborative consumption. All the players must understand the POPI Act to ensure the privacy of all parties is observed. Mistakes involving product liability, exercising due diligence by customers, and credit legislations regulated differently in different countries are key issues that the firms and other stakeholders involved in the digital collaborative consumption business model.

7.4.5 Build interpersonal trust

Trust was found to be a barrier in online platforms (Ison, 2013). The researcher recommends that businesses build an interpersonal trust system supported by ICT to ensure that all transactions are traceable and verifiable. The delivery personnel must have tracking devices on their delivery cars to enable consumers to monitor the goods. This help to find the goods in case there is a hijacking by criminals. Consumers must trust the firms, as undeserving individuals must not share their personal information.

7.5 STUDY LIMITATIONS AND PROPOSALS FOR FUTURE RESEARCH

The study presented the limitations and the proposal for future research, which could be in an emerging market or developed economy.

7.5.1 Limitations of the study

The study identified some limitations during the implementation of the research process and suggested possible directions for future research in DCC, as indicated. First, the research focused on one type of digital collaborative consumption: the food delivery industry. Replicating the DCC business model is strongly recommended. Testing the current model in other contexts may produce different patterns important in analysing the drivers of digital collaborative consumption, resulting in successful online platforms. The study's sample size was insufficient for a survey covering the whole country. The current size of the sample was

not large enough to test for several socio-demographic variables. Digital collaborative consumption results from the study suggest that more data and further analysis of the phenomenon are inevitable.

7.5.2 Proposals for Future Research

Data for future research should be collected from townships and test the impact of digital collaborative consumption in improving township economies and the community's living standards. In model development, the researcher focussed on the research context, i.e., the cross-national data captured on similar response formats. Future research must use different response formats. Researchers noted that if the research is conducted in many countries, achieving an acceptable fit, e.g., multi-group CFA, the model becomes challenging (Steenkamp & Maydeu-Olivares, 2020); Steenkamp and De Jong (2010). The researcher recommends that the model framework in the study be routinely applied to obtain a better-fitting model to strengthen DCC.

Furthermore, it is still crucial that more research progresses to develop a more in-depth and complete understanding of digital collaborative consumption by focusing on the theoretical and managerial imperatives of the constructs. Finally, the national approach to this study in emerging markets was encouraging. It should be a springboard for more research to understand consumers' general preferences in emerging markets compared to advanced markets. A deeper understanding of the rationale underlying the motivations for digital collaborative consumption is important. Attitudinal and behavioural predictions enhance the study's significance, especially in cross-national research. Future research must design digital collaborative systems to alleviate potential failures and unforeseen problems. Understanding the type of goods and services amenable to digital collaborative consumption is another grey area that needs future researchers' attention.

7.6 NOVEL CONTRIBUTIONS AND IMPLICATIONS

Although some studies have been conducted in high-income countries, ground-breaking research was conducted in the South African marketplace investigating the drivers of digital collaborative consumers in the food delivery industry. After adopting items from existing studies, the researcher developed a new scale for measuring digital collaborative consumption. While recent attempts have improved the operationalisation and measurement of DCC,

progress in this area requires additional contributions by developing alternative conceptualisations and refined scales. The research made novel and substantive contributions to the body of knowledge, including theoretical, methodological, practical, conceptual contributions and managerial implications.

7.6.1 Theoretical contribution

The research provided new empirical insights into DCC-relevant constructs. It theorised relations grounded in solid theory, i.e., the Technology acceptance model (TAM) and Theory of reasoned action (TRA) and validated measurement tools adapted to the South African emerging market context. Davis et al. (1989)'s technology acceptance model was extended to include home delivery, economic benefits, social benefits, security assurance and trust as attitudes to the model. The attitudes were taken from the theory of reasoned action as they were motivators of DCC in emerging markets. The research found trust insignificant when mediated through perceived usefulness but had significant indirect and total effects on the intention to continue using DCC. The final DCC model developed is shown in Figure 32 below. Ajzen and Fishbein (1980) and Lindenberg (2001) noted that when an obligation to the social benefit is a strong motivator for an individual. Overall, the research findings added value to the literature on DCC, but little focus was given to emerging markets, especially in the food delivery industry. The findings from the study are consistent with previous studies showing positive and significant relationships across various domains (Ho et al., 2015). The TAM and TRA revealed that attitudes are important determinants of DCC in an Emerging market.

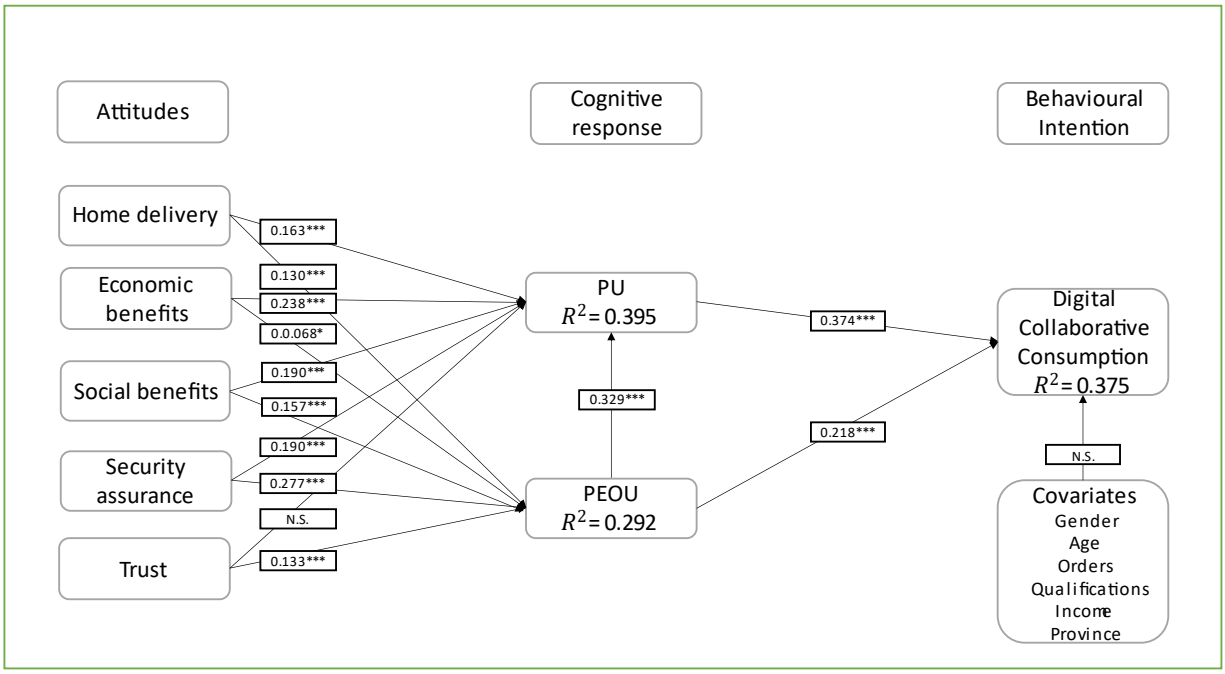


Figure 32: Digital collaborative consumption model

Source: Developed by the researcher

After running the structural equation model using the multigroup regression, the researcher summarised the significant determinants of digital collaborative consumption in emerging markets measured attitudes, i.e., home delivery, economic benefits, social benefits, security assurance and trust; cognitive response, i.e., perceived usefulness and perceived ease of use; and behavioural response which is the intention to continue using DCC. Home delivery, perceived usefulness, perceived ease of use, social benefits and security assurance were found to be key drivers of digital collaborative consumption in the model, whilst trust in the platform was found to be insignificant in determining consumption behaviour among emerging market consumers.

7.6.2 Methodological Contribution

Methodologically, a new scale measuring DCC was developed, assessed rigorously using confirmatory factor analysis, and showed good measurement properties. Social benefits and home delivery had a strong positive direct effect on intentions to continue using DCC, whilst security assurance had a weak positive direct effect on DCC.

7.6.3 Practical contribution

Practically, the effect size estimates suggested that home delivery, economic benefits, social benefits, perceived usefulness, perceived ease of use and trust in the platform have practical relevance for marketing strategists in reshaping public policy in the DCC marketplace. The study recommended approaches that research institutes, government, policymakers and business leaders, e.g., health, environmental management, social issues, education and transport, must use to plan, unlock opportunities and predict future consumption trends to get new guidance on new business models in emerging markets.

7.6.4 Conceptual contribution

Conceptually, previous studies in this new research domain assumed one theoretical viewpoint. The research implemented a more synergistic approach. Although prior research has studied the motivation of collaborative consumption in high-income countries, it has not focused on drivers of digital collaborative consumption in emerging markets, especially the South African context. The research is important because studying the experiences and attitudes of consumers in emerging markets help marketers to predict future consumption trends. The study confirms that home delivery, economic benefits, social benefits, and security assurance strongly affect perceived usefulness and ease of use. Trust had an insignificant relationship with perceived usefulness. The drivers of digital collaborative consumption strongly affecting the intention to continue using the DCC business model were economic benefits, social benefits, perceived usefulness, perceived ease of use, and security assurance. While some researchers found trust to be a key driver of collaborative consumption, e.g., Hamari et al. (2016), the current study found trust in the platform insignificant in determining the intention to continue using the DCC business model.

7.6.5 Managerial implications

Emerging African markets have become crucial for the growth of both multinational and local firms. Global and local brands must devise context-appropriate strategies to increase market share. The researcher had implications for the managers who sell products and services on DCC platforms for the current study. The platform was found to be pleasurable to use as PU and PEOU of use are important motivators in the model. The system was found to be trusted by consumers who pass positive word of mouth both online and offline and make recommendations. Local brands were found to be deriving great advantages in emerging

markets and were competing successfully with leading international brands by attracting more local customers. Managers who must rigorously market their products and services to win the market share will find this useful. The managers must be advised of stricter resource allocation mechanisms to ensure the systems are managed well, and customer problems are attended to quickly. This has been proven useful in other contexts, e.g., file and ride-sharing. The study identified drivers that promote DCC in the food delivery industry. Focusing on the right drivers provided a cognitive boost in developing an online community of loyal customers.

In conclusion, the model made significant contributions to the literature on DCC and consumer behaviour literature. The model unifies several conceptual frameworks within the technology acceptance model to create an original model that explains digital collaborative consumption in the emerging market. Some aspects of the contribution to acknowledge are measures for understanding the antecedents, motivating variables and their key determinants. To the researcher's knowledge, the study is the first type to formally test the relationships between these variables of the model in the emerging market. The data used for the study came from real consumers, and the findings support these relations. Finally, the research model provided comprehensive coverage of DCC drivers to appreciate consumer and buyer behaviour in the food delivery context. The research could help inform strategies and policy decisions in business and government agencies that help plan, predict and meet future demands.

REFERENCES

Abraham, J., & Barker, K. (2015). An expectancy-value model for sustained enrolment intentions of senior secondary physics students. *Research in Science Education, 45*(4), 509-526.

Abrams, D., & Hogg, M. A. (1988). Comments on the motivational status of self-esteem in social identity and intergroup discrimination. *European Journal of Social Psychology, 18*(4), 317-334.

Adams, R., Bessant, J., & Phelps, R. (2006). Innovation management measurement: A review. *International Journal of Management Reviews, 8*(1), 21 - 47.

Agarwal, S., Satyavada, A., Kaushik, S., & Kumar, R. (2007). Urbanization, urban poverty and health of the urban poor: status, challenges and the way forward. *Demography India, 36*(1), 121-134.

Agostini, M., & van Zomeren, M. (2021). Toward a comprehensive and potentially cross-cultural model of why people engage in collective action: A quantitative research synthesis of four motivations and structural constraints. *Psychological bulletin, 147*(7), 667.

Ahmad, A., Li, K., Feng, C., Asim, S. M., Yousif, A., & Ge, S. (2018). An empirical study of investigating mobile applications development challenges. *IEEE Access, 6*(1), 17711-17728.

Agatz, N., Campbell, A., Fleischmann, M., & Savelsbergh, M. (2011). Time slot management in attended home delivery. *Transportation Science, 45*(3), 435-449.

Ailawadi, K. L., Neslin, S. A., & Gedenk, K. (2001). Pursuing the value-conscious consumer: store brands versus national brand promotions. *Journal of Marketing, 65*(1), 71-89.

Ajzen, I. (1991). The theory of planned behaviour. *Organisational Behaviour and Human Decision Processes, 50*(2), 179-211.

Ajzen, I. (2011). The theory of planned behaviour: Reactions and reflections. Oxfordshire, UK: Taylor & Francis.

Ajzen, I., & Fishbein, M. (1977). Attitude-behaviour relations: A theoretical analysis and review of empirical research. *Psychological Bulletin, 84*(5), 888.

Ajzen, I., & Fishbein, M. (1980). *Understanding attitudes and predicting social behaviour.* Englewood Cliffs, NJ: Prentice-Hall.

Ajzen, I., & Fishbein, M. (2005). The influence of attitudes on behaviour. Amherst: University of Massachusetts

Ajzen, I., & Schmidt, P. (2020). *Changing behaviour using the theory of planned behaviour*. New York: Cambridge University Press.

Akram, U., Hui, P., Khan, M. K., Yan, C., & Akram, Z. (2018). Factors affecting online impulse buying: evidence from Chinese social commerce environment. *Sustainability, 10*(2), 352.

Al-Debei, M. M., Akroush, M. N., & Ashouri, M. I. (2015). Consumer attitudes towards online shopping: the effects of trust, perceived benefits and perceived web quality. *Internet Research, 25*(5), 707-73.

Alalwan, A. A., Algharabat, R. S., Baabdullah, A. M., Rana, N. P., Qasem, Z., & Dwivedi, Y. K. (2020). Examining the impact of mobile interactivity on customer engagement in the context of mobile shopping. *Journal of Enterprise Information Management, 33*(3), 627-653.

Alasuutari, P., Bickman, L., & Brannen, J. (2008). *The SAGE handbook of social research methods*. Los Angels: Sage Publications.

Albinsson, P. A., & Perera, B. Y. (2018). Access-Based Consumption: From Ownership to Non-Ownership of Clothing. *The Rise of the Sharing Economy: Exploring the Challenges and Opportunities of Collaborative Consumption, 3*(1), 183 - 212.

Al-Debei, M. M., Akroush, M. N., & Ashouri, M. I. (2015). Consumer attitudes towards online shopping: the effects of trust, perceived benefits, and perceived web quality. *Internet Research, 25*(5), 707-733.

Alden, D. L., Steenkamp, J.-B. E., & Batra, R. (2006). Consumer attitudes toward marketplace globalization: Structure, antecedents and consequences. *International Journal of Research in Marketing, 23*(3), 227-239.

Ali, S., Khalid, N., Javed, H. M. U., & Islam, D. M. (2021). Consumer adoption of online food delivery ordering (OFDO) services in Pakistan: the impact of the COVID-19 pandemic situation. *Journal of Open Innovation: Technology, Market, and Complexity, 7*(1), 10.

Allport, G. W. (1937). *Personality*. New York: Holt.

Alzamora-Ruiz, J., Guerrero-Medina, C., Martínez-Fiestas, M., & Serida-Nishimura, J. (2020). Why people participate in collaborative consumption: An exploratory study of motivating factors in a Latin American economy. *Sustainability, 12*(5), 1936.

Amankwah-Amoah, J., Khan, Z., & Wood, G. (2021). COVID-19 and business failures: The paradoxes of experience, scale, and scope for theory and practice. *European Management Journal, 39*(2), 179-184.

Annaraud, K., & Berezina, K. (2020). Predicting satisfaction and intentions to use online food delivery: What really makes a difference? *Journal of foodservice business research, 23*(4), 305-323.

Arifin, W. N. (2018). A Web-based Sample Size Calculator for Reliability Studies. *Education in Medicine Journal, 10*(3), 17-26.

Babbie, E. R. (2020). *The practice of social research* (15th Ed.). Singapore: Cengage learning.

Babrow, A. S., & Kwitonda, J. C. (2020). Expectancy value model. *The international encyclopaedia of media psychology*, 1-6.

Baburajan, V., e Silva, J. d. A., & Pereira, F. C. (2020). Open-Ended Versus Closed-Ended Responses: A Comparison Study Using Topic Modelling and Factor Analysis. *IEEE Transactions on Intelligent Transportation Systems, 22*(4), 2123-2132.

Bae, J., & Koo, D.-M. (2018). Lemons problem in collaborative consumption platforms: Different decision heuristics chosen by consumers with different cognitive styles. *Internet Research, 28*(3), 746-766.

Bailey, R., Armour, K., Kirk, D., Jess, M., Pickup, I., Sandford, R., & Education, B. P. (2009). The educational benefits claimed for physical education and school sport: an academic review. *Research papers in education, 24*(1), 1-27.

Bagozzi, R. P., Baumgartner, J., & Yi, Y. (1989). An investigation into the role of intentions as mediators of the attitude-behaviour relationship. *Journal of Economic psychology, 10*(1), 35-62.

Bagozzi, R. P., & Yi, Y. (2012). Specification, evaluation, and interpretation of structural equation models. *Journal of the Academy of Marketing Science, 40*(1), 8-34.

Bakaloudi, D. R., Jeyakumar, D. T., Jayawardena, R., & Chourdakis, M. (2021). The impact of COVID-19 lockdown on snacking habits, fast-food and alcohol consumption: A systematic review of the evidence. *Clinical Nutrition, 41*(12), 3038-3045.

Balderjahn, I., Peyer, M., Seegebarth, B., Wiedmann, K.-P., & Weber, A. (2018). The many faces of sustainability-conscious consumers: A category-independent typology. *Journal of Business Research, 91*(1), 83-93.

Banks, S. P., Ge, G., & Baker, J. (1991). Intercultural encounters and miscommunication. *Miscommunication" and problematic talk*, 103-120.

Bardhi, F., & Eckhardt, G. M. (2012). Access-based consumption: The case of car sharing. *Journal of consumer research*, *39*(4), 881-898.

Barnes, S. J., & Mattsson, J. (2017). Understanding collaborative consumption: Test of a theoretical model. *Technological Forecasting and Social Change*, *118*, 281-292.

Barnes, S. J., Mattsson, J. J. T. F., & Change, S. (2017). Understanding collaborative consumption: Test of a theoretical model. *118*(1), 281-292.

Bart, Y., Shankar, V., Sultan, F., & Urban, G. L. (2005). Are the drivers and role of online trust the same for all web sites and consumers? A large-scale exploratory empirical study. *Journal of Marketing*, *69*(4), 133-152.

