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Investigating cart stacking as a response to free delivery thresholds in South African e-commerce.

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Contingent free shipping policy

Cart stacking

E - commerce

Pre intentioned cart

Threshold for free delivery policy

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CHAPTER 1. INTRODUCTION

1.1 Statement of purpose

The purpose of this study is to quantitatively investigate cart stacking as a response to the threshold for free delivery policy in South African e-commerce.

1.2 Background of the study

Threshold for free delivery is a delivery policy that certain e-commerce retailers apply, which stipulates a minimum purchase spend amount to qualify for free delivery. Typically, in a physical brick and mortar retail environment, there are no delivery fees but when the process is migrated online, a delivery fee comes to effect. Retailers will either absorb the delivery cost and incorporate it with product cost and therefore, offer free shipping; state a standard delivery fee on all products or introduce a threshold for free delivery policy. This policy will generate a different response from e-commerce users who will consequently choose an option based on what is valuable to them. Online shoppers may either abandon the purchase to avoid delivery fee, continue the purchase and pay the standard delivery fee or increase the products in their virtual cart to reach the minimum spend amount thus, obtain free delivery. (Huang et al., 2019)

E-commerce is defined as the purchasing and selling of information, products, and services on the internet. Gunasekaran et al. (2002) highlights four major defining factors of e-commerce which include, the delivering of information, the application of technology to a business process, the service factor, which describes cutting costs and improving on service delivery using e-commerce, and lastly the buying of products and services online. E-commerce is essentially trading that occurs on a technology platform facilitated by the internet. (Gunasekaran et al., 2002).

This study discusses the e-commerce industry of South Africa, particularly the retailers that have a threshold for free delivery policy. The South African

ecommerce industry has grown by 66% from 2019 to 2020 with a value of 30 billion rand. This growth has been attributed to the purchase of data and airtime, clothing, online entertainment, and groceries. Another contributor has been the rapid increase in the purchase of smart phones, which gives consumers a chance to interact with `online retailers. Although South Africa has poor fixed line infrastructure, the consumers are still making online purchases and brands have a significant presence on social media platforms. (International Trade Administration, 2021) Online customers making use of e-commerce platforms are faced with a delivery policy that requires a minimum spend of x amount to qualify for free delivery or alternatively pay a standard delivery fee. The study also explores how the consumer decides on cart stacking or paying the standard delivery fee and why that decision is made.

Jin et al., (2019) introduces the notion of order padding which is the concept of increasing the value of your virtual cart to obtain the incentive of free shipping. This consumer behaviour contributes to the cross-selling and up-selling business strategies for e-commerce retailers. (Jin et al., 2019) The term cart stacking is not widely used but will be utilized frequently in this study. Cart stacking is defined as the act of increasing the products or items in an individual's virtual cart to meet the minimum threshold expenditure to acquire free shipping.

The aim of the research is to determine whether the threshold for free delivery policy influence's a consumer's cart behaviour i.e., cart stacking.

1.3 Research problem

The threshold for free delivery policy may influence e-commerce consumers to add items into their virtual carts to achieve the threshold and therefore, obtain free delivery on their order. This study investigates cart stacking as a response to the threshold for free delivery policy in South African e-commerce.

The action of cart stacking is defined as consumers adding items to their virtual carts to reach a threshold for free delivery that has been implemented by an e-commerce provider. The context of the study will take place in the South African e-commerce industry where consumers purchase products online. Some e-commerce providers impose a threshold for free delivery policy which requires that consumers spend a certain amount to acquire free delivery. The research problem is that e-commerce providers have little knowledge of how consumers react to the threshold for free delivery policy and whether the policy affects their purchase decisions. Studies in other regions have been implemented on consumers and the policy but in South Africa, this study has not been realized. There is a gap in the knowledge of how South African e-commerce consumers respond to the policy and what factors influence their cart stacking decision.