Bashir, I., & Madhavaiah, C. (2015). Consumer attitude and behavioural intention towards Internet banking adoption in India. *Journal of Indian Business Research*, *7*(1), 67-102.

Baubonienė, Ž., & Gulevičiūtė, G. (2015). E-commerce factors influencing consumers 'online shopping decisions. *Social Technologies*, *5*(1), 62-73.

Baumgartner, H., & Steenkamp, J.-B. E. (1996). Exploratory consumer buying behaviour: Conceptualization and measurement. *International Journal of Research in Marketing*, *13*(2), 121-137.

Beldad, A., van der Geest, T., de Jong, M., & Steehouder, M. (2012). A cue or two and I'll trust you: Determinants of trust in government organisations in terms of their processing and usage of citizens' personal information disclosed online. *Government information quarterly*, *29*(1), 41-49.

Belk, R. (2007). Why not share rather than own? *The Annals of the American Academy of Political and Social Science*, *611*(1), 126-140.

Belk, R. (2014). You are what you can access: Sharing and collaborative consumption online. *Journal of Business Research*, *67*(8), 1595-1600.

Belk, R. (2018). Foreword: The Sharing Economy. *The Rise of the Sharing Economy: Exploring the Challenges and Opportunities of Collaborative Consumption*. Santa Barbara: CA: ABC-CLIO.

Benoit, S., Baker, T. L., Bolton, R. N., Gruber, T., & Kandampully, J. (2017). A triadic framework for collaborative consumption (CC): Motives, activities and resources & capabilities of actors. *Journal of Business Research*, *79*(1), 219-227.

Beyari, H., & Abareshi, A. (2018, June). The interaction of trust and social influence factors in the social commerce environment. In *International Conference of Reliable Information and Communication Technology* (pp. 931-944). New York: Springer, Cham.

Beznosov, K., & Kruchten, P. (2004, September). Towards agile security assurance. In *Proceedings of the 2004 workshop on New security paradigms* (pp. 47-54).

Bilsky, W., & Schwartz, S. H. (1994). Values and personality. *European Journal of Personality*, *8*(3), 163-181.

Bijarnia, S., Ilavarasan, P. V., & Kar, A. K. (2020). Comparing SERVQUAL for transportation services in the sharing economy for emerging markets: insights from Twitter analytics. In *Digital and Social Media Marketing* (pp. 127-134). Singapore: Springer.

Bock, G.-W., Zmud, R. W., Kim, Y.-G., & Lee, J.-N. (2005). Behavioural intention formation in knowledge sharing: Examining the roles of extrinsic motivators, social-psychological forces, and organisational climate. *MIS quarterly*, *29*(1), 87-111.

Bolton, R. N., McColl-Kennedy, J. R., Cheung, L., Gallan, A., Orsingher, C., Witell, L., & Zaki, M. (2018). Customer experience challenges: bringing together digital, physical and social realms. *Journal of Service Management*, *29*(5), 776-808.

Bolton, R. N., Parasuraman, A., Hoefnagels, A., Migchels, N., Kabadayi, S., Gruber, T., Loureiro, Y. K., & Solnet, D. (2013). Understanding Generation Y and their use of social media: a review and research agenda. *Journal of Service Management*, *12*(2), 90-112.

Bonnet, D., Buvat, J., & Kvj, S. (2015). When Digital Disruption Strikes: How Can Incumbents Respond. *Digital Transformation Review 7*(1), 78-89.

Botsman, R., & Rogers, R. (2010). What's mine is yours. *The rise of collaborative consumption.* New York: Harper.

Boyer, K. K., Hult, G. T., & Frohlich, M. (2003). An exploratory analysis of extended grocery supply chain operations and home delivery. *Integrated Manufacturing Systems*, *14*(8), 652-663.

Bray, J. P. (2008). *Consumer behaviour theory: approaches and models*. Retrieved June 12, 2020, from http://eprints.bournemouth.ac.uk/10107/1/Consumer_Behaviour_Theory_-_Approaches_&_Models.pdf

Brune, S., Knollenberg, W., Stevenson, K. T., Barbieri, C., & Schroeder-Moreno, M. (2021). The influence of agritourism experiences on consumer behaviour toward local food. *Journal of Travel Research*, *60*(6), 1318-1332.

Burgess, S. M. (1992a). Personal values and consumer research: An historical perspective. *Research in Marketing*, *11*(1), 35-79.

Burgess, S. M. (1992b). Personal values and consumer research: An historical perspective. *International Journal of Research in Marketing*, *11*(1), 35-79.

Burgess, S. M. (2002). *SA tribes: Who we are, how we live and what we want from life in the new South Africa.* Cape Town: David Philip.

Burgess, S. M. (2003). Within-country diversity: is it the key to South Africa's prosperity in a changing world? *International Journal of Advertising*, *22*(2), 157-182.

Burgess, S. M., Harris, M., & Mattes, R. B. (2002). *SA tribes: Who we are, how we live and what we want from life in the new South Africa*. Cape Town: David Philip Publishers.

Burgess, S. M., & Harris, M. (1998). Values, optimum stimulation levels and brand loyalty: new scales in new populations. *South African Journal of Business Management*, *29*(4), 142-157.

Burgess, S. M., & Steenkamp, J.-B. E. (1999). Value priorities and consumer behaviour in a transitional economy. In *marketing issues in transitional economies* (pp. 85-105). New York: Springer.

Burgess, S. M., & Steenkamp, J.-B. E. (2006). Marketing renaissance: How research in emerging markets advances marketing science and practice. *International Journal of Research in Marketing*, *23*(4), 337-356.

Burgess, S. M., & Steenkamp, J.-B. E. (2013). Introduction to the special issue on marketing in emerging markets. *International Journal of Research in Marketing*, *30*(1), 1-3.

Burgess, S. M., & Steenkamp, J. (2011). Call for papers: Special issue on marketing in emerging markets. *International Journal of Research in Marketing*, *28*(1), vi-vii.

Burton-Jones, A., & Hubona, G. S. (2006). The mediation of external variables in the technology acceptance model. *Information & management*, *43*(6), 706-717.

Campbell, M. J., Machin, D., & Walters, S. J. (2010). *Medical statistics: a textbook for the health sciences*. Hoboken, NJ: John Wiley & Sons.

Caputo, V., Scarpa, R., Nayga Jr, R. M., & Ortega, D. L. (2018). Are preferences for food quality attributes really normally distributed? An analysis using flexible mixing distributions. *Journal of choice modelling*, *28*, 10-27.

Cavusoglu, H., Raghunathan, S., & Cavusoglu, H. (2009). Configuration of and interaction between information security technologies: The case of firewalls and intrusion detection systems. *Information Systems Research*, *20*(2), 198-217.
Carling, J., & Schewel, K. (2018). Revisiting aspiration and ability in international migration. *Journal of Ethnic and Migration Studies*, *44*(6), 945-963.
Castillo, I., Adell, F. L., & Alvarez, O. (2018). Relationships between personal values and leadership behaviours in basketball coaches. *Frontiers in psychology*, *9*(1), 1661.
Ceci, L. (2021). South Africa: mobile internet users 2016-2026. *Mobile Internet & Apps, 2022*. Retrieved February 24 2022, from https://www.statista.com/statistics/558867/number-of-mobile-internet-user-in-south-africa/
Cernat, A., & Liu, M. (2019). Radio buttons in web surveys: Searching for alternatives. *International Journal of Market Research*, *61*(3), 266-286.
Chai, L. T., & Yat, D. N. C. (2019). Online food delivery services: making food delivery the new normal. *Journal of Marketing advances and Practices*, *1*(1), 62-77.
Chang, S.-J., Van Witteloostuijn, A., & Eden, L. (2010). From the editors: Common method variance in international business research. New York: Springer.
Chen, F. F. (2007). Sensitivity of goodness of fit indexes to lack of measurement invariance. *Structural Equation Modelling: A Multidisciplinary Journal*, *14*(3), 464-504.
Chen, J. V., Ruangsri, S., Ha, Q.-A., & Widjaja, A. E. (2021). An experimental study of consumers' impulse buying behaviour in augmented reality mobile shopping apps. *Behaviour & Information Technology*, *4*(1), 1-22.
Chen, S. J., & Chang, T. Z. (2003). A descriptive model of online shopping process: some empirical results. *International Journal of Service Industry Management*, *14*(5), 556-569.
Cheng, C., Lay, K.-L., Hsu, Y.-F., & Tsai, Y.-M. (2021). Can Likert scales predict choices? Testing the congruence between using the Likert scale and comparative judgment on measuring attribution. *Methods in Psychology*, *5*(1), 1-11.
Cho, H., Chung, S., & Filippova, A. (2015). Perceptions of social norms surrounding digital piracy: The effect of social projection and communication exposure on injunctive and descriptive social norms. *Computers in Human Behaviour*, *48*(1), 506-515.
Chowdhury, S., Haftor, D., & Pashkevich, N. (2018). Smart product-service systems (smart PSS) in industrial firms: a literature review. *Procedia CIRP*, *73*(1), 26-31.
Churchill, G. A., Brown, T. J., & Suter, T. A. (1996). *Basic marketing research*. Orlando, FL: Dryden Press.
Chuah, S. H.-W., Tseng, M.-L., Wu, K.-J., & Cheng, C.-F. (2021). Factors influencing the adoption of sharing economy in B2B context in China: Findings from PLS-SEM and fsQCA. *Resources, Conservation and Recycling*, *175*(1), 1-16.
Churchill Jr, G. A. (1979). A paradigm for developing better measures of marketing constructs. *Journal of Marketing Research*, *16*(1), 64-73.
Cialdini, R. B., & Goldstein, N. J. (2004). Social influence: Compliance and conformity. Annual Review of Psychology, *55*(1), 591-621.
Cicia, G., Furno, M., & Del Giudice, T. (2021). Do consumers' values and attitudes affect food retailer choice? Evidence from a national survey on farmers' market in Germany. *Agricultural and Food Economics*, *9*(1), 1-21.
Coish, P., McGovern, E., Zimmerman, J. B., & Anastas, P. T. (2018). The value-adding connections between the management of eco-innovation and the principles of green chemistry and green engineering. In *Green chemistry* (pp. 981-998).
Cornescu, V., & Adam, C.-R. (2013). The consumer resistance behaviour towards innovation. *Procedia Economics and Finance*, *6*(1), 457-465.

Correa, J. C., Garzón, W., Brooker, P., Sakarkar, G., Carranza, S. A., Yunado, L., & Rincón, A. (2019). Evaluation of collaborative consumption of food delivery services through web mining techniques. *Journal of Retailing and Consumer Services*, *46*(1), 45-50.

Costa Jr, P. T., & McCrae, R. R. (1992). The five-factor model of personality and its relevance to personality disorders. *Journal of personality disorders*, *6*(4), 343-359.

Cramer, A. O., Van der Sluis, S., Noordhof, A., Wichers, M., Geschwind, N., Aggen, S. H., Kendler, K. S., & Borsboom, D. (2012). Dimensions of normal personality as networks in search of equilibrium: You can't like parties if you don't like people. *European Journal of Personality*, *26*(4), 414-431.

Cronbach, L. J. (1951). Coefficient alpha and the internal structure of tests. *Psychometrika*, *16*(3), 297-334.

Cziko, G. (2000). *The things we do: Using the lessons of Bernard and Darwin to understand the what, how, and why of our behaviour*. Cambridge, MA: MIT Press.

Dabbous, A., & Tarhini, A. (2021). Does sharing economy promote sustainable economic development and energy efficiency? Evidence from OECD countries. *Journal of Innovation & Knowledge*, *6*(1), 58-68.

Davidson, A., Habibi, M. R., & Laroche, M. (2018). Materialism and the sharing economy: A cross-cultural study of American and Indian consumers. *Journal of Business Research*, *82*(1), 364-372.

Davis, F. D. (1989). Perceived usefulness, perceived ease of use, and user acceptance of information technology. *MIS quarterly*, *12*(2), 319-340.

Davis, F. D. (1993). User acceptance of information technology: system characteristics, user perceptions and behavioural impacts. *International journal of man-machine studies*, *38*(3), 475-487.

Davis, F. D., Bagozzi, R. P., & Warshaw, P. R. (1989). User acceptance of computer technology: a comparison of two theoretical models. *Management science*, *35*(8), 982-1003.

Dawar, N., & Chattopadhyay, A. (2002). Rethinking Marketing Programs for Emerging Markets. *Long Range Planning*, *35*(5), 457-474.

de Oliveira, V. M., da Costa-Nascimento, D. V., de Sousa Teodósio, A. d. S., & Correia, S. É. N. (2022). Collaborative consumption as sustainable consumption: The effects of Uber's platform in the context of Brazilian cities. *Cleaner and Responsible Consumption*, *5*(1), 1-10.

de Rivera, J., Gordo, Á., Cassidy, P., & Apesteguía, A. (2017). An ethnographic study of P2P collaborative consumption platforms' user interface and design. *Environmental Innovation and Societal Transitions*, *23*(1), 11-27.

De Witt Huberts, J. C., Evers, C., & De Ridder, D. T. (2012). License to sin: Self-licensing as a mechanism underlying hedonic consumption. *European Journal of Social Psychology*, *42*(4), 490-496.

del Pozo, R. G., & García-Lapresta, J. L. (2021). Managing the Smiley Face Scale Used by Booking.com in an Ordinal Way. *Journal of theoretical and applied electronic commerce research*, *16*(2), 128-139.

Deshpandé, R., & Farley, J. U. (2004). Organisational culture, market orientation, innovativeness, and firm performance: an international research odyssey. *International Journal of Research in Marketing*, *21*(1), 3-22.

DeVellis, R. F., Lewis, M. A., & Sterba, K. R. (2003). Interpersonal emotional processes in adjustment to chronic illness. *Social psychological foundations of health and illness*, *5*(2) 256-287.

Dewangan, V., & Godse, M. (2014). Towards a holistic enterprise innovation performance measurement system. *Technovation*, *34*(9), 536-545.

deYoung, C. G. (2015). Openness/intellect: A dimension of personality reflecting cognitive exploration. In *APA handbook of personality and social psychology, Volume 4: Personality processes and individual differences.* (pp. 369-399). New York: American Psychological Association.

Diamantopoulos, A., Davydova, O., & Arslanagic-Kalajdzic, M. (2019). Modelling the role of consumer xenocentrism in impacting preferences for domestic and foreign brands: A mediation analysis. *Journal of Business Research*, *104*, 587-596.

Dillahunt, T. R., & Malone, A. R. (2015, April). The promise of the sharing economy among disadvantaged communities. In *Proceedings of the 33rd annual ACM conference on human factors in computing systems* (pp. 2285-2294).

Dillman, D. A., & Bowker, D. K. (2001). The web questionnaire challenge to survey methodologists. *Online social sciences*, *2*(1), 53-71.

Doering, T., Suresh, N. C., & Krumwiede, D. (2020). Measuring the effects of time: repeated cross-sectional research in operations and supply chain management. *Supply Chain Management: An International Journal*, *25*(1), 122-138

Dörnyei, Z., & Ushioda, E. (2009). *Motivation, language identity and the L2 self*. Bristol: Multilingual Matters.

Dörnyei, Z., & Ushioda, E. (2021). *Teaching and researching motivation*. London: Longman

Du Plessis, P. J., Rousseau, D., & Boshoff, C. (2007). *Buyer behaviour: understanding consumer psychology and marketing* (4th Ed.). Cape Town: Oxford University Press.

Dworczak, P., Kominers, S. D., & Akbarpour, M. (2021). Redistribution through markets. *Econometrica*, *89*(4), 1665-1698.

Eagly, A. H., & Chaiken, S. (1993). *The psychology of attitudes*. San Diego, CA: Harcourt brace Jovanovich College Publishers.

Eckhardt, G. M., & Bardhi, F. (2016). The relationship between access practices and economic systems. *Journal of the Association for Consumer Research*, *1*(2), 210-225.

Ehmke, J. F., & Mattfeld, D. C. (2012). Vehicle routing for attended home delivery in city logistics. *Procedia-Social and Behavioural Sciences*, *39*, 622-632.

Elfering, A., & Grebner, S. (2010). A smile is just a smile: But only for men. Sex differences in meaning of Faces Scales. *Journal of Happiness Studies*, *11*(2), 179-191.

Elvandari, C. D. R., Sukartiko, A. C., & Nugrahini, A. D. (2018). Identification of Technical Requirement for Improving Quality of Local Online Food Delivery Service in Yogyakarta. *Journal of Industrial and Information Technology in Agriculture*, *1*(2), 1-7.

Engel, J., Blackwell, R., & Miniard, P. (1986). *Consumer Behaviour*. Dryden: Dryden Publishers.

Emerson, R. W. (2017). Likert scales. *Journal of Visual Impairment & Blindness (Online)*, *111*(5), 488-488.

Esposito, M., Tse, T., & Soufani, K. (2017). Is the circular economy a new fast-expanding market? *Thunderbird International Business Review*, *59*(1), 9-14.

Etikan, I. (2016). Comparison of Convenience Sampling and Purposive Sampling. *American journal of theoretical and applied statistics*, *5*(1). doi:10.11648/j.ajtas.20160501.11

Etikan, I., Musa, S. A., & Alkassim, R. S. (2016). Comparison of convenience sampling and purposive sampling. *American journal of theoretical and applied statistics*, *5*(1), 1-4.

Everatt, D., & Solanki, G. (2008). A nation of givers? Results from a national survey of social giving. *Giving & solidarity* (p. 45). Bloemfontein: HSRC Press.

Felson, M., & Spaeth, J. L. (1978). Community structure and collaborative consumption: A routine activity approach. *American behavioural scientist*, *21*(4), 614-624.

Fine, B. (2018). *The political economy of South Africa: From minerals-energy complex to industrialisation*. London: Routledge.
Fishbein, M., & Ajzen, I. (1975). *Belief, attitude, intention and behaviour: An introduction to theory and research*. Wesley: Reading.
Forsythe, S., Liu, C., Shannon, D., & Gardner, L. C. (2006). Development of a scale to measure the perceived benefits and risks of online shopping. *Journal of interactive marketing*, *20*(2), 55-75.
Foxall, G. R. (1990). An empirical analysis of mid-career managers' adaptive-innovative cognitive styles and task orientations in three countries. *Psychological Reports*, *66*(3), 1115-1124.
Frank, D. A., & Peschel, A. O. (2020). Sweetening the deal: The ingredients that drive consumer adoption of online grocery shopping. *Journal of Food Products Marketing*, *26*(8), 535-544.
Fraiberger, S. P., & Sundararajan, A. (2015). *Peer-to-peer rental markets in the sharing economy*. New York: New York University.
Friedel, M., Brichard, B., Boonen, S., Tonon, C., De Terwangne, B., Bellis, D., Mevisse, M., Fonteyne, C., Jaspard, M., & Schruse, M. (2021). Face and Content Validity, Acceptability, and Feasibility of the Adapted Version of the Children's Palliative Outcome Scale: A Qualitative Pilot Study. *Journal of Palliative Medicine*, *24*(2), 181-188.
Gaiseanu, F. (2020). Attitude as an expressible info-operational reaction to a perceived/purposed object/objective. *International Journal on Neuropsychology and Behavioural Sciences*, *1*(1), 12-16.
Galati, A., Crescimanno, M., Vrontis, D., & Siggia, D. (2020). Contribution to the sustainability challenges of the food-delivery sector: Finding from the Deliveroo Italy case study. *Sustainability*, *12*(17), 7045.
Gammelgaard, B. (2004). Schools in logistics research? A methodological framework for analysis of the discipline. *International Journal of Physical Distribution & Logistics Management*, *34*(6), 579 - 491.
Ganapati, S., & Reddick, C. G. (2018). Prospects and challenges of sharing economy for the public sector. *Government Information Quarterly*, *35*(1), 77-87.
Garai-Fodor, M. (2019). Values-based food consumer behaviour patterns among the Z generation in terms of health nutrition. *International Journal of Business and Administrative Studies*, *5*(2), 53-62.
Gefen, D. (2000). E-commerce: the role of familiarity and trust. *Omega*, *28*(6), 725-737.
Gefen, D., Karahanna, E., & Straub, D. W. (2003). Trust and TAM in online shopping: an integrated model. *MIS quarterly*, *27*(1), 51-90.
Geiser, C. (2012). *Data analysis with Mplus*. New York: Guilford Publications.
Geiser, C. (2013). *Methodology in the social sciences. Data analysis with Mplus*. New York: Guilford Press.
Geiser, C. (2020). *Longitudinal structural equation modelling with Mplus: A latent state-trait perspective*. New York: Guilford Publications.
Geiser, C., Hintz, F., Burns, G. L., & Servera, M. (2021). Longitudinal structural equation modelling of personality data. In *The Handbook of Personality Dynamics and Processes* (pp. 949-984). Amsterdam: Elsevier.
Geradin, D. (2016). Online Intermediation Platforms and Free Trade Principles–Some Reflections on the Uber Preliminary Ruling Case. *Available at SSRN 2759379*.
Gerber, A. S., Huber, G. A., Doherty, D., & Dowling, C. M. (2011). Personality traits and the consumption of political information. *American Politics Research*, *39*(1), 32-84.

Gerber, A. S., & Rogers, T. (2009). Descriptive social norms and motivation to vote: Everybody's voting, and so should you. *The Journal of Politics*, *71*(1), 178-191.
Gerber, J., Wheeler, L., & Suls, J. (2018). A social comparison theory meta-analysis 60+ years on. *Psychological bulletin*, *144*(2), 177.
Gevaers, R., Van de Voorde, E., & Vanelslander, T. (2011). Characteristics and typology of last-mile logistics from an innovation perspective in an urban context. In C. Macharis S. Melo (Eds.). *City distribution and urban freight transport: multiple* perspectives (pp. 56-71). Cheltenham: Edward Elgar Publishing.
Ghasemi, A., & Zahediasl, S. (2012). Normality tests for statistical analysis: a guide for non-statisticians. *International journal of endocrinology and metabolism*, *10*(2), 486.
Ghosh, D., & Vogt, A. (2012). *Outliers: An evaluation of methodologies.* Paper presented at the Joint statistical meetings,*12*(1), 3455 - 3460.
Gielens, K., & Steenkamp, J.-B. E. (2007). Drivers of consumer acceptance of new packaged goods: An investigation across products and countries. *International Journal of Research in Marketing*, *24*(2), 97-111.
Ginevicius, R. (2019). Quantitative Assessment of the Compatibility of the Development of Socioeconomic Systems. *Journal of Competitiveness*, *11*(2), 36.
Glaeser, E. L., Kolko, J., & Saiz, A. (2001). Consumer city. *Journal of Economic Geography*, *1*(1), 27-50.
Goldsmiths, R., & Bridges, E. (2000). E-tailing vs retailing: Using attitude to predict online buying behaviour. *Quarterly Journal of Electronic Commerce*, *1*(3), 245-253.
Gray, B., & Purdy, J. (2018). *Collaborating for our future: Multistakeholder partnerships for solving complex problems*. Oxford, GB: Oxford University Press.
Graham, J. W. (2009). Missing data analysis: Making it work in the real world. *Annual Review of Psychology*, *60*(1), 549-576.
Green, S. B. (1991). How many subjects does it take to do a regression analysis? *Multivariate behavioural research*, *26*(3), 499-510.
Grinnell, R., & Unrau, Y. (2010). *Social Work Research and Evaluation: Quantitative and Qualitative Approaches* (9th ed.). Oxford, Gran Bretaña: Oxford University Press.
Guido, G., Capestro, M., & Peluso, A. M. (2007). Experimental shopping analysis of consumer stimulation and motivational states in shopping experiences. *International Journal of Market Research*, *49*(3), 365-386.
Gupta, K., & Singh, N. (2015). Fit Estimation in Structural Equation Modelling-Synthesis of Related Statistics. *HSB Research Review*, *8*(1), 9.
Guttentag, D., Smith, S., Potwarka, L., & Havitz, M. (2018). Why tourists choose Airbnb: a motivation-based segmentation study. *Journal of Travel Research*, *57*(3), 342-359.
Habibi, M. R., Kim, A., & Laroche, M. (2016). From sharing to exchange: An extended framework of dual modes of collaborative non-ownership consumption. *Journal of the Association for Consumer Research*, *1*(2), 277-294.
Haddock, G., & Maio, G. (2017). Attitudes. *The Wiley-Blackwell Encyclopedia of Social Theory*, 1-3.
Hall, K., & Sambu, W. (2019). Demography of South Africa's children. *South African child gauge* (1), 216-220.
Hall, M. G., Sheeran, P., Noar, S. M., Ribisl, K. M., Bach, L. E., & Brewer, N. T. (2016). Reactance to health warnings scale: development and validation. *Annals of Behavioural Medicine*, *50*(5), 736-750.
Hallem, Y., Ben Arfi, W., & Teulon, F. (2020). Exploring consumer attitudes to online collaborative consumption: A typology of collaborative consumer profiles. *Canadian Journal of Administrative Sciences/Revue Canadienne des Sciences de l'Administration*, *37*(1), 82-94.

Hamari, J. (2015). Why do people buy virtual goods? Attitude toward virtual good purchases versus game enjoyment. *International Journal of Information Management*, *35*(3), 299-308.
Hamari, J., Sjöklint, M., & Ukkonen, A. (2016). The sharing economy: Why people participate in collaborative consumption. *Journal of the association for information science and technology*, *67*(9), 2047-2059.
Hammond, A. L., Kramer, W. J., Katz, R. S., & Tran, J. T. (2007). *The next 4 billion: Market size and business strategy at the base of the pyramid*, *10*(2), 7-26.
Hampson, S. E. (2012). Personality processes: Mechanisms by which personality traits "get outside the skin". *Annual review of psychology*, *63*(1), 315-339.
Hansmeier, H., Schiller, K., & Rogge, K. S. (2021). Towards methodological diversity in sustainability transitions research? Comparing recent developments (2016-2019) with the past (before 2016). *Environmental Innovation and Societal Transitions*, *38*(1), 169-174.
Hanushek, E. A. (2021). Addressing cross-national generalizability in educational impact evaluation. *International Journal of Educational Development*, *80*(1), 102318.
Hars, A. S. O. (2002). Working for free? Motivations for participating in open-source projects. *International Journal Of Electronic Commerce*, *6*(3), 25-39.
Hatch, E. M., & Lazaraton, A. (1991). *The research manual: Design and statistics for applied linguistics*. New York: Newbury House Publishers
Haugtvedt, C. P., Petty, R. E., & Cacioppo, J. T. (1992). Need for cognition and advertising: Understanding the role of personality variables in consumer behaviour. *Journal of Consumer Psychology*, *1*(3), 239-260.
Hayes, A. F. (2009). Beyond Baron and Kenny: Statistical mediation analysis in the new millennium. *Communication monographs*, *76*(4), 408-420.
Hayes, A. F. (2017). *Introduction to mediation, moderation, and conditional process analysis: A regression-based approach*. New York City: Guilford Publications.
Hayes, A. F. (2018). Partial, conditional, and moderated mediation: Quantification, inference, and interpretation. *Communication monographs*, *85*(1), 4-40.
Hayes, A. F., & Preacher, K. J. (2014). Statistical mediation analysis with a multi-categorical independent variable. *British journal of mathematical and statistical psychology*, *67*(3), 451-470.
Healy, M., & Perry, C. (2000). Comprehensive criteria to judge validity and reliability of qualitative research within the realism paradigm. *Qualitative Market Research: An International Journal, 3*(3), 118 - 126.
Heldt, B., Matteis, T., von Schmidt, A., & Heinrichs, M. (2019). Cool but dirty food?–Estimating the impact of grocery home delivery on transport and CO2 emissions, including cooling. *Research in Transportation Economics, 87*(6), 100763.
Henrich, J., Heine, S. J., & Norenzayan, A. (2010). The weirdest people in the world? *Behavioural and brain sciences*, *33*(2-3), 61-83.
Hidayanto, A. N., Herbowo, A., Budi, N. F. A., & Sucahyo, Y. G. (2014). Determinant of customer trust on E-commerce and its impact to purchase and word of mouth intention: A case of Indonesia. *Journal of Computer Science*, *10*(12), 2395.
Hill, R. J. (2017). Attitudes and behaviour. In *Social psychology* (pp. 347-377). Routledge.
Hishamuddin, N. (2019). *Understanding the growth of takeaway food apps in the UK: A supplier and consumer perspective* [PhD thesis]. The University of Exeter. Retrieved from https://ore.exeter.ac.uk/repository/handle/10871/39180?show=full.
Hishamuddin, N. S. (2021). Food vendor adoption of online food ordering: a pilot survey. In *Proceedings of the international joint conference on hospitality and tourism 2021*, 51-52.

Hjørland, B. (2005). Empiricism, rationalism and positivism in library and information science. *Journal of documentation*, *61*(1), 130 - 155.
Ho, C.-W., Wang, Y.-B., & Yen, N. Y. (2015). Does environmental sustainability play a role in the adoption of smart card technology at universities in Taiwan: An integration of TAM and TRA. *Sustainability*, *7*(8), 10994-11009.
Ho, R. (2013). *Handbook of univariate and multivariate data analysis with IBM SPSS*. London: CRC press, Taylor and Francis Group.
Ho, R. (2014). *Univariate and Multivariate Data Analysis with IBM SPSS*. London: Taylor & Francis Group.
Hofstede, G. (1986). Cultural differences in teaching and learning. *International Journal of intercultural relations*, *10*(3), 301-320.
Hofstede, G. (1994). The business of international business is culture. *International business review*, *3*(1), 1-14.
Hofstede, G. (2011). Dimensionalizing cultures: The Hofstede model in context. *Online readings in Psychology and Culture*, *2*(1), 2307-0919.1014.
Hogan, R., & Sherman, R. A. (2020). Personality theory and the nature of human nature. *Personality and Individual Differences*, *152*(1), 109561.
Hogg, M. A. (2020). Chapter 5 Social identity theory. In P. J. Burke (Ed.), *Contemporary Social Psychological Theories* (pp. 112-138). Stanford: Stanford University Press.
Hogg, M. A., Abrams, D., & Brewer, M. B. (2017). Social identity: The role of self in group processes and intergroup relations. *Group Processes & Intergroup Relations*, *20*(5), 570-581.
Hooper, D., Coughlan, J., & Mullen, M. (2008, September). Evaluating model fit: a synthesis of the structural equation modelling literature. In *7th European Conference on research methodology for business and management studies* (pp. 195-200).
Horner, R., Schindler, S., Haberly, D., & Aoyama, Y. (2018). Globalisation, uneven development and the North–South 'big switch'. *Cambridge Journal of Regions, Economy and Society*, *11*(1), 17-33.
Howard, J. A., & Sheth, J. N. (1969). The theory of buyer behaviour. In M. Baker (Ed.), *Marketing Critical Perspectives on Business and Management* (Vol. 3, pp. 81 - 105). Hoboken: John Wiley.
Hsu, C. L., & Lin, J. C. C. (2008). Acceptance of blog usage: The roles of technology acceptance, social influence and knowledge sharing motivation. *Information & Management*, *45*(1), 65-74.
Hu, L. t., & Bentler, P. M. (1999). Cutoff criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives. *Structural Equation Modelling: A Multidisciplinary Journal*, *6*(1), 1-55.
Hu, X., Wu, G., Wu, Y., & Zhang, H. (2010). The effects of Web assurance seals on consumers' initial trust in an online vendor: A functional perspective. *Decision Support Systems*, *48*(2), 407-418.
Huang, M.-H., & Rust, R. T. (2011). Sustainability and consumption. *Journal of the Academy of Marketing Science*, *39*(1), 40-54.
Huang, T. K., Liao, C. Y., Wang, Y. T., & Lin, K. Y. (2018, January). How does social media interactivity affect brand loyalty? In *Proceedings of the 51st Hawaii International Conference on System Sciences*.
Huang, Y.-C., Chang, L. L., Yu, C.-P., & Chen, J. (2019). Examining an extended technology acceptance model with experience construct on hotel consumers' adoption of mobile applications. *Journal of Hospitality Marketing & Management*, *28*(8), 957-980.
Hulin, C., Netemeyer, R., & Cudeck, R. (2001). Can a reliability coefficient be too high? *Journal of Consumer Psychology*, *10*(1), 55-58.

Hwang, J., & Griffiths, M. A. (2017). Share more, drive less: Millennials value perception and behavioural intent in using collaborative consumption services. *Journal of Consumer Marketing, 6*(3), 134-164.

Hwang, J., & Choe, J. Y. J. (2019). Exploring perceived risk in building successful drone food delivery services. *International Journal of Contemporary Hospitality Management, 31*(8), 3249 -3269.

Imtiaz, M. A., & Maarop, N. (2014). A review of technology acceptance studies in the field of education. *Jurnal Teknologi*, *69*(2), 1-16.

In, J. (2017). Introduction of a pilot study. *Korean journal of anesthesiology*, *70*(6), 601.

Ingham, J., Cadieux, J., & Berrada, A. M. (2015). E-Shopping acceptance: A qualitative and meta-analytic review. *Information & management*, *52*(1), 44-60.

Inglehart, R., Basanez, M., Diez-Medrano, J., Halman, L., & Luijkx, R. (2000). World values surveys and European values surveys, 1981-1984, 1990-1993, and 1995-1997. *Ann Arbor-Michigan, Institute for Social Research, ICPSR version*.

Irshaidat, R. (2022). Interpretivism vs positivism in political marketing research. *Journal of Political Marketing, 21*(2), 126-160.Isnin, S. F., Mustapha, R., & Sapuan, A. F. (2021). *Mini-Research Project Module: Validity and Reliability* 11th National Conference in Education. Technical & Vocational Education and Training, Sultan Azlan Shah.

Jayawickreme, E., Zachry, C. E., & Fleeson, W. (2019). Whole trait theory: An integrative approach to examining personality structure and process. *Personality and individual differences*, *136*(1), 2-11.

Ji, S. W., Sun, X. Y., & Liu, D. (2014). Research on core competitiveness of the Chinese retail industry based on O2O. In P. Yarlagadda & K. Yun-Hae (Ed.). *Advanced materials research* (Vol. 834, pp. 2017-2020). Baech, CF: Trans Tech Publications Ltd.

Jiang, B., & Tian, L. (2018). Collaborative consumption: Strategic and economic implications of product sharing. *Management Science*, *64*(3), 1171-1188.

John, O. P., Naumann, L. P., & Soto, C. J. (2008). Paradigm shift to the integrative big five trait taxonomy. *Handbook of personality: Theory and research*, *3*(2), 114-158.

Johnston, M. P. (2017). Secondary data analysis: A method by which the time has come. *Qualitative and Quantitative Methods in Libraries*, *3*(3), 619-626.

Jun, K., Yoon, B., Lee, S., & Lee, D.S. (2022). Factors Influencing Customer Decisions to Use Online Food Delivery Services during the COVID-19 Pandemic. *Foods*, *11*(1), 64.

Jung, J., Park, E., Moon, J., & Lee, W. S. (2021). Exploration of Sharing Accommodation Platform Airbnb Using an Extended Technology Acceptance Model. *Sustainability*, *13*(3), 1185.

Jung, J., Yoon, S., Kim, S., Park, S., Lee, K. P., & Lee, U. (2016, May). Social or financial goals? Comparative analysis of user behaviours in Couchsurfing and Airbnb. In *Proceedings of the 2016 CHI conference extended abstracts on human factors in computing systems* (pp. 2857-2863).

Kahle, L. R., & Xie, G.-X. (2018). Social values in consumer psychology. In *Handbook of consumer psychology* (pp. 576-586). New York: Routledge.

Kaiser, K. (2012). *Protecting confidentiality*. Thousand Oaks: SAGE Publications.

Kalaian, S. A. (2008a). Research Design. In P. J. Lavrakas (Ed.), *Encyclopedia of survey research methods* (pp. 725-732). Thousand Oaks: SAGE Publishers.

Kalaian, S. A. (2008b). Research Design. In P. J. Lavrakas (Ed.), *Encyclopedia of Survey Research Methods*. Thousand Oaks: Sage Publications.