This research problem affects e-commerce providers in South Africa who are interested in understanding how their consumers think and make decisions. It's important for e-commerce providers to investigate their audience for cross sell and up sell opportunities. The process of cross selling is providing consumers an opportunity to purchase a product that is compatible to the item that they have selected. Upselling, on the other hand, is the process of convincing a consumer to purchase more quantity on what they have selected or a better, more expensive version of their original choice. (Weichbroth & Kubiak, 2016) It is also vital for e-commerce providers to learn and understand their consumers to ensure that their platforms are still relevant, functional and appeal to the targeted audience. If e-commerce providers are not studying or learning the habits of their consumers, they may lose them to competitors who offer a similar product offering. Therefore, it is important for e-commerce providers to study consumer behaviour, cart stacking behaviour and consumer reaction to the threshold for free delivery policy.

Li et al. (2020) state that a threshold for free delivery, or a contingent free shipping policy, together with an add-on recommendation service is very likely to influence a consumer's purchase decision.

1.4 Research questions

1. Why do e-commerce consumers cart stack to meet the threshold for free delivery?
2. How do e-commerce consumers choose to take part in the cart stacking process?
3. Which products will e-commerce consumers include during the cart stacking process to reach the threshold for free delivery?

1.5 Rationale

The threshold for free delivery or contingency for free shipping is a common policy implemented by e-commerce retailers to cover the delivery fees and increase consumer expenditure. However, the consumer's reaction to the policy and the influence on their spending habits has not been explored in the South African e-commerce market. Contributing to the existing literature, this study will discover the impact of threshold for free delivery on Takealot consumers in South Africa.

A threshold for free delivery policy or a contingent free shipping policy will offer free delivery service to consumers whose total spend on the e-commerce platform reaches a specific amount. This policy influences consumers whose cart is currently below the threshold, to increase their spend and therefore achieve free delivery. A consumer's response to this policy depends on their natural demand which refers to the size of their ultimate shopping cart if there were no conditions for free delivery. A consumer who has a pre-intentioned cart, which is a preconceived idea of what they would like to purchase on the platform, that exceeds the minimum threshold for free delivery, is not likely to cart stack. Another consumer may also have a pre intentioned cart that is below the threshold for free delivery and may decide to add products from her natural demand to receive free delivery. This process is referred as order padding or also cart stacking in the context of this study (Hemmati et al., 2021).

This research topic is of interest as it will explore the dynamics of common consumer behaviour for users of e-commerce platforms that have the threshold

for free delivery policy imposed on them. It will be worthwhile investigating how South African consumers react to the policy as every consumer will react differently to said policy. A quantitative research methodology will be adopted in this study in the form of a causal comparative approach.

1.6 Delimitations of the study

Delimitations of this study refer to the factors or terms of research that will not be included or explored by this research report.

i) E – commerce consumers that are outside of South Africa
ii) E – commerce retailers that do not have a threshold for free delivery policy
iii) The return policy of the e-commerce retailer
iv) E – commerce retailers that are not Takealot
v) Delivery timeliness impacted by threshold for free delivery

1.7 Definition of terms

- Cart/ online shopping cart / virtual cart: is a function of an e-commerce platform that allows online consumers to place all the products they would like to purchase before checkout. The cart allows the consumer to review the products, increase or decrease the quantity, read the product

characteristics, and remove a product prior to finalizing the purchase. (Nguyen, 2021)

- Cart stacking: is defined as the act of increasing the products or items in an individual's virtual cart to meet the minimum threshold expenditure to acquire free shipping.

- E – commerce retailer: is an organisation responsible for facilitating the purchase of goods and services, and the transfer of money and data over the internet (Zande, 2020).

- Pre intentioned cart: is a preconceived idea of what an e-commerce consumer would like to purchase on the platform.

- Threshold for free delivery: is a policy that e-commerce retailers enforce that provides a pre-defined minimum value for shoppers to spend to receive free shipping (Huang & Cheng, 2015).

- Takealot: is an ecommerce retailer in South Africa that provides a wide selection of products across electronics, lifestyle, fashion, media & gaming (Takealot, 2011)

1.8 Assumptions

- Respondents will answer the survey truthfully and as honestly as they can. The survey results will be anonymized, and no response will be linked to a specific respondent. This will create trust and reliability for the survey and therefore encouraging respondents to be candid in their response.