Kalaian, S. A., & Kasim, R. M. (2016). Analysing quantitative data. In *Mixed Methods Research for Improved Scientific Study* (pp. 149-164). Hershey, PA: IGI Global.
Kanchanatanee, K., Suwanno, N., & Jarernvongrayab, A. (2014). Effects of attitude toward using, perceived usefulness, perceived ease of use and perceived compatibility on intention to use E-marketing. *Journal of Management Research*, *6*(3), 1.
Kandeh, A. T., Botha, R. A., & Futcher, L. A. (2018). Enforcement of the Protection of Personal Information (POPI) Act: Perspective of data management professionals. *South African Journal of Information Management*, *20*(1), 1-9.
Kang, J.-W., & Namkung, Y. (2019). The information quality and source credibility matter in customers' evaluation toward food O2O commerce. *International Journal of Hospitality Management*, *78*(1), 189-198.
Karahanna, E., Straub, D. W., & Chervany, N. L. (1999). Information technology adoption across time: a cross-sectional comparison of pre-and post-adoption beliefs. *MIS Quarterly*, *23*(2), 183-213.
Karimi, J., & Walter, Z. (2015). The role of dynamic capabilities in responding to digital disruption: A factor-based study of the newspaper industry. *Journal of management information systems*, *32*(1), 39-81.
Kassarjian, H. H. (1971). Personality and consumer behaviour: A review. *Journal of Marketing Research*, *8*(4), 409-418.
Kaur, S., Jaswal, N., & Singh, H. (2022). Blockchain Technology: Principles, Applications, and Advantages of Blockchain Technology in the Digital Era. In *Applications, Challenges, and Opportunities of Blockchain Technology in Banking and Insurance* (pp. 204-212).
Keeble, M., Adams, J., Sacks, G., Vanderlee, L., White, C. M., Hammond, D., & Burgoine, T. (2020). Use of online food delivery services to order food prepared away-from-home and associated sociodemographic characteristics: a cross-sectional, multi-country analysis. *International Journal of Environmental Research and Public Health*, *17*(14), 5190.
Kim, D. J., Ferrin, D. L., & Rao, H. R. (2009). Trust and satisfaction, two stepping stones for successful e-commerce relationships: A longitudinal exploration. *Information systems research*, *20*(2), 237-257.
Kim, S., & Park, H. (2013). Effects of various characteristics of social commerce (s-commerce) on consumers' trust and trust performance. *International Journal of Information Management*, *33*(2), 318-332.
Kim, T., Barasz, K., John, L. K., & Morales, A. (2018). Why Am I Seeing This Ad? The Effect of Ad Transparency on Ad Effectiveness. *Journal of Consumer Research*.
Kim, Y., & Peterson, R. A. (2017). A Meta-analysis of Online Trust Relationships in E-commerce. *Journal of interactive marketing*, *38*(1), 44-54.
Koay, K. Y., Cheah, C. W., & Chang, Y. X. (2022). A model of online food delivery service quality, customer satisfaction and customer loyalty: a combination of PLS-SEM and NCA approaches. *British Food Journal*, *1*(1), 1-18.
Kourouthanassis, P. E., & Giaglis, G. M. (2014). Introduction to the Special Issue Mobile Commerce: The Past, Present, and Future of Mobile Commerce Research. *International Journal of electronic commerce*, *16*(4), 5-18.
Kozinets, R. V. (2008). Technology ideology: How ideological fields influence consumers' technology narratives. *Journal of consumer research*, *34*(6), 865-881.
Krejcie, R. V., & Morgan, D. W. (1970). Determining sample size for research activities. *Educational and Psychological Measurement*, *30*(3), 607-610.
Krosnick, J. A. (2018). Questionnaire design. In K. J. Vannette D. (Ed.), *The Palgrave handbook of survey research* (pp. 439-455). London: Palgrave Macmillan.

Krupka, E. L., & Weber, R. A. (2013). Identifying social norms using coordination games: Why does dictator game sharing vary? *Journal of the European Economic Association*, *11*(3), 495-524.
Lakens, D. (2022). Sample size justification. *Collabra: Psychology*, *8*(1), 1-32.
Lamberton, C. P., & Rose, R. L. (2012). When is ours better than mine? A framework for understanding and altering participation in commercial sharing systems. *Journal of Marketing*, *76*(4), 109-125.
Lang, C., & Armstrong, C. M. J. (2018). Collaborative consumption: The influence of fashion leadership, need for uniqueness, and materialism on female consumers' adoption of clothing renting and swapping. *Sustainable Production and Consumption*, *13*, 37-47.
Lavrakas, P. J. (2008). Encyclopedia of survey research methods. In P. J. Lavrakas (Ed.), (Vol. 1, pp. 1 - 1003). Washington DC: Sage publications.
Lakens, D. (2022). Sample size justification. *Collabra: Psychology*, *8*(1), 1-32.
Lee, Z. W., Chan, T. K., Balaji, M., & Chong, A. Y.-L. (2018). Why people participate in the sharing economy: an empirical investigation of Uber. *Internet Research*, *28*(3), 829-850.
Legner, C., Eymann, T., Hess, T., Matt, C., Böhmann, T., Drews, P., Mädche, A., Urbach, N., & Ahlemann, F. (2017). Digitalization: opportunity and challenge for the business and information systems engineering community. *Business & information systems engineering*, *59*(4), 301-308.
Lewis, D. (2008). *Convention: A philosophical study*. Hoboken, NJ: John Wiley & Sons.
Li, C., Mirosa, M., & Bremer, P. (2020). Review of Online Food Delivery Platforms and their Impacts on Sustainability. *Sustainability*, *12*(14), 5528.
Li, C., Mirosa, M., & Bremer, P. (2020). Review of Online Food Delivery Platforms and their Impacts on Sustainability. *Sustainability*, *12*(14), 5528.
Lim, W. M. (2018). Dialectic antidotes to critics of the technology acceptance model: Conceptual, methodological, and replication treatments for behavioural modelling in technology-mediated environments. *Australasian Journal of Information Systems*, *22*(1), 1-11.
Lin, D. (1998). *An information-theoretic definition of similarity.* Paper presented at the ICMI, *98*(1), 296 - 304.
Lindblom, A., Lindblom, T., & Wechtler, H. (2018). Collaborative consumption as C2C trading: Analysing the effects of materialism and price consciousness. *Journal of Retailing and Consumer Services*, *44*(1), 244-252.
Lindenberg, S. (2001). Social rationality versus rational egoism. In *Handbook of sociological theory* (pp. 635-668). New York: Springer.
Liu, C., & Chen, J. (2019). Consuming takeaway food: Convenience, waste and Chinese young people's urban lifestyle. *Journal of Consumer Culture*, *14*(6), 54-719.
London, T., & Hart, S. L. (2004). Reinventing strategies for emerging markets: beyond the transnational model. *Journal of international business studies*, *35*(5), 350-370.
Loudon, D. L., & Della Bitta, A. J. (1993). *Instructor's Manual to Accompany Consumer Behaviour: Concepts and Applications*. Hillsdale, NJ: McGraw-Hill, Incorporated.
Lu, C. Y., Suhartanto, D., Gunawan, A. I., & Chen, B. T. (2020). Customer Satisfaction toward Online Purchasing Services: Evidence from Small & Medium Restaurants. *International Journal of Applied Business Research*, *2*(01), 1-14.
MacKinnon, D. P., Lockwood, C. M., & Williams, J. (2004). Confidence limits for the indirect effect: Distribution of the product and resampling methods. *Multivariate behavioural research*, *39*(1), 99-128.

MacKinnon, D. P., & Luecken, L. J. (2008). How and for whom? Mediation and moderation in health psychology. *Health psychology*, *27*(2S), S99.
MacKinnon, D. P., Valente, M. J., & Gonzalez, O. (2020). The correspondence between causal and traditional mediation analysis: The link is the mediator by treatment interaction. *Prevention Science*, *21*(2), 147-157.
Malhotra, N. (2015). An Empirical Analysis of "Tort Tales" How Cultural Memes Influence Attitudes on Tort Reform. *Journal of Law and Courts*, *3*(1), 149-166.
Malhotra, N. K. (2006). Questionnaire design and scale development. *The handbook of marketing research: Uses, misuses, and future advances*, 83-94.
Malhotra, N. K., Mukhopadhyay, S., Liu, X., & Dash, S. (2012). One, few or many? An integrated framework for identifying the items in measurement scales. *International Journal of Market Research*, *54*(6), 835-862.
Mangiavacchi, L., Piccoli, L., & Rapallini, C. (2021). Personality traits and household consumption choices. *The BE Journal of Economic Analysis & Policy*, *21*(2), 433-468.
Marangunić, N., & Granić, A. (2015). Technology acceptance model: a literature review from 1986 to 2013. *Universal Access in the Information Society*, *14*(1), 81-95.
Marinković, V., Đorđević, A., & Kalinić, Z. (2020). The moderating effects of gender on customer satisfaction and continuance intention in mobile commerce: a UTAUT-based perspective. *Technology Analysis & Strategic Management*, *32*(3), 306-318.
Martin, L., White, M. P., Hunt, A., Richardson, M., Pahl, S., & Burt, J. (2020). Nature contact, nature connectedness and associations with health, wellbeing and pro-environmental behaviours. *Journal of Environmental Psychology*, *68*(1), 101389.
Matthews, G. (2018). Cognitive-adaptive trait theory: A shift in perspective on personality. *Journal of personality*, *86*(1), 69-82.
Mattsson, J., Sørensen, F., Jensen, J. F., & Barnes, S. (2017). A Survey Instrument for Measuring the Experiential Value of Employee-Tourist Encounters. In *RESER Annual Conference in Bilbao, Spain: The crucial role of services in business and cities competitiveness*.
May, E. T. (2008). *Homeward bound: American families in the Cold War era*. London: Hachette UK.
McDonald, R. P. (1985). *Factor analysis and related methods*. New York: Psychology Press.
McDonald, S., Oates, C. J., Thyne, M., Timmis, A. J., & Carlile, C. (2015). Flying in the face of environmental concern: why green consumers continue to fly. *Journal of Marketing Management*, *31*(13-14), 1503-1528.
Mehreen, H., Rammal, H. G., Pereira, V., & Del Giudice, M. (2021). Investigating the Influence of Absorptive Capacity of Recipients within Cross-Border Transfer of Knowledge: Evidence from Emerging Markets. *International Marketing Review*. Ahead-of-print.
Melnikovas, A. (2018). Towards an explicit research methodology: Adapting research onion model for futures studies. *Journal of Futures Studies*, *23*(2), 29-44.
Menon, J. (2018). *Unit-7 Harappan Economy and Occupations*. In *IGNOU*, 28-37.
Mishra, P., Pandey, C. M., Singh, U., Gupta, A., Sahu, C., & Keshri, A. (2019). Descriptive statistics and normality tests for statistical data. *Annals of cardiac anaesthesia*, *22*(1), 67.
Mohamad, M., Steghöfer, J.-P., & Scandariato, R. (2021). Security assurance cases—state of the art of an emerging approach. *Empirical Software Engineering*, *26*(4), 1-43.
Möhlmann, M. (2015). Collaborative consumption: determinants of satisfaction and the likelihood of using a sharing economy option again. *Journal of Consumer Behaviour*, *14*(3), 193-207.

Möhlmann, M. (2021). Unjustified trust beliefs: Trust conflation on sharing economy platforms. *Research Policy*, *50*(3), 104173.
Montoya, A. K., & Hayes, A. F. (2017). Two-condition within-participant statistical mediation analysis: A path-analytic framework. *Psychological methods*, *22*(1), 6.
Moody, G. D., Galletta, D. F., & Lowry, P. B. (2014). When trust and distrust collide online: The engendered and role of consumer ambivalence in online consumer behaviour. *Electronic Commerce Research and Applications*, *13*(4), 266-282.
Morgan, R. M., & Hunt, S. D. (1994). The commitment-trust theory of relationship marketing. *Journal of Marketing*, *58*(3), 20-38.
Mourtzis, D., Boli, N., Alexopoulos, K., & Różycki, D. (2018). A Framework of Energy Services: From Traditional Contracts to Product-Service System (PSS). *Procedia CIRP*, *69*(1), 746-751.
Muthén, B., & Muthén, L. (2017). *Mplus*. Boca Raton, FL: Chapman and Hall/CRC.
Nakata, C., & Antalis, E. (2015). Enhancing market exchanges at the base of the pyramid. *International Marketing Review*, *32*(6), 762-782.
Ng, T. W., & Feldman, D. C. (2013). Changes in perceived supervisor embeddedness: Effects on employees' embeddedness, organisational trust, and voice behaviour. *Personnel Psychology*, *66*(3), 645-685.
Nielsen, U. B., Hannibal, M., & Larsen, N. N. (2018). Reviewing emerging markets: context, concepts and future research. *International Journal of Emerging Markets*, *13*(6), 1679 - 1698.
North, D. C. (1991). Institutions, ideology, and economic performance. *Cato Journal*, *11*(1), 477.
Nunnally, J. (1978). *Psychometric theory* (2nd ed.). Hillsdale, NJ: Mcgraw-Hill.
Offiaeli, K., & Yaman, F. (2021). Social norms as a cost-effective measure of managing transport demand: Evidence from an experiment on the London underground. *Transportation Research Part A: Policy and Practice*, *145*(1), 63-80.
Olson, K. (2013). *A national study quantifies the reality of the "Sharing Economy" movement.* Retrieved August 8, 2020, from https://www.researchgate.net/publication/272023008 An_ExploratoryStudy_on_Drivers_and_Deterrents_of_Collaborative_Consumption_in_Trave
Owyang, J., Tran, C., & Silva, C. (2013). A Market Definition Report of The Collaborative Economy: Products, services, and market relationships have changed as sharing startups impact business models. To avoid disruption, companies must adopt the Collaborative Economy Value Chain. *To avoid disruption, companies must adopt the Collaborative Economy Value Chain. Altimeter Research Theme: Digital Economies*, *4*. Retrieved August 8, 2014, from http:// www.slideshare.net/Altimeter/the-collaborative-economy, 1-27.
Oyedele, A., & Simpson, P. (2018). Emerging adulthood, sharing utilities and intention to use sharing services. *Journal of Services Marketing*, *32*(2), 161-174.
Özgen, Ö., & Biçakcioğlu-Peynirci, N. (2020). Exploring the Collaborative Consumption Journey: The Case of Access-Based Consumption. *Advances in Hospitality and Tourism Research (AHTR)*, *8*(2), 256-287.
Paker, N., & Gök, O. (2021). Extending collaborative consumption concept to yacht charter services: The case of Blue Voyage. *European Journal of Tourism Research*, *28*(1), 2808-2808.
Palomba, A. (2020). Consumer personality and lifestyles at the box office and beyond How demographics, lifestyles and personalities predict movie consumption. *Journal of Retailing and Consumer Services*, *55*(1), 102083.

Palos-Sanchez, P. R., & Correia, M. B. (2018). The Collaborative Economy Based Analysis of Demand: Study of Airbnb Case in Spain and Portugal. *Journal of theoretical and applied electronic commerce research*, *13*(3), 85-98.

Pandey, M., Bhati, M., Shukla, D. M., & Qureshi, I. (2021). Resourcing and value creation: A case of sharing economy model at the base of the pyramid. In *Sharing Economy at the Base of the Pyramid* (pp. 197-218). Singapore: Springer.

Pantazopoulos, P., Haddad, S., Lambrinoudakis, C., Kalloniatis, C., Maliatsos, K., Kanatas, A., ... & Amditis, A. (2018, June). Towards a security assurance framework for connected vehicles. In *2018 IEEE 19th International Symposium on" A World of Wireless, Mobile and Multimedia Networks"(WoWMoM)* (pp. 01-06). IEEE.

Parguel, B., Lunardo, R., & Benoit-Moreau, F. (2017). Sustainability of the sharing economy in question: When second-hand peer-to-peer platforms stimulate indulgent consumption. *Technological Forecasting and Social Change*, *125*(1), 48-57.

Perren, R., & Grauerholz, L. (2015). Collaborative consumption. *International Encyclopedia of the Social & Behavioral Sciences*, *4*(1), 139-144.

Perren, R., & Kozinets, R. V. (2018). Lateral Exchange Markets: How Social Platforms Operate in a Networked Economy. *Journal of Marketing*, *82*(1), 20-36.

Petruzzi, M. A., Marques, C., & Sheppard, V. (2020). To Share or To Exchange: An analysis of the sharing economy characteristics of Airbnb and Fairbnb. *International Journal of Hospitality Management*, *92*(1), 102724.

Plenter, F., Fielt, E., Hoffen, V. M., Chasin, F., & Rosemann, M. (2017). Repainting the business model canvas for peer-to-peer sharing and collaborative consumption. In *Proceedings of the 25th European Conference on Information Systems (ECIS 2017)* (pp. 2234-2249). Association for Information Systems.

Podsakoff, P. M., MacKenzie, S. B., & Podsakoff, N. P. (2012). Sources of method bias in social science research and recommendations on how to control it. *Annual review of psychology*, *63*(1), 539-569.

Pouri, M. J., & Hilty, L. M. (2021). The digital sharing economy: a confluence of technical and social sharing. *Environmental Innovation and Societal Transitions*, *38*(1), 127-139.

Pollio, A. (2019). Forefronts of the sharing economy: Uber in Cape Town. *International Journal of Urban and Regional Research*, *43*(4), 760-775.

Pranas, Ž., & Regina, A. (2018). *Philosophy and paradigm of scientific research*. London: Intechhopen Limited.

Preacher, K. J., & Hayes, A. F. (2008). Asymptotic and resampling strategies for assessing and comparing indirect effects in multiple mediator models. *Behaviour research methods*, *40*(3), 879-891.

Punakivi, M., & Saranen, J. (2001). Identifying the success factors in e-grocery home delivery. *International Journal of Retail & Distribution Management*, *29*(4), 156-163.

Punyatoya, P. (2018). Effects of cognitive and affective trust on online customer behaviour. *Marketing Intelligence & Planning*, *37*(1), 1-17.

Puschmann, T., & Alt, R. (2016). Sharing economy. *Business & information systems engineering*, *58*(1), 93-99.

Pynoo, B., Tondeur, J., Van Braak, J., Duyck, W., Sijnave, B., & Duyck, P. (2012). Teachers' acceptance and use of an educational portal. *Computers & Education*, *58*(4), 1308-1317.

Qian, M., & Jiang, J. (2020). COVID-19 and social distancing. *Journal of Public Health*, *30*(1), 259 - 261.

Quirin, M., Robinson, M. D., Rauthmann, J. F., Kuhl, J., Read, S. J., Tops, M., & deYoung, C. G. (2020). The dynamics of personality approach (DPA): 20 tenets for uncovering

the causal mechanisms of personality. *European Journal of Personality*, *34*(6), 947-968.
Raewf, M. B., Thabit, T. H., & Jasim, Y. A. (2021). The Relationship between the Elements of Marketing Mix and Consumer Behaviour during Environmental Uncertainty. *Cihan University-Erbil Journal of Humanities and Social Sciences*, *5*(1), 50-55.
Rafferty, A., Walthery, P., & King-Hele, S. (2015). *Analysing change over time: repeated cross-sectional and longitudinal survey data*. Retrieved 20 October 202,1 from https://research.manchester.ac.uk/en/publications/analysing-change-over-time-repeated-cross-sectional-and-longitudi.
Rahi, S., Alnaser, F. M., & Abd Ghani, M. (2019). Designing survey research: recommendation for questionnaire development, calculating sample size and selecting research paradigms. *Economic and Social Development: Book of Proceedings*, 1157-1169.
Rahman, M. A., Islam, M. A., Esha, B. H., Sultana, N., & Chakravorty, S. (2018). Consumer buying behaviour towards online shopping: An empirical study on Dhaka city, Bangladesh. *Cogent Business & Management*, *5*(1), 1514940.
Ramos, K. (2021). Factors influencing customers' continuance usage intention of food delivery apps during COVID-19 quarantine in Mexico. *British Food Journal*, *124*(3), 833-852.
Rattrie, L. T., Kittler, M. G., & Paul, K. I. (2020). Culture, Burnout, and Engagement: A Meta-Analysis on National Cultural Values as Moderators in JD-R Theory. *Applied Psychology*, *69*(1), 176-220.
Ray, A., Dhir, A., Bala, P. K., & Kaur, P. (2019). Why do people use food delivery apps (FDA)? A uses and gratification theory perspective. *Journal of Retailing and Consumer Services*, *51*(3), 221-230.
Ray, S., Ow, T., & Kim, S. S. (2011). Security assurance: How online service providers can influence security control perceptions and gain trust. *Decision Sciences*, *42*(2), 391-412.
Reinartz, W., Wiegand, N., & Imschloss, M. (2019). The impact of digital transformation on the retailing value chain. *International Journal of Research in Marketing*, *36*(3), 350-366.
Research Advisors. (2006). *Sample Size Table*. Retrieved August 12, 2020, from https://www.research-advisors.com/tools/SampleSize.htm
Rizkyta, A. H., Nuryakin, C., & Hambali, S. (2021). Is motorcycle e-hailing welfare improving? *Case Studies on Transport Policy*, *9*(2), 784-795.
Roberts, J. A., Hann, I.-H., & Slaughter, S. A. (2006). Understanding the motivations, participation, and performance of open source software developers: A longitudinal study of the Apache projects. *Management science*, *52*(7), 984-999.
Robinson, E., Hull, L., & Petrides, K. (2020). Big Five model and trait emotional intelligence in camouflaging behaviours in autism. *Personality and individual differences*, *152*(1), 109565.
Rogers, E. (2003). *Diffusion of Innovations fifth Ed Free Press.* New York: Free Press.
Rogers, M. (2004). Networks, firm size and innovation. *Small Business Economics*, *22*(2), 141-153.
Roh, M., & Park, K. (2019). Adoption of O2O food delivery services in South Korea: The moderating role of moral obligation in meal preparation. *International Journal of Information Management*, *47*(2), 262-273.
Rokeach, M. (1973). *The nature of human values*. New York: Free press.
Rokeach, M. (1975). The nature of human values. *Social Forces*, *53*(4), 659-660.

Rousseau, D. M., Sitkin, S. B., Burt, R. S., & Camerer, C. (1998). Not so different after all: A cross-discipline view of trust. *Academy of management review*, *23*(3), 393-404.
Roy, R. (2000). Sustainable product-service systems. *Futures*, *32*(3-4), 289-299.
Rudnick, A. (2014). A philosophical analysis of the general methodology of qualitative research: A critical rationalist perspective. *Health Care Analysis, 22*(3), 245-254.
Saha, S. K., Duarte, P., Silva, S. C., & Zhuang, G. (2022). The Role of Online Experience in the Relationship Between Service Convenience and Future Purchase Intentions. *Journal of Internet Commerce*, *34*(8), 1-28.
Saruchera, F. (2014). *Determinants of commercialization of technological innovations in developing economies: a study of Zimbabwe's research institutes* [Doctoral dissertation]. University of KwaZulu-Natal, Pietermaritzburg, South Africa.
Saruchera, F. (2020). Determinants of effective high-risk cargo logistics at seaports: A case study. *Journal of Transport and Supply Chain Management*, *14*(1), 1-13.
Saucier, G. (2009). Recurrent personality dimensions in inclusive lexical studies: Indications for a Big Six structure. *Journal of Personality*, *77*(5), 1577-1614.
Saunders, P., Lewis, A., & Thornhill, M. (2019). *Research methods for business students* (8th ed.). New York: Pearson Education Limited.
Schaub, M. Y. (2018). Why Uber is an information society service. *Journal of European Consumer and Market Law*, *7*(3), 109-115.
Scherer, R., Siddiq, F., & Tondeur, J. (2019). The technology acceptance model (TAM): A meta-analytic structural equation modelling approach to explaining teachers' adoption of digital technology in education. *Computers & Education*, *128*(2), 13-35.
Scheuneman, J. D., & Grima, A. (1997). Characteristics of quantitative word items associated with differential performance for female and black examinees. *Applied measurement in education*, *10*(4), 299-319.
Schiffman, L., & Kanuk, L. (2007). *Purchasing behaviour*. Upper Saddle River, NJ: Pearson Prentice Hall.
Schwartz, S. H. (1992). Universals in the content and structure of values: Theoretical advances and empirical tests in 20 countries. *Advances in experimental social psychology*, *25*(1), 1-65.
Schwartz, S. H. (1994). Are there universal aspects in the structure and contents of human values? *Journal of Social Issues*, *50*(4), 19-45.
Schwartz, S. H. (2012). An overview of the Schwartz theory of basic values. *Online readings in Psychology and Culture*, *2*(1), 2307.
Schwartz, S. H., Cieciuch, J., Vecchione, M., Davidov, E., Fischer, R., Beierlein, C., Ramos, A., Verkasalo, M., Lönnqvist, J.-E., & Demirutku, K. (2012). Refining the theory of basic individual values. *Journal of Personality and social psychology*, *103*(4), 663.
Schwartz, S. H., Cieciuch, J., Vecchione, M., Torres, C., Dirilen-Gumus, O., & Butenko, T. (2017). Value tradeoffs propel and inhibit behaviour: Validating the 19 refined values in four countries. *European Journal of Social Psychology*, *47*(3), 241-258.
Scott, A. (2001). *Global city-regions: trends, theory, policy*. England: Oxford University Press.
See-Kwong, G., Soo-Ryue, N., Shiun-Yi, W., & Lily, C. (2017). Outsourcing to online food delivery services: Perspective of F&B business owners. *The Journal of Internet Banking and Commerce*, *22*(2), 1-18.
Selig, J. P., Card, N. A., & Little, T. D. (2015). Latent variable structural equation modelling in cross-cultural research: Multigroup and multilevel approaches. In J.R. Fons van de Vijver, Dianne A. Van Hemert, Ype H. Poortinga (Eds.). *Multilevel analysis of individuals and cultures* (pp. 93-119). London & New York: Psychology Press.

Shao, Z., & Yin, H. (2018). Trust building in the car-sharing platform: An empirical study in China. In *International Conference on Information Resources Management (CONF-IRM)*. Association For Information Systems.

Sharma, S., Agarwal, A., Agarwal, I., & Gupta, A. (2017). A Cross-Cultural Examination on the Role of Emotional Intelligence in Predicting Negotiation Effectiveness. *SAM Advanced Management Journal (07497075)*, *82*(4).

Sheppard, B. H., Hartwick, J., & Warshaw, P. R. (1988). The theory of reasoned action: A meta-analysis of past research with recommendations for modifications and future research. *Journal of Consumer Research*, *15*(3), 325-343.

Simmons, J. P., Nelson, L. D., & Simonsohn, U. (2013). *Life after p-hacking.* Paper presented at the Meeting of the Society for Personality and social psychology, New Orleans, LA.

Simms, L. J., Zelazny, K., Williams, T. F., & Bernstein, L. (2019). Does the number of response options matter? Psychometric perspectives using personality questionnaire data. *Psychological assessment*, *31*(4), 1-10.

Singh, A., & Khosla, M. (2020). *Unit-7 Personality*. New Delhi: Indira Gandhi National Open University.

Skog, D. A., Wimelius, H., & Sandberg, J. (2018). Digital disruption. *Business & Information Systems Engineering*, *60*(5), 431-437.

Skok, W., & Baker, S. (2019). Evaluating the impact of Uber on London's taxi service: A critical review of the literature. *Knowledge and Process Management*, *26*(1), 3-9.

Snyder, H. (2019). Literature review as a research methodology: An overview and guidelines. *Journal of Business Research*, *104*(1), 333-339.

So, K. K. F., Kim, H., & Oh, H. (2021). What makes Airbnb experiences enjoyable? The effects of environmental stimuli on perceived enjoyment and repurchase intention. *Journal of Travel Research*, *60*(5), 1018-1038.

Solomon, M., Russell-Bennett, R., & Previte, J. (2012). *Consumer behaviour*. New York: Pearson Higher Education.

Song, W., & Sakao, T. (2017). A customization-oriented framework for design of sustainable product/service system. *Journal of Cleaner Production*, *140*(1), 1672-1685.

Steenkamp, J.-B. E., & Baumgartner, H. (1992). The role of optimum stimulation level in exploratory consumer behaviour. *Journal of Consumer Research*, *19*(3), 434-448.

Steenkamp, J.-B. E., & Baumgartner, H. (1998). Assessing measurement invariance in cross-national consumer research. *Journal of Consumer Research*, *25*(1), 78-90.

Steenkamp, J.-B. E., & De Jong, M. G. (2010). A global investigation into the constellation of consumer attitudes toward global and local products. *Journal of Marketing*, *74*(6), 18-40.

Steenkamp, J.-B. E., & Maydeu-Olivares, A. (2021). An updated paradigm for evaluating measurement invariance incorporating common method variance and its assessment. *Journal of the Academy of Marketing Science*, *49*(1), 5-29.

Steenkamp, J.-B. E., Batra, R., & Alden, D. L. (2003). How perceived brand globalness creates brand value. *Journal of International Business Studies*, *34*(1), 53-65.

Steenkamp, J.-B. E., Nijs, V. R., Hanssens, D. M., & Dekimpe, M. G. (2018). Competitive reactions to advertising and promotion attacks. In *Long-Term Impact Of Marketing: A Compendium* (pp. 325-372). Singapore: World Scientific.

Steenkamp, J.-B. E., & Van Trijp, H. C. (1991). The use of LISREL in validating marketing constructs. *International Journal of Research in Marketing*, *8*(4), 283-299.

Steenkamp, J.-B. E. M., & Maydeu-Olivares, A. (2020). An updated paradigm for evaluating measurement invariance incorporating common method variance and its assessment.

Journal of the Academy of Marketing Science, *49*(1), 5-29. https://doi.org/10.1007/s11747-020-00745-z

Stets, J. E., & Burke, P. J. (2000). Identity theory and social identity theory. *Social psychology quarterly*, 224-237.

Suhartanto, D., Dean, D. L., Leo, G., & Triyuni, N. N. (2019). Millennial experience with online food home delivery: a lesson from Indonesia. *Interdisciplinary Journal of Information, Knowledge, and Management*, *14*(1), 277-279. https://doi.org/10.28945/438

Suhartanto, D., Helmi Ali, M., Tan, K. H., Sjahroeddin, F., & Kusdibyo, L. (2019). Loyalty toward online food delivery service: the role of e-service quality and food quality. *Journal of foodservice business research*, *22*(1), 81-97.

Suhartanto, D., Kartikasari, A., Najib, M., & Leo, G. (2021). COVID-19: Pre-Purchase Trust and Health Risk Impact on M-Commerce Experience–Young Customers' Experience on Food Purchasing. *Journal of International Food & Agribusiness Marketing*, 1-20.

Sun, Y., & Wang, S. (2019). Understanding consumers' intentions to purchase green products in the social media marketing context. *Asia Pacific Journal of Marketing and Logistics*, *32*(4), 860-878.

Sundaram, S., & Hadjicostis, C. N. (2010). Distributed function calculation via linear iterative strategies in the presence of malicious agents. *IEEE Transactions on Automatic Control*, *56*(7), 1495-1508.

Sundararajan, A. (2014). Peer-to-peer businesses and the sharing (collaborative) economy: Overview, economic effects and regulatory issues. *Written testimony for the hearing titled The Power of Connection: Peer to Peer Businesses*.

Sundararajan, A. (2016). *The sharing economy: The end of employment and the rise of crowd-based capitalism*. Cambridge: MIT Press.

Swanson, E. B. (1987). Information channel disposition and use. *Decision Sciences*, *18*(1), 131-145.

Sweeney, J. C., & Soutar, G. N. (2001). Consumer perceived value: The development of a multiple-item scale. *Journal of Retailing*, *77*(2), 203-220.

Taherdoost, H. (2017). Determining sample size; how to calculate survey sample size. *International Journal of Economics and Management Systems*, *2*(1), 237-239.

Tassabehji, R. (2003). *Applying e-commerce in business*. Thousand Oaks, CA: Sage.

Taylor, D. G., & Strutton, D. (2010). Has e-marketing come of age? Modelling historical influences on post-adoption era Internet consumer behaviours. *Journal of Business Research*, *63*(9-10), 950-956.

Taylor, S., & Todd, P. (1995). Decomposition and crossover effects in the theory of planned behaviour: A study of consumer adoption intentions. *International Journal of Research in Marketing*, *12*(2), 137-155.

Teh, P. L., & Ahmed, P. K. (2012, June). Understanding social commerce adoption: An extension of the Technology Acceptance Model. In *2012 IEEE International Conference on Management of Innovation & Technology (ICMIT)* (pp. 359-364). IEEE.

Teo, T. (2015). Comparing pre-service and in-service teachers' acceptance of technology: Assessment of measurement invariance and latent mean differences. *Computers & Education*, *83*(3), 22-31.

Teo, T., Lee, C. B., Chai, C. S., & Wong, S. L. (2009). Assessing the intention to use technology among pre-service teachers in Singapore and Malaysia: A multigroup invariance analysis of the Technology Acceptance Model (TAM). *Computers & Education*, *53*(3), 1000-1009.

Thomas, A., & Deshmukhi, R. (2019). *South African fast food market: Opportunity analysis and industry forecast 2019-2026*. Rajasthan: A. M. Research. https://www.alliedmarketresearch.com/south-africa-fast-food-market

Toepoel, V., & Funke, F. (2018). Sliders, visual analogue scales, or buttons: Influence of formats and scales in mobile and desktop surveys. *Mathematical Population Studies*, *25*(2), 112-122.

Toepoel, V., Vermeeren, B., & Metin, B. (2019). Smileys, stars, hearts, buttons, tiles or grids: influence of response format on substantive response, questionnaire experience and response time. *Bulletin of Sociological Methodology/Bulletin de Méthodologie Sociologique*, *142*(1), 57-74.

Tussyadiah, I. P. (2015). An exploratory study on drivers and deterrents of collaborative consumption in travel. In *Information and communication technologies in tourism 2015* (pp. 817-830). New York: Springer.

Tussyadiah, I. P., & Pesonen, J. (2018). Drivers and barriers of peer-to-peer accommodation stay–an exploratory study with American and Finnish travellers. *Current Issues in Tourism*, *21*(6), 703-720.

Ursachi, G., Horodnic, I. A., & Zait, A. (2015). How reliable are measurement scales? External factors with indirect influence on reliability estimators. *Procedia Economics and Finance*, *20*(1), 679-686.

Van de Vijver, F., & Tanzer, N. (1998). Bias and equivalence in cross-cultural assessment. *European Review of applied psychology*, *47*(4), 263-279.

Van de Vijver, F. J. (1998). Towards a theory of bias and equivalence. *50967*, *3*(1), 41-65.

Van der Heijden, H., Verhagen, T., & Creemers, M. (2003). Understanding online purchase intentions: contributions from technology and trust perspectives. *European Journal of Information Systems*, *12*(1), 41-48.

Van Trijp, H. C., & Steenkamp, J. B. E. (1992). Consumers' variety seeking tendency with respect to foods: measurement and managerial implications. *European Review of Agricultural Economics*, *19*(2), 181-195.

VanVoorhis, C. W., & Morgan, B. L. (2007). Understanding power and rules of thumb for determining sample sizes. *Tutorials in quantitative methods for psychology*, *3*(2), 43-50.

Vaughan, G. M., & Hogg, M. A. (2010). *Essentials of social psychology*. London: Pearson.

Venkatesh, V., Morris, M. G., Davis, G. B., & Davis, F. D. (2003). User acceptance of information technology: Toward a unified view. *MIS Quarterly*, 425-478.

Ventre, I., & Kolbe, D. (2020). The impact of perceived usefulness of online reviews, trust and perceived risk on online purchase intention in emerging markets: A Mexican perspective. *Journal of International Consumer Marketing*, *32*(4), 287-299.

Venugopal, S., & Viswanathan, M. (2017). The subsistence marketplaces approach to poverty: Implications for marketing theory. *Marketing Theory*, *17*(3), 341-356.

Visser, J., Nemoto, T., & Browne, M. (2014). Home delivery and the impacts on urban freight transport: A review. *Procedia-Social and Behavioural Sciences*, *125*(1), 15-27.

Viswanathan, M., Elaydi, R., Gau, R., & Christensen, L. J. (2019). Subsistence Marketplaces: Challenges and Opportunities. *Journal of Public Policy & Marketing*, *38*(1), 36-41.

Viswanathan, M., Sridharan, S., & Ritchie, R. (2010). Understanding consumption and entrepreneurship in subsistence marketplaces. *Journal of Business Research*, *63*(6), 570-581.

Viswanathan, M., Sridharan, S., Ritchie, R., Venugopal, S., & Jung, K. (2012). Marketing interactions in subsistence marketplaces: A bottom-up approach to designing public policy. *Journal of Public Policy & Marketing*, *31*(2), 159-177.