- The hypotheses of the study will be tested in a cause – effect style in relation to the threshold for free delivery policy and cart stacking.

- The threshold for free delivery policy is likely to encourage e-commerce consumers to cart stack to acquire free delivery from the platform.

- The researcher will remain independent of the research and will not interfere or influence the results or outcomes of the research.

- The goal is to create a generalization that will contribute to existing literature on cart stacking as a response to a threshold for free delivery policy.

1.9 Chapter Outline

The study will focus on investigating cart stacking as a response to the threshold for free delivery policy implemented by e-commerce retailers in South Africa. The study will reference existing literature and theories that support why e-commerce consumers make the choice to cart stack, how they make the decision to take part in the cart stacking process and which products they will select to include in their virtual cart. The study will also describe the research methodology that will be adopted to investigate this phenomenon. The research methodology will highlight which research approach will be used, the research strategy, sampling method and research instrument that will be used to conduct the research.

CHAPTER 2: LITERATURE REVIEW AND THEORETICAL FRAMEWORK

2.1 Introduction

The literature review of this study will provide greater detail on the existing literature of threshold for free delivery and the concept of cart stacking. The literature review, analytical and theoretical framework will review the theories that support why e-commerce consumers cart stack, how they chose to take part in the process and which products they choose to add to their virtual cart. In this chapter, the hypotheses of the research will also be defined in support of the research questions identified in chapter 1.

2.2 Background discussion

Online customers making use of e-commerce platforms are faced with a delivery policy that requires a minimum spend of x amount to qualify for free delivery or alternatively pay a standard delivery fee. The study explores how the consumer decides on cart stacking or paying the standard delivery fee and why that decision is made.

Threshold for free delivery minimum spend amount is primarily calculated above the average order value a consumer is likely to spend and it is built to motivate an increased expenditure with every purchase. From a retailer's point of view, there is increased revenue margins that are anticipated, and the advantage of the delivery fee being covered by the minimum spend value. Research has shown that e-commerce consumers are adding items to their cart to qualify for free shipping. Although this is common consumer behaviour, Huang & Cheng (2015) also identifies that a threshold for free delivery policy does not increase the order frequency of a consumer and may even deter them from making a purchase due to the minimum spend amount stipulated. (Huang & Cheng, 2015)

Literature has identified the existence of this phenomenon and has generated theories that support the decision making of the e-commerce consumer in this regard. This literature review will give sight of the theories that past researchers have formulated in support of the mental processes a consumer goes through to make decisions.

2.2.1 Why do e-commerce consumers cart stack to meet the threshold for free delivery?

This discussion will focus on the reason why consumers cart stack and the theory that supports this consumer behaviour.

Prospect Theory

The original authors of prospect theory, D. Kahneman and A. Tversky, define the theory as “a descriptive model of decision making under risk”. The authors describe the theory as decisions made by an individual’s association to the value of loss or gain in relation to a reference point. An individual is likely to place weights on the available options or when faced with a decision and is likely to choose the weighted option that will generate more perceived value. (Kahneman & Tversky, 1979) Many authors have adapted, modified, and rejected the principles of prospect theory but for the purpose of this study it is relevant to support the decision making of e-commerce consumers in relation to the threshold for free delivery policy.

On the premise of prospect theory, the value in the perspective of the consumer is determined by their frame of reference which is informed by how they perceive loss and gain and from past purchase experiences. Consumers being charged a standard delivery fee assume that all consumers are incurring this cost and will pay it to complete the purchase. Consumers experiencing the threshold for free delivery policy perceive that if their purchase is below the threshold, they experience a loss as they will have to pay for delivery, and if the purchase is

above the threshold, they experience a bonus or a discount as they will not pay for shipping. (Koukova et al., 2011)