Weltevreden, J. W., & van Rietbergen, T. (2009). The implications of e-shopping for in-store shopping at various shopping locations in the Netherlands. *Environment and Planning B: Planning and Design*, *36*(2), 279-299.
Werbach, K. (2018). Trust, but verify: Why the blockchain needs the law. *Berkeley Technology Law Journal*, *33*(2), 487-550.
Werner, O., & Campbell, D. T. (1970). Translating, working through interpreters, and the problem of decentering. *A handbook of method in cultural anthropology*, *398*, 420.
White, J., Lucock, X. S., Baird, T., & Dean, D. (2021). European Expert Buyers' Perceptions of New Zealand Agri-food Products and Businesses: An Explanation of the Theory of Buyer-Seller Relationships and Country of Origin Theory. *International Journal of Applied Business Research, 3*(2) 89-102.
Williams, M. (2000). *Ethical clearance—just a rubber stamp?* Amsterdam: Elsevier.
Wittel, A. (2001). Toward a network sociality. *Theory, Culture & Society*, *18*(6), 51-76.
Wu, B., & Deng, P. (2020). Internationalization of SMEs from emerging markets: An institutional escape perspective. *Journal of Business Research*, *108*, 337-350.
Xie, X., Zou, H., & Qi, G. (2018). Knowledge absorptive capacity and innovation performance in high-tech companies: A multi-mediating analysis. *Journal of Business Research*, *88*(1), 289-297.
Yadav, R., Balaji, M., & Jebarajakirthy, C. (2019). How psychological and contextual factors contribute to travellers' propensity to choose green hotels? *International Journal of Hospitality Management*, *77*(2), 385-395.
Yafi, E., Nazir, M., & Mustafa, K. (2018, October). Security assurance against cybercrime ransomware. In *International conference on intelligent computing & optimization* (pp. 21-34). New York: Springer, Cham.
Yamin, P., Fei, M., Lahlou, S., & Levy, S. (2019). Using social norms to change behaviour and increase sustainability in the real world: A systematic review of the literature. *Sustainability*, *11*(20), 5847.
Yeo, V. C. S., Goh, S.-K., & Rezaei, S. (2017). Consumer experiences, attitude and behavioural intention toward online food delivery (OFD) services. *Journal of Retailing and Consumer Services*, *35*(1), 150-162.
Yousafzai, S. Y., Pallister, J. G., & Foxall, G. R. (2003). A proposed model of e-trust for electronic banking. *Technovation*, *23*(11), 847-860.
Yusra, H., & Agus, A. (2020). The influence of online food delivery service quality on customer satisfaction and customer loyalty: the role of personal innovativeness. *Journal of Environmental Treatment Techniques*, *8*(1), 6-12.
Wei, X., Lo, C. K., Jung, S., & Choi, T.-M. (2021). From co-consumption to co-production: A systematic review and research synthesis of collaborative consumption practices. *Journal of Business Research*, *129*(1), 282-294.
Weston, R., & Gore Jr, P. A. (2006). A brief guide to structural equation modelling. *The Counseling Psychologist*, *34*(5), 719-751.
Zervas, G., Proserpio, D., & Byers, J. W. (2017). The rise of the sharing economy: Estimating the impact of Airbnb on the hotel industry. *Journal of Marketing Research*, *54*(5), 687-705.
Zervas, P., Tsitmidelli, A., Sampson, D. G., Chen, N.-S., & Kinshuk. (2014). Studying research collaboration patterns via co-authorship analysis in the field of tel: the case of educational technology & society journal. *Journal of Educational Technology & Society*, *17*(4), 1-16.
Zhang, M. L., & Chen, M. S. (2019). *China's digital economy: Opportunities and risks*. Washington, DC: International Monetary Fund.

Zhao, L., & Lu, Y. (2012). Enhancing perceived interactivity through network externalities: An empirical study on micro-blogging service satisfaction and continuance intention. *Decision Support Systems*, *53*(4), 825-834.
Zhao, Y., & Bacao, F. (2021). How Does the Pandemic Facilitate Mobile Payment? An Investigation on Users' Perspective under the COVID-19 Pandemic. *International journal of environmental research and public health*, *18*(3), 1016.
Zhou, T. (2013). An empirical examination of continuance intention of mobile payment services. *Decision Support Systems*, *54*(2), 1085-1091.
Zhu, C., Shu, L., Leung, V. C., Guo, S., Zhang, Y., & Yang, L. T. (2017). Secure multimedia big data in trust-assisted sensor-cloud for smart city. *IEEE Communications Magazine*, *55*(12), 24-30.
Zhuang, X., Lin, L., Zhang, R., Li, J. J., & He, B. (2021). e-service quality perceptions of millennials and non-millennials on O2O delivery applications. *British Food Journal*, *123*(12), 4116 - 4134.
Žukauskas, P., Vveinhardt, J., & Andriukaitienė, R. (2018). Philosophy and paradigm of scientific research. *Management Culture and Corporate Social Responsibility*. London: Intechhopen Limited.

ANNEXURE A: SURVEY QUESTIONNAIRE

Dear participant,

Thank you for sparing your time to answer this online questionnaire. This activity involves answering questions based on whether you agree with the statements. There is no right or wrong answer. The project aims to evaluate the impact of digital collaborative consumption in an emerging market. Kindly pay attention to the instructions, and please answer every question. The success of the project depends on fully completed online questionnaires. The questionnaire is expected to take 20 minutes of your time or less to complete.

There are no personal costs for participating in the project. You will not receive any direct benefits from participation, and there are no disadvantages or penalties if you choose not to participate or withdraw from the study. You may withdraw at any time or not answer any question if you do not want to. The survey will be confidential and anonymous, as your name or identifying information will not be asked. The information you give will be held securely and not disclosed to anyone else.

By completing and submitting this online survey, it is taken to mean consent.

[ ] Agree

[ ] Do not agree

PLEASE START THE SURVEY HERE

SECTION A: SOUTH AFRICAN FOOD DELIVERY SERVICE PROVIDERS

Q1 Have you used food delivery service providers when buying food? Please indicate your response.

[ ] Yes
[ ] No

If Yes is selected, Please continue to the next question.

If No is selected, Thank you for taking part in the survey. The survey is terminated.

Q2 Please select the food ordering application which you use.

○	○	○	○

Q3 What type of food do you order online regularly?

Chicken [ ]

Burgers	[ ]
Processed fish	[ ]
Pizza	[ ]
African tradition, e.g., Mola mogodu	[ ]
Asian cuisine	[ ]

SECTION B: PLEASE INDICATE HOW YOU STRONGLY DISAGREE OR STRONGLY AGREE WITH THE STATEMENTS. THERE IS NO RIGHT OR WRONG ANSWER.

	Item		**Strongly Disagree**	**Disagree**	**Neutral**	**Agree**	**Strongly Agree**
Q4 Please indicate your opinion about home delivery of food and indicate how you disagree or agree with the statements.							
Home delivery	HD1	Delivery of food is efficient.	1	2	3	4	5
	HD2	The online food delivery firm delivers the right food item.	1	2	3	4	5
	HD3	Home delivery is quick.	1	2	3	4	5
	HD4	Food delivered at home is fresh.	1	2	3	4	5
	HD5	Online food service provider has a variety of dishes.	1	2	3	4	5
Q5 To what extent does ordering food online help to enhance your productivity? Please indicate how you disagree or agree with the following statements.							
Perceived Usefulness	PU1	Online apps have a quicker response rate.	1	2	3	4	5
	PU2	Ordering food online increases my productivity at work.	1	2	3	4	5
	PU3	I regard online food ordering as useful.	1	2	3	4	5
	PU4	The online ordering platform saves me time.	1	2	3	4	5
	PU5	The online ordering system is quick to complete the order.	1	2	3	4	5
	PU6	Overall, using an online ordering system is more advantageous.	1	2	3	4	5
Q6 Ordering online would be free from effort. Share your beliefs on how online technology is easy to use.							
Perceived Ease of Use	PEOU1	My interaction with the online food ordering app is clear and understandable.	1	2	3	4	5
	PEOU2	The food ordering app allows me to do what I want.	1	2	3	4	5

	PEOU3	I find the food ordering website flexible to interact with.	1	2	3	4	5
	PEOU4	I find it easy to navigate the website when buying.	1	2	3	4	5
	PEOU5	The use of the food ordering application requires a lot of thinking.	1	2	3	4	5
Q7 Please share your security assurance concerns about ordering online. Indicate how you disagree or agree with the statements.							
Security Assurance	SA1	People I value prefer that I continue buying online.	1	2	3	4	5
	SA2	I recommend continued purchasing of products and services online.	1	2	3	4	5
	SA3	Online food ordering website is trustworthy.	1	2	3	4	5
	SA4	Online food ordering website has a policy on privacy and security.	1	2	3	4	5
	SA5	I am aware of the details of the website's security and privacy policy.	1	2	3	4	5
	SA6	I can remove my personal information from the site when I want to.	1	2	3	4	5
	SA7	Consumer control of personal information lies at the heart of consumer privacy.	1	2	3	4	5
Q8 Statements below describe the economic benefits of buying online. Indicate your opinion by indicating how you agree or disagree with the statements.							
Economic Benefits	EB1	I save money when I continue buying online.	1	2	3	4	5
	EB2	My participation in an online platform benefits me financially.	1	2	3	4	5
	EB3	Continued to participate in the DCC platform improves my economic situation.	1	2	3	4	5
	EB4	Online buying saves me time.	1	2	3	4	5
	EB5	Ordering food online helps to lower travelling costs.	1	2	3	4	5
	EB6	I do not benefit economically when I continue buying online as the site is not trustworthy.	1	2	3	4	5
Q9 Please indicate your level of trust in the digital platform below.							
Trust in the Platform	TP1	Based on my experience with online purchases in the past, I know online food delivery firms care about customers.	1	2	3	4	5
	TP2	Online food delivery service providers are honest.	1	2	3	4	5
	TP3	Online food delivery service providers are not opportunistic.	1	2	3	4	5
	TP4	Online food delivery firms have high integrity.	1	2	3	4	5
	TP5	Based on my experience, online food delivery firms cannot be trusted sometimes.	1	2	3	4	5
	TP6	Online food delivery firms keep the best interest of consumers.	1	2	3	4	5
Q10 Please share your opinions about the intentions to consume collaboratively in the food delivery industry.							

Intention to continue buying on the DCC platform	DCC 1	I see myself buying food online in future.	1	2	3	4	5
	DCC 2	I see myself increasing online purchasing activities in future.	1	2	3	4	5
	DCC 3	All things considered equal, I expect to continue ordering online.	1	2	3	4	5
	DCC 4	I would recommend online buying to my family and friends.	1	2	3	4	5
	DCC 5	I would not recommend online buying to my family and friends.	1	2	3	4	5
	DCC 6	I see myself writing positive reviews on social media.	1	2	3	4	5

SECTION B: PERSONAL INFORMATION

Please provide your personal information. Tick one option per question.

Q11 How do you describe your gender?

- Male
- Female
- Prefer not to say

Q12 Please indicate your age group in years.

- 18 -24
- 25-34
- 35-44
- 45-54
- 55-60
- 61+

Q13 On average, how often do you order food online monthly?

- Less than 5 times
- 6-10 times
- 11+ times

- Q14 What is your highest educational qualification?
- Matric
- Diploma
- Degree
- Post-graduate degree

Q15 What is your average monthly income?

- Less than R5000
- R5001-R10000
- R10001-R15000
- R15001-R20000
- Above R20001

Q16 Please indicate your province.

- Limpopo
- Mpumalanga
- North West
- Eastern Cape
- Western Cape
- Northern Cape
- Gauteng
- Free State
- KwaZulu Natal

ANNEXURE B: PEARSON'S CORRELATION TABLE

df \ α	0.2	0.1	0.05	0.02	0.01	0.001
1	0.951057	0.987688	0.996917	0.999507	0.999877	0.999999
2	0.800000	0.900000	0.950000	0.980000	0.990000	0.999000
3	0.687049	0.805384	0.878339	0.934333	0.958735	0.991139
4	0.608400	0.729299	0.811401	0.882194	0.917200	0.974068
5	0.550863	0.669439	0.754492	0.832874	0.874526	0.950883
6	0.506727	0.621489	0.706734	0.788720	0.834342	0.924904
7	0.471589	0.582206	0.666384	0.749776	0.797681	0.898260
8	0.442796	0.549357	0.631897	0.715459	0.764592	0.872115
9	0.418662	0.521404	0.602069	0.685095	0.734786	0.847047
10	0.398062	0.497265	0.575983	0.658070	0.707888	0.823305
11	0.380216	0.476156	0.552943	0.633863	0.683528	0.800962
12	0.364562	0.457500	0.532413	0.612047	0.661376	0.779998
13	0.350688	0.440861	0.513977	0.592270	0.641145	0.760351
14	0.338282	0.425902	0.497309	0.574245	0.622591	0.741934
15	0.327101	0.412360	0.482146	0.557737	0.605506	0.724657
16	0.316958	0.400027	0.468277	0.542548	0.589714	0.708429
17	0.307702	0.388733	0.455531	0.528517	0.575067	0.693163
18	0.299210	0.378341	0.443763	0.515505	0.561435	0.678781
19	0.291384	0.368737	0.432858	0.503397	0.548711	0.665208
20	0.284140	0.359827	0.422714	0.492094	0.536800	0.652378
21	0.277411	0.351531	0.413247	0.481512	0.525620	0.640230
22	0.271137	0.343783	0.404386	0.471579	0.515101	0.628710
23	0.265270	0.336524	0.396070	0.462231	0.505182	0.617768
24	0.259768	0.329705	0.388244	0.453413	0.495808	0.607360
25	0.254594	0.323283	0.380863	0.445078	0.486932	0.597446
26	0.249717	0.317223	0.373886	0.437184	0.478511	0.587988
27	0.245110	0.311490	0.367278	0.429693	0.470509	0.578956
28	0.240749	0.306057	0.361007	0.422572	0.462892	0.570317
29	0.236612	0.300898	0.355046	0.415792	0.455631	0.562047
30	0.232681	0.295991	0.349370	0.409327	0.448699	0.554119

df \ α	0.2	0.1	0.05	0.02	0.01	0.001
35	0.215598	0.274611	0.324573	0.380976	0.418211	0.518898
40	0.201796	0.257278	0.304396	0.357787	0.393174	0.489570
45	0.190345	0.242859	0.287563	0.338367	0.372142	0.464673
50	0.180644	0.230620	0.273243	0.321796	0.354153	0.443201
60	0.164997	0.210832	0.250035	0.294846	0.324818	0.407865
70	0.152818	0.195394	0.231883	0.273695	0.301734	0.379799
80	0.142990	0.182916	0.217185	0.256525	0.282958	0.356816
90	0.134844	0.172558	0.204968	0.242227	0.267298	0.337549
100	0.127947	0.163782	0.194604	0.230079	0.253979	0.321095
125	0.114477	0.146617	0.174308	0.206245	0.227807	0.288602
150	0.104525	0.133919	0.159273	0.188552	0.208349	0.264316
175	0.096787	0.124036	0.147558	0.174749	0.193153	0.245280
200	0.090546	0.116060	0.138098	0.163592	0.180860	0.229840
250	0.081000	0.103852	0.123607	0.146483	0.161994	0.206079
300	0.073951	0.094831	0.112891	0.133819	0.148019	0.188431
350	0.068470	0.087814	0.104552	0.123957	0.137131	0.174657
400	0.064052	0.082155	0.097824	0.115997	0.128339	0.163520
450	0.060391	0.077466	0.092248	0.109397	0.121046	0.154273
500	0.057294	0.073497	0.087528	0.103808	0.114870	0.146436
600	0.052305	0.067103	0.079920	0.094798	0.104911	0.133787
700	0.048427	0.062132	0.074004	0.087789	0.097161	0.123935
800	0.045301	0.058123	0.069234	0.082135	0.090909	0.115981
900	0.042711	0.054802	0.065281	0.077450	0.085727	0.109385
1000	0.040520	0.051993	0.061935	0.073484	0.081340	0.103800
1500	0.033086	0.042458	0.050582	0.060022	0.066445	0.084822
2000	0.028654	0.036772	0.043811	0.051990	0.057557	0.073488
3000	0.023397	0.030027	0.035775	0.042457	0.047006	0.060027
4000	0.020262	0.026005	0.030984	0.036773	0.040713	0.051996
5000	0.018123	0.023260	0.027714	0.032892	0.036417	0.046512

ANNEXURE C: DISCRIMINANT VALIDITY

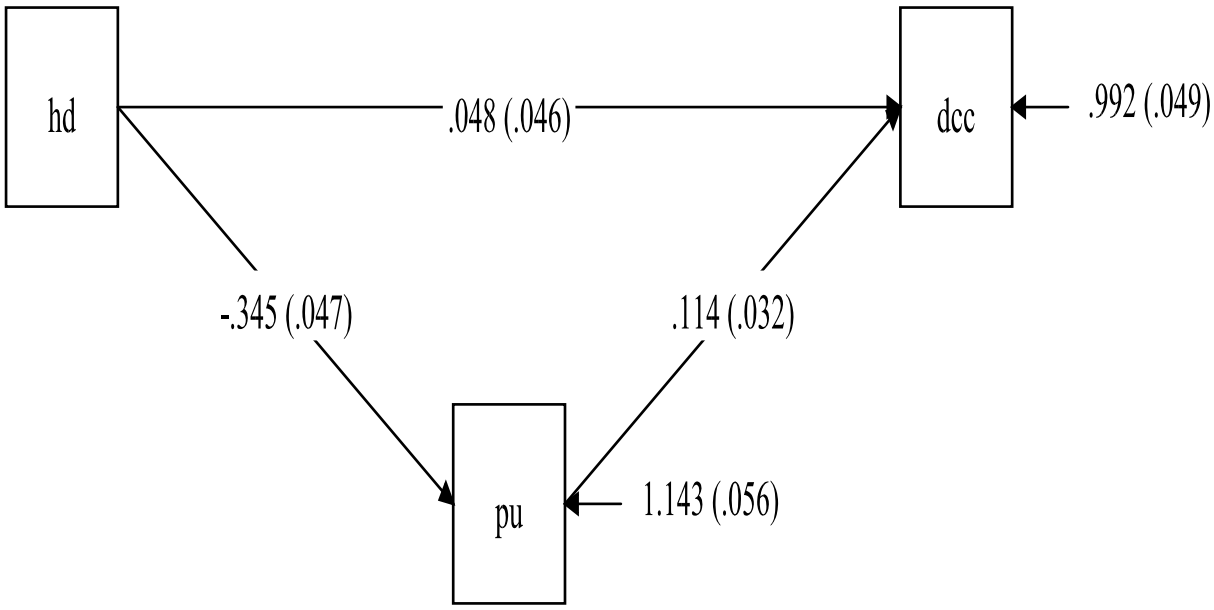
	CR	AVE	SA	HD	PU	PEOU	EB	SB	TP	DCC
Security assurance (SA)	0,589	0,520	**0.720**							
Home delivery (HD)	0,461	0,648	0,487	**0,804**						
Perceived Usefulness (PU)	0,765	0,554	0,573	0,467	**0,744**					
Perceived ease of use (PEOU)	0,711	0,679	0,638	0,440	0,731	**0,824**				
Economic benefits (EB)	0,678	0,576	0,360	0,290	0,401	0,211	**0,758**			
Social Benefits (SB)	0,639	0,562	0,523	0,176	0,480	0,329	0,557	**0,749**		
Trust (TP)	0,736	0,758	0,633	0,384	0,476	0,485	0,513	0,585	**0.870**	
Intention to continue using DCC	0,727	0,401	-0,506	-0,318	-0,615	-0,525	-0,263	-0,404	-0,473	**0,634**

ANNEXURE D: CORRELATION MATRIX

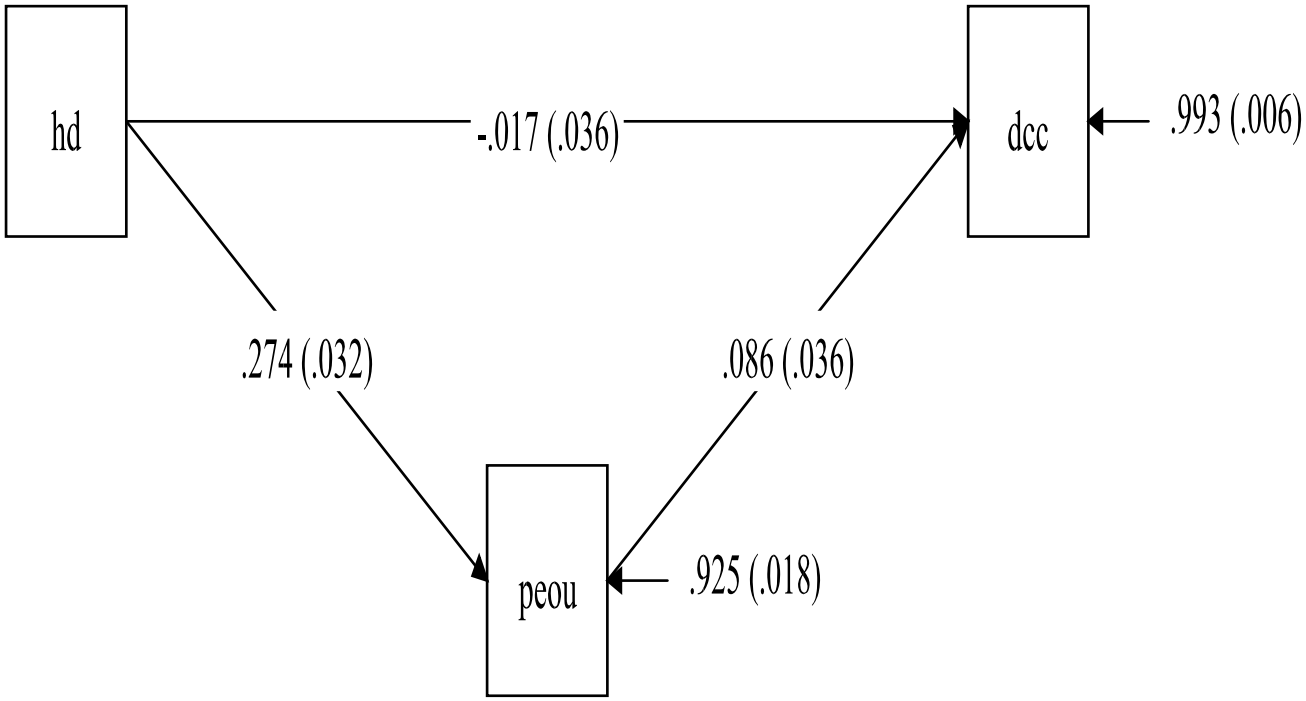
		HD1	HD2	HD3	HD4	PU1	PU2	PU3	PU6	PEOU1	PEOU2	PEOU3	PEOU4	SA2	SA3	SA4	SA5	EB1	EB2	EB3	EB5	SB3	SB4	SB5	SB6	TP1	TP2	TP3	TP4	TP6	DCC1	DCC2	DCC3	DCC4	DCC5
Correlation	HD1	1.000	.229	.143	.176	.105	.108	.156	.072	.105	.100	.075	.113	.104	.055	.045	.044	.017	.008	-.009	.106	.014	-.053	.037	.029	.053	.025	.002	.020	.054	.069	.025	.083	.050	-.040
	HD2	.229	1.000	.121	.218	.071	.072	.097	.078	.121	.154	.129	.141	.154	.081	.056	.029	.090	.051	.094	.121	.048	-.005	.095	.059	.161	.152	.053	.132	.168	.166	.122	.136	.152	-.108
	HD3	.143	.121	1.000	.139	.074	.104	.056	.072	.059	.083	.084	.109	.061	.068	.103	.074	.108	.126	.109	.044	.029	.041	.035	-.011	.067	.083	.068	.005	.118	.033	.080	.061	-.008	.023
	HD4	.176	.218	.139	1.000	.126	.148	.129	.095	.068	.109	.094	.067	.153	.122	.125	.178	.120	.082	.100	.106	.040	.091	.093	.052	.123	.127	.134	.147	.118	.040	.068	.077	.067	.005
	PU1	.105	.071	.074	.126	1.000	.275	.250	.358	.223	.299	.244	.254	.152	.217	.156	.089	.198	.196	.167	.218	.176	.159	.239	.232	.244	.277	.186	.218	.228	.222	.246	.269	.215	.031
	PU2	.108	.072	.104	.148	.275	1.000	.358	.311	.193	.257	.240	.152	.168	.233	.127	.132	.260	.238	.252	.229	.168	.265	.233	.206	.189	.226	.183	.216	.187	.179	.201	.227	.178	-.033
	PU3	.156	.097	.056	.129	.250	.358	1.000	.404	.361	.366	.291	.295	.216	.138	.168	.146	.099	.106	.074	.175	.262	.141	.202	.183	.152	.223	.111	.169	.156	.341	.278	.354	.360	-.067
	PU6	.072	.078	.072	.095	.358	.311	.404	1.00	.330	.382	.327	.253	.216	.202	.164	.173	.197	.228	.212	.396	.251	.196	.241	.227	.189	.228	.201	.188	.200	.247	.277	.299	.266	-.031
	PEOU1	.105	.121	.059	.068	.223	.193	.361	.330	1.000	.468	.484	.475	.247	.136	.159	.179	.080	.069	.075	.179	.248	.077	.128	.116	.225	.233	.082	.177	.186	.321	.238	.312	.285	-.107
	PEOU2	.100	.154	.083	.109	.299	.257	.366	.382	.468	1.000	.505	.404	.225	.222	.204	.190	.134	.162	.169	.216	.277	.105	.181	.181	.247	.292	.138	.260	.269	.239	.182	.243	.236	-.019
	PEOU3	.075	.129	.084	.094	.244	.240	.291	.327	.484	.505	1.000	.524	.254	.239	.294	.249	.115	.124	.175	.220	.216	.168	.163	.182	.266	.292	.197	.246	.276	.298	.235	.325	.283	-.014
	PEOU4	.113	.141	.109	.067	.254	.152	.295	.253	.475	.404	.524	1.000	.218	.151	.219	.169	.004	.002	.061	.155	.238	.081	.075	.093	.180	.233	.052	.161	.237	.309	.201	.303	.267	-.041
	SA2	.104	.154	.061	.153	.152	.168	.216	.216	.247	.225	.254	.218	1.000	.362	.308	.265	.062	.106	.104	.141	.174	.112	.145	.149	.220	.226	.121	.209	.199	.202	.212	.262	.276	-.055
	SA3	.055	.081	.068	.122	.217	.233	.138	.202	.136	.222	.239	.151	.362	1.000	.324	.278	.253	.237	.316	.178	.144	.242	.271	.257	.203	.231	.302	.293	.304	.119	.178	.175	.168	.062
	SA4	.045	.056	.103	.125	.156	.127	.168	.164	.159	.204	.294	.219	.308	.324	1.000	.317	.119	.156	.173	.200	.137	.151	.165	.188	.192	.280	.180	.215	.235	.149	.102	.166	.136	.039
	SA5	.044	.029	.074	.178	.089	.132	.146	.173	.179	.190	.249	.169	.265	.278	.317	1.000	.141	.134	.213	.208	.118	.191	.158	.181	.186	.266	.205	.243	.222	.111	.148	.145	.168	.039
	EB1	.017	.090	.108	.120	.198	.260	.099	.197	.080	.134	.115	.004	.062	.253	.119	.141	1.000	.673	.571	.366	.065	.206	.311	.283	.241	.235	.278	.232	.291	.079	.178	.107	.137	.037
	EB2	.008	.051	.126	.082	.196	.238	.106	.228	.069	.162	.124	.002	.106	.237	.156	.134	.673	1.000	.638	.329	.138	.281	.352	.330	.234	.304	.285	.277	.255	.069	.193	.135	.134	.090
	EB3	-.009	.094	.109	.100	.167	.252	.074	.212	.075	.169	.175	.061	.104	.316	.173	.213	.571	.638	1.000	.333	.152	.263	.351	.323	.246	.256	.312	.304	.280	.059	.216	.094	.134	.097
	EB5	.106	.121	.044	.106	.218	.229	.175	.396	.179	.216	.220	.155	.141	.178	.200	.208	.366	.329	.333	1.000	.162	.145	.182	.201	.240	.291	.194	.222	.218	.180	.259	.223	.204	-.057
	SB3	.014	.048	.029	.040	.176	.168	.262	.251	.248	.277	.216	.238	.174	.144	.137	.118	.065	.138	.152	.162	1.000	.204	.275	.222	.131	.190	.073	.159	.129	.251	.258	.283	.292	-.068
	SB4	-.053	-.005	.041	.091	.159	.265	.141	.196	.077	.105	.168	.081	.112	.242	.151	.191	.206	.281	.263	.145	.204	1.000	.399	.364	.168	.222	.266	.223	.259	.118	.156	.161	.108	.115
	SB5	.037	.095	.035	.093	.239	.233	.202	.241	.128	.181	.163	.075	.145	.271	.165	.158	.311	.352	.351	.182	.275	.399	1.000	.565	.287	.303	.334	.287	.298	.110	.239	.180	.272	.099
	SB6	.029	.059	-.011	.052	.232	.206	.183	.227	.116	.181	.182	.093	.149	.257	.188	.181	.283	.330	.323	.201	.222	.364	.565	1.000	.231	.268	.224	.279	.299	.097	.251	.185	.255	.073
	TP1	.053	.161	.067	.123	.244	.189	.152	.189	.225	.247	.266	.180	.220	.203	.192	.186	.241	.234	.246	.240	.131	.168	.287	.231	1.000	.556	.314	.377	.448	.232	.250	.245	.306	-.035
	TP2	.025	.152	.083	.127	.277	.226	.223	.228	.233	.292	.292	.233	.226	.231	.280	.266	.235	.304	.256	.291	.190	.222	.303	.268	.556	1.000	.400	.448	.464	.294	.270	.262	.274	-.014
	TP3	.002	.053	.068	.134	.186	.183	.111	.201	.082	.138	.197	.052	.121	.302	.180	.205	.278	.285	.312	.194	.073	.266	.334	.224	.314	.400	1.000	.442	.376	.069	.180	.157	.145	.096

TP4	.020	.132	.005	.147	.218	.216	.169	.188	.177	.260	.246	.161	.209	.293	.215	.243	.232	.277	.304	.222	.159	.223	.287	.279	.377	.448	.442	1.000	.481	.166	.223	.201	.221	.022
TP6	.054	.168	.118	.118	.228	.187	.156	.200	.186	.269	.276	.237	.199	.304	.235	.222	.291	.255	.280	.218	.129	.259	.298	.299	.448	.464	.376	.481	1.000	.206	.235	.222	.265	.027
DCC1	.069	.166	.033	.040	.222	.179	.341	.247	.321	.239	.298	.309	.202	.119	.149	.111	.079	.069	.059	.180	.251	.118	.110	.097	.232	.294	.069	.166	.206	1.000	.524	.607	.448	-.216
DCC2	.025	.122	.080	.068	.246	.201	.278	.277	.238	.182	.235	.201	.212	.178	.102	.148	.178	.193	.216	.259	.258	.156	.239	.251	.250	.270	.180	.223	.235	.524	1.000	.602	.492	-.135
DCC3	.083	.136	.061	.077	.269	.227	.354	.299	.312	.243	.325	.303	.262	.175	.166	.145	.107	.135	.094	.223	.283	.161	.180	.185	.245	.262	.157	.201	.222	.607	.602	1.000	.557	-.248
DCC4	.050	.152	-.008	.067	.215	.178	.360	.266	.285	.236	.283	.267	.276	.168	.136	.168	.137	.134	.134	.204	.292	.108	.272	.255	.306	.274	.145	.221	.265	.448	.492	.557	1.000	-.269