Prospect theory provides the understanding that people interpret an outcome to a decision as either a gain or a loss relative to a reference point. This perception is also likely to attach a weighting to the gain or loss experienced and both may be different. When a consumer is faced with a decision to make, they are likely to measure the risk based on the gain or loss that will be because of that decision made. A consumer is likely to select a choice based on the perceived value that it will provide. (Abdellaoui et al., 2007) Prospect theory states that the consumer's choice is likely to change if the perceived value of the outcome will change, and if the risk is in the form of a perceived loss. The theory also states that changes in the benefit, in relation to the reference point, influence the perceived value. The reference point also evolves over time and with every decision faced and a choice may be made using multiple reference points. Prospect theory also considers that an individual's reference point will be influenced by their income, the perceived gain and time factors. (Nwogugu, 2005)

Prospect theory has greatly influenced the behavioural model of risky decision making but does not completely define the whole concept. Risky decision making is also influenced by the cognitive aspects of an individual, past experiences and human errors that they have experienced. Risky decision making is defined as decision behaviour imposed on individuals in a risky context. In risky decision-making scenarios, the outcomes and their relative consequences are known. Emotions are present in everyday situations, whether a decision is made consciously or unconsciously, and individuals are likely to first express emotion before evaluating the information at hand. Where prospect theory is concerned, the effect of emotions is subjective to the perceived value of the situation, the weighting provided on the decisions to be made, and value of loss or gain to a reference point. (Prietzel, 2019) In the analysis of risk methods, prospect theory has been used to illustrate that there is a varied preference of risk that individuals possess, and this will ultimately influence their decision making (Zheng et al., 2023).

Edwards (1996) outlines the principles of prospect theory that were proposed by Kahneman and Tversky. The first principle highlighted is the certainty effect, which states that individuals allocate a greater weight in a scenario where the probable outcomes are known in comparison to a lesser weight where the probable outcome is unknown. The certainty effect introduces risk aversion from individuals faced with the risk of loss or gain. The second principle is the isolation effect, which states that an individual is likely to disregard options or outcomes that are similar and selects the outcome that is different. The reference point of the outcome or option will determine the individual's choice. The third principle is the reflection effect which contrast positive and negative outcomes of a decision and stipulates that negative prospect are a mirror reflection of positive prospects. The prospect theory is a combination of all the mentioned principles, and it asserts that an individual's decision making is based on what they perceive as a loss or gain to a reference point and decision weights. Kahneman and Tversky, have also developed a two-phase model used in scenarios that will have monetary outcomes. The two phases are the editing phase and the evaluation phase. The editing phase consists consist of four sequential factors namely coding, combination, segregation, and cancellation. Coding starts the process by setting a reference point and measuring all gains and losses imposed by the situation. Combination is made up of the accumulation of probabilities associated with the same result. Segregation separates the risky options from the non-risky options. Cancellation removes the options that are common or similar. The evaluation phase requires the individual to decide on what prospect is of most value to them based on the conclusion of the editing phase. (Edwards, 1996)

In conclusion, the prospect theory highlights that a consumer is likely to cart stack if they perceive it as a gain and have allocated a higher weight to that decision.

Hypothesis 1

H1: If a consumer perceives cart stacking as a gain rather than a loss, the more likely they are to cart stack.

2.2.2 How do e-commerce consumers choose to cart stack during an e-commerce journey?

This section of the study focuses on how consumers make the choice to cart stack during their purchase journey and the theories that supports this behaviour.

Script theory

Script theory is a psychology theory that describes human behaviour that creates a pattern as a script and the environment in which the script occurs as a scene (Sam, 2013). Script theory suggests that human memory is based on past experiences that are referred to when an individual is faced with a similar scenario or event. It is a knowledge that is introduced to an individual as they encounter new experiences in new environments and are subsequently creating scripts. An individual finding themselves in the same situation that they have experienced before is likely to use a script to behave in that situation as they have experienced it before. As new experiences are experienced by the individual, new scripts are being written. (Leonard, 2002) Script theory, which has also contributed to thematic analysis, is a useful tool for identifying extraordinary and ordinary experiences since it collects a wide range of information in an unbiased manner (Bigne et al., 2020)

Optimal stopping theory

Optimal stopping is a theory associated with an individual's choice to select a time to stop a search once they have reached maximum result or to minimize the cost of searching (The University of California, n.d.). Optimal stopping theory is a probability theory that conditions an individual's decision to stop in a search process. The individual observing a process is likely to stop once they have minimized the cost of process or have achieved maximize gain from the process. (Vannestål, 2011).