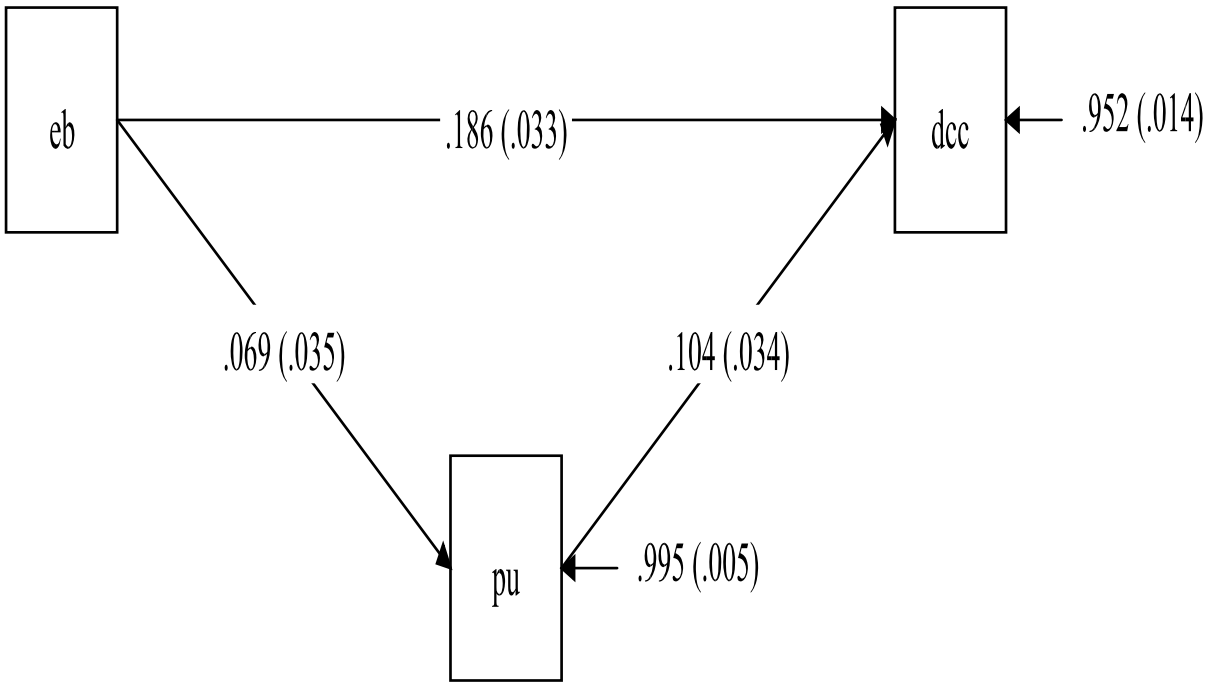
ANNEXURE E: MANIFEST PATH MODEL HD PU



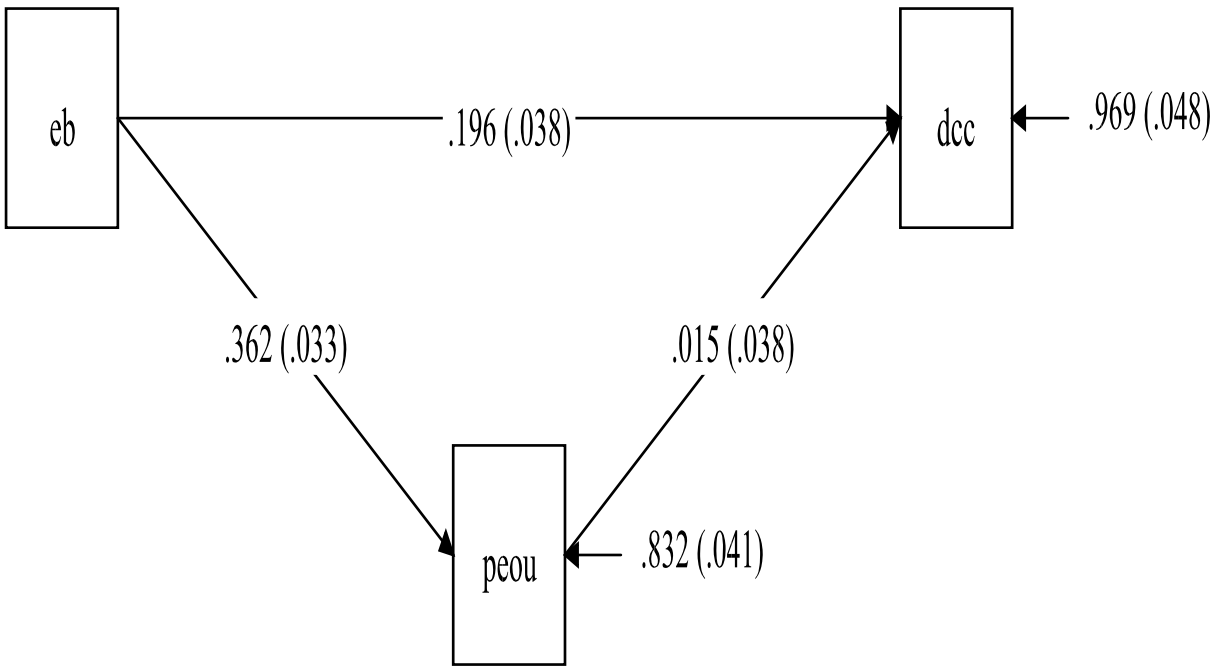
ANNEXURE F: MANIFEST PATH MODEL HD PEOU



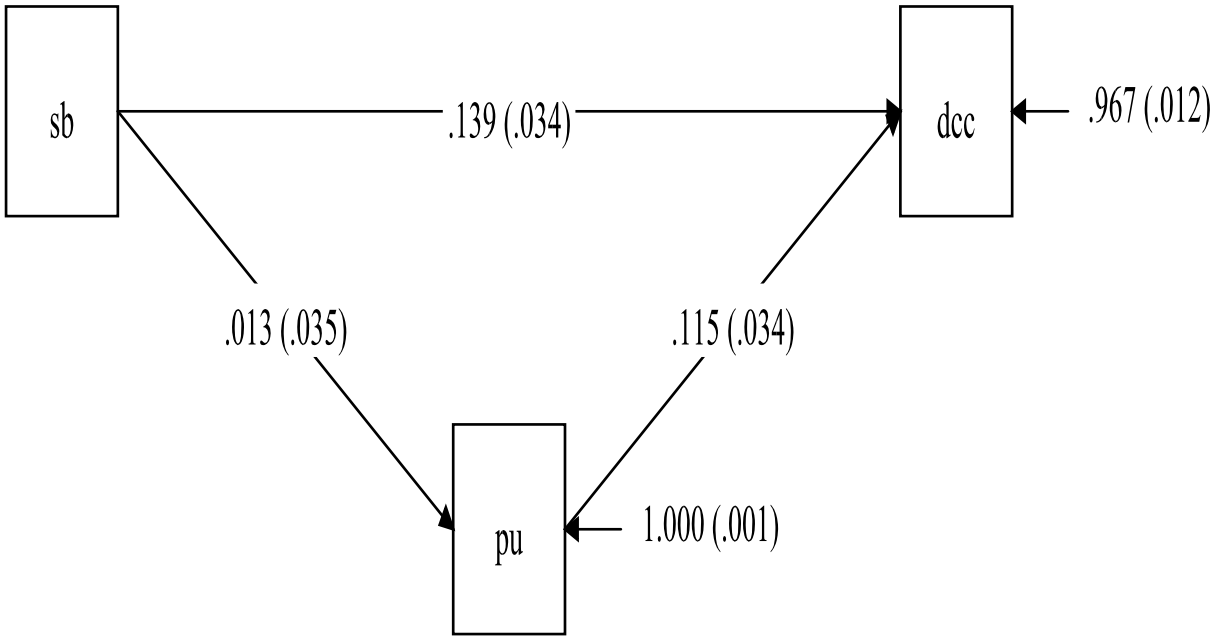
ANNEXURE G: MANIFEST PATH MODEL EB PU



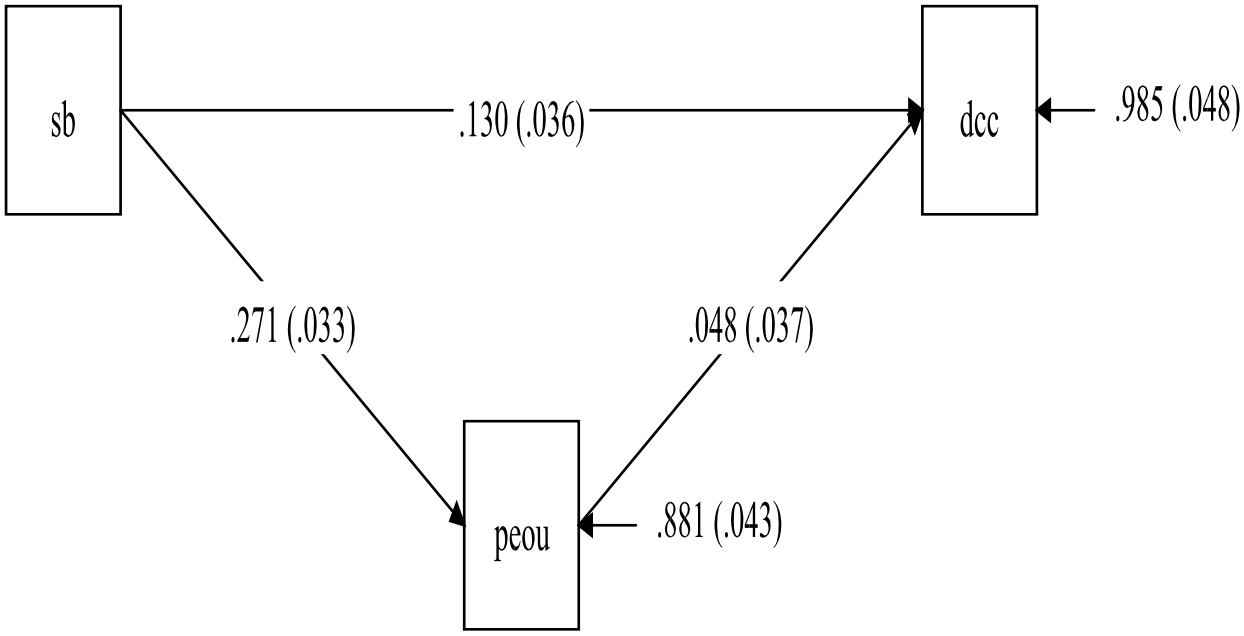
ANNEXURE H: MANIFEST PATH MODEL EB PEOU



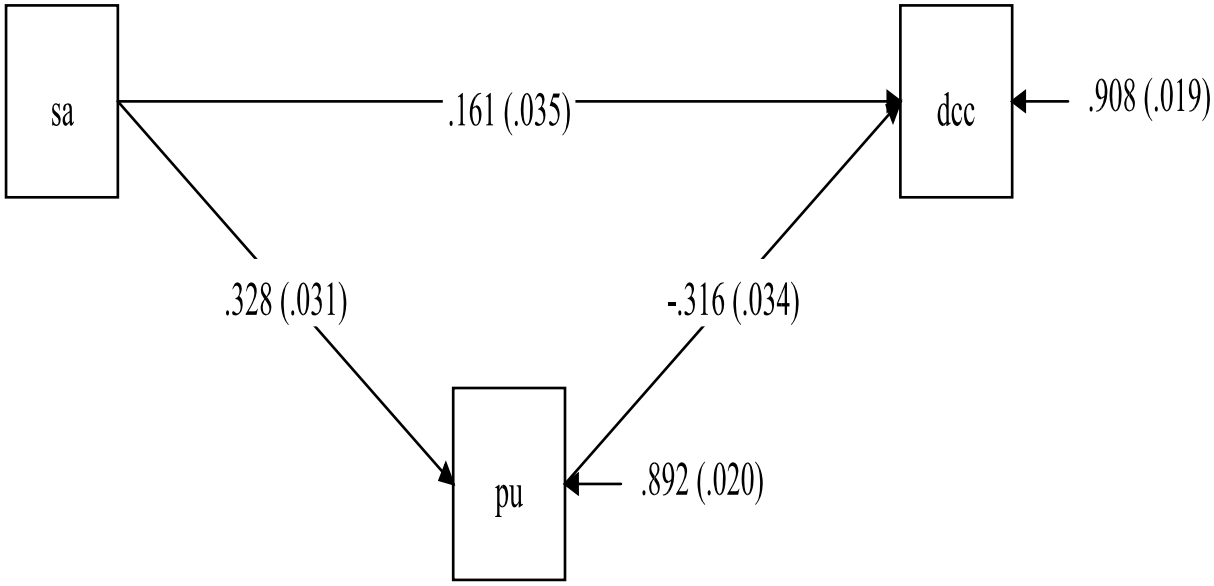
ANNEXURE I: MANIFEST PATH MODEL SB PU



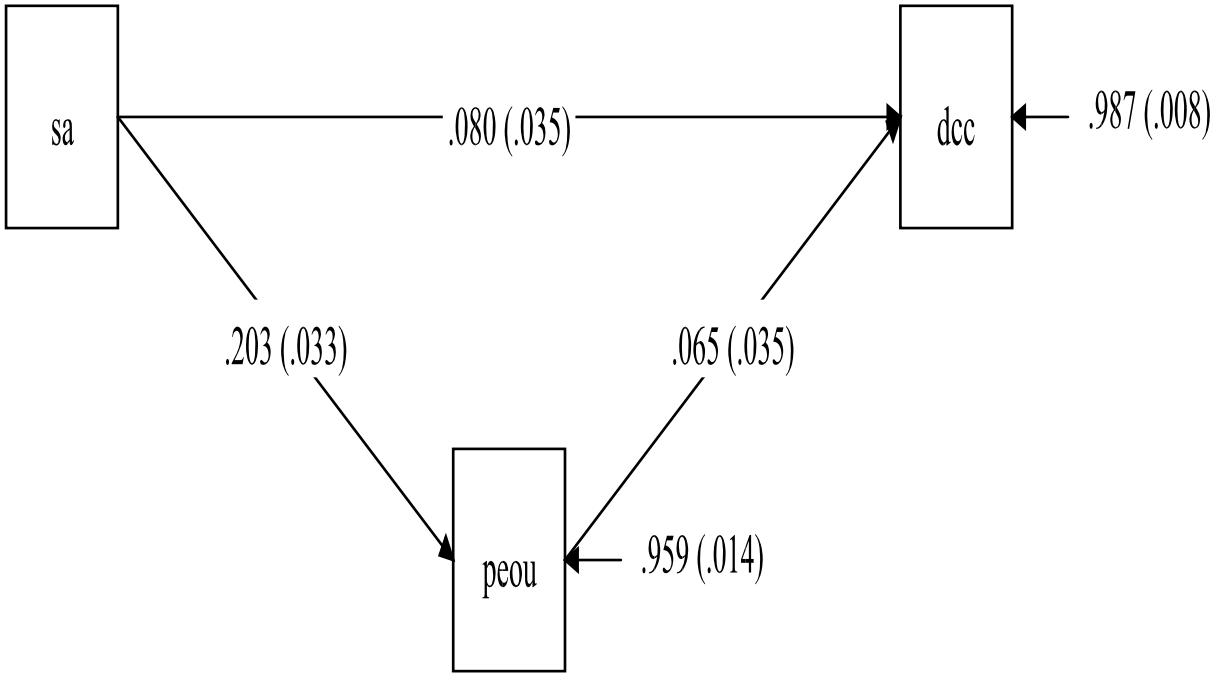
ANNEXURE J: MANIFEST PATH MODEL SB PEOU



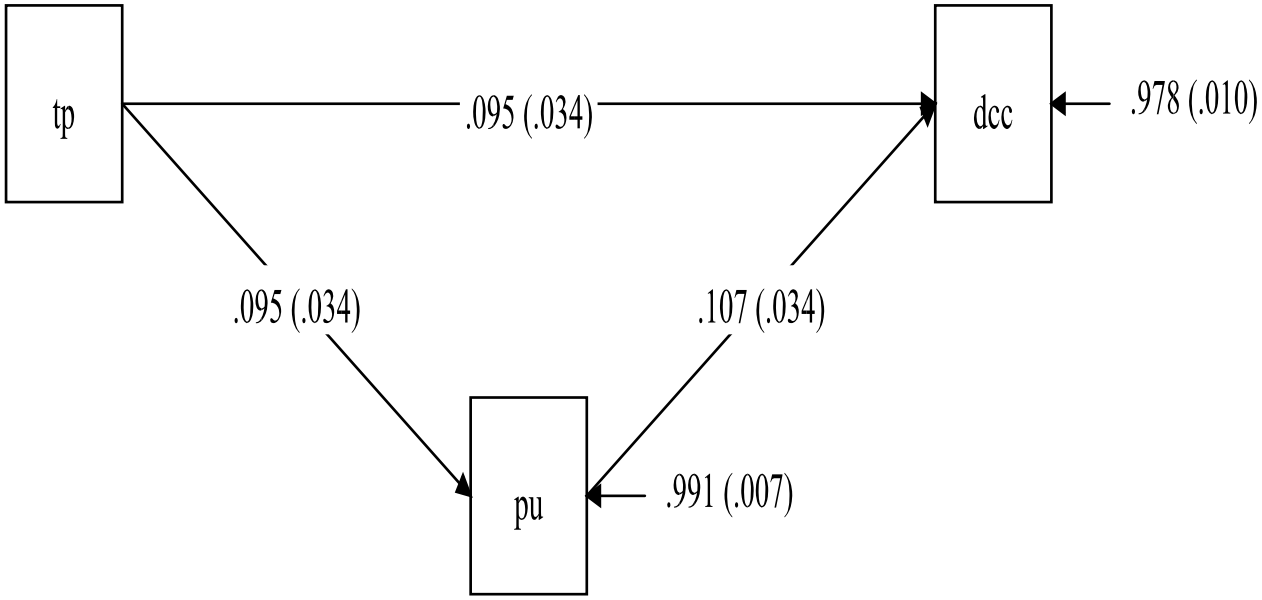
ANNEXURE H: MANIFEST PATH MODEL SA PU



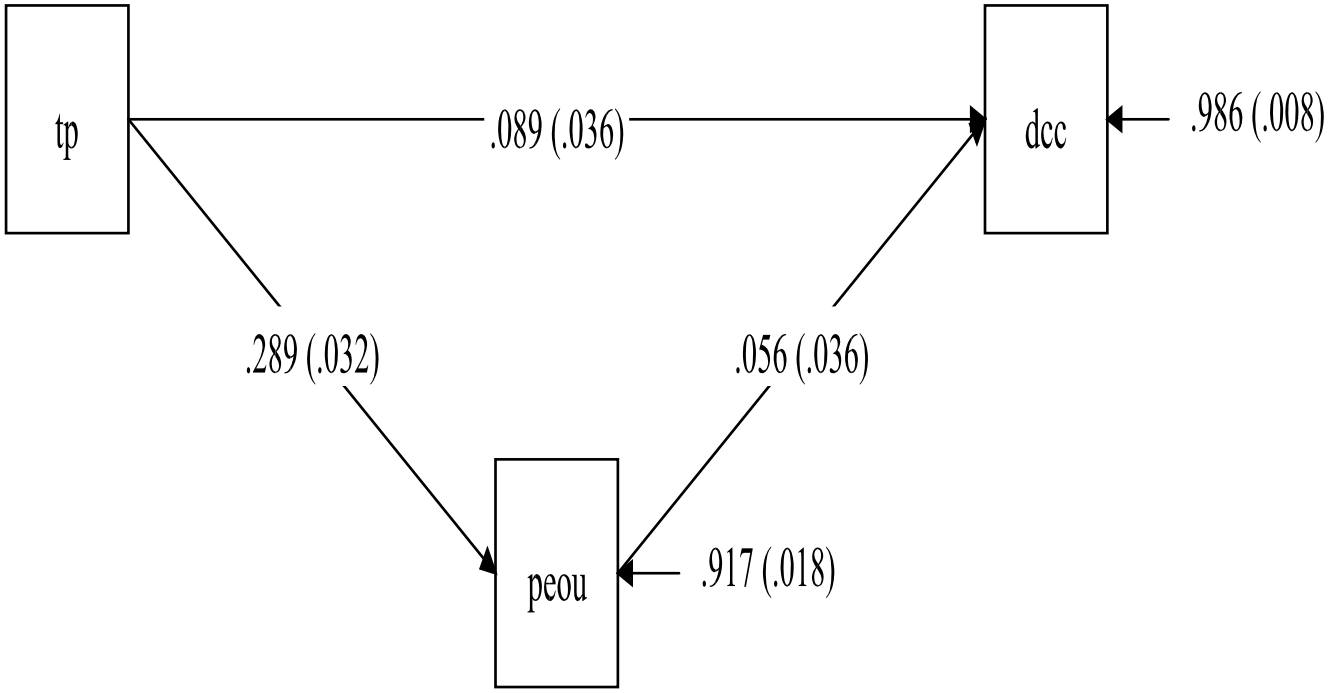
ANNEXURE K: MANIFEST PATH MODEL SA PEOU



ANNEXURE L: MANIFEST PATH MODEL TP PU



ANNEXURE M: MANIFEST PATH MODEL TP PEOU



ANNEXURE N: ETHICAL CLEARANCE CERTIFICATE

UNIVERSITY OF THE WITWATERSRAND JOHANNESBURG

Research Office

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

CLEARANCE CERTIFICATE	**PROTOCOL NUMBER: H20/08/39**
PROJECT TITLE	Digital Collaborative Consumption in an Emerging Market: South African food delivery services
INVESTIGATOR(S)	Mr T Shumba
SCHOOL/DEPARTMENT	Wits Business School/
DATE CONSIDERED	21 August 2020
DECISION OF THE COMMITTEE	Approved Risk Level: Minimal
EXPIRY DATE	14 October 2023

DATE 15 October 2020 **CHAIRPERSON** _____
(Professor J Knight)

cc: Supervisor : Dr F Saruchera

DECLARATION OF INVESTIGATOR(S)

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

I/We fully understand the conditions under which I am/we are authorized to carry out the abovementioned research and I/we guarantee to ensure compliance with these conditions. Should any departure to be contemplated from the research procedure as approved I/we undertake to resubmit the protocol to the Committee. **I agree to completion of a yearly progress report.**

_____ 15 , 10 , 2020
Signature **Date**

PLEASE QUOTE THE PROTOCOL NUMBER ON ALL ENQUIRIES

ANNEXURE O: LANGUAGE EDITING CONFIRMATION

LANGUAGE-EDITING CONFIRMATION

To whom it may concern:

This memo serves to confirm that the manuscript/research project detailed below has been language-edited and/or proof-read.

Regards,

ET Innocent *(Cert. Lang. Ed.)*
M. Sine *(Ed.)*
Contact: +27781485212

****

Title:

DIGITAL COLLABORATIVE CONSUMPTION IN AN EMERGING MARKET: SOUTH AFRICAN FOOD DELIVERY SERVICES

Author:

TINAYESHE SHUMBA

Issued on:

28/02/2022

Disclaimer:
The editors (proofreaders) detach themselves from the accuracy of the manuscript contents nor the objectives of the author. While all possible efforts have been made to ensure the text as edited is readable and grammatically correct, the author had the option to accept or reject suggestions and trackable changes made to the document before submission.

INDEPENDENT EDITORS

ANNEXURE P: SECOND LANGUAGE EDITING CONFIRMATION

EDITING CONFIRMATION

11 May 2023

To whom it may concern:

We are writing to confirm that we have successfully completed the language editing process for the thesis titled "Digital Collaborative Consumption in an emerging market: South African Food Delivery Services" by **T. Shumba**. We have carefully reviewed and edited the thesis to ensure clarity, coherence, and adherence to language standards.

During the language editing process, we focused on improving the overall readability and linguistic quality of the thesis while ensuring the preservation of the content and the original research. Our editing services encompassed areas such as grammar, syntax, punctuation, clarity, and consistency.

Thank you for your attention to this matter. We trust that this confirmation of language editing will meet the requirements set forth by the institution regarding language editing for thesis submission.

We wish Mr. Shumba all the best in his thesis submission and future academic endeavors.

Sincerely,

S.Mpunz

*** Professional Editors ***

sarchcot@gmail.com