Hedonism

Hedonism is a phenomenon that believes that pleasure is the leading emotion that governs an individual's decision making. Hedonism typically considers the pleasure of an action or decision greater than values and fairness of the action. (McCombs School of Business, 2013). Hedonism is also defined as seeking pleasure in an activity, decision, or situation that one is faced with (Dietz, 2018). In the context of the study, a consumer who enjoys the process of searching for items on an ecommerce platform is considered hedonic.

Hypothesis 2

H2: If a customer's pre intentioned cart is less than the minimum threshold for delivery, they are likely to cart stack to avoid paying for delivery.

In conclusion, a consumer who has cart stacked before is likely to participate in the process again as they have created a script on the scenario, and this would be the application of script theory. A consumer implementing optimal stopping theory may stop the search process for cart stacking items once they have maximized the result and have minimized the cost. A consumer who finds pleasure in the process of searching for items online may choose to cart stack. This consumer is said to be implementing hedonism.

2.2.3 Which products will e-commerce consumers include in their cart stacking to reach the threshold for free delivery?

This discussion will focus on which products a consumer is likely to add to their cart to reach the threshold for free delivery.

Image theory

Image theory is a decision-making model that suggests that the decision maker at a point in time, when faced with a decision, will organize their thinking in the scenario into 3 ideas or images. The three images are the value image, the

trajectory image, and the strategic image. The value image will consist of the individual's ethics and morals that govern their behaviour. These influence how the individual will decide and will direct their internally generated goals and plans for implementation. The principles will serve as a determinant to the individual once they are presented with external stimuli. The trajectory image consists of the individual's view of their ideal future, it is an extended view of a distant point in time. The strategic image consists of plans that have been adopted to address the trajectory image or future. The action plans to achieve goals are called tactics and the anticipation of a plan is called a forecast. The individual may change their decision when presented with new information or if there are changes in the environment. The realization of how people should act and how things should be is the main reason behind the whole process. (Beach, 1998)

The image theory highlights two types of decision that a user will be faced with, namely the adoption decisions and the progress decisions. The adoption decisions refer to acceptance or rejection of the contributions to the trajectory or strategic image. Adoption decisions are divided into screening decisions and choice decisions. Screening decisions involves eliminating options that are not suitable in a scenario by measuring them against the three images. Choice decisions involves choosing the best option in relation to the three images and according to the appeal of the consequences of the decision. The progress decision is an assessment of compatibility between the forecasted future and the ideal future provide by the trajectory image. Incompatibility will result in a rejection of the decision. (Beach, 1998)

Author Dunegan (1993), states that image theory is the substance for compatibility images between expected and experienced events. Once there is a discrepancy in the compatibility, an individual is likely to go into a more conscious state of examination of lower-level information contained in the problem space. When compatibility is prevalent in the problem space, further examination is not required, instead, action will be taken consistent to the decision-maker's images. If there is no significant discrepancy, a decision – maker is likely to continue with

a decision intuitively and routinely without further analysis of the information. (Dunegan, 1993)

Script Theory

As discussed in section 2.4.1 script theory is the process of creating memories and referencing them when faced with the same or a similar scenario. Script theory is also relevant in responding to the research question of which products a consumer will use to cart stack.

Hypothesis 3

H3: If a customer is cart stacking, they are likely to select products that they have purchased before to fill their cart.

In conclusion, image theory supports that a consumer may select products to cart stack based on what they deem is necessary to fulfil their trajectory image. When a consumer is making purchase decisions, they are currently in a strategic image state preparing for the trajectory image. A consumer who finds themselves in a similar situation will utilise script theory to select products. For example, the purchasing of face masks had become a script for consumers as we were in a pandemic and masks were mandatory.

2.3 ANALYTICAL FRAMEWORK

The analytical framework of this study will include the theoretical framework and the conceptual framework which will further discuss cart stacking as a response to free delivery threshold in South African e-commerce.

2.3.1 Theoretical Framework

The theoretical framework of this study will refer to 2 equations that explain the research aim and the theories explained in the literature review. It will include the

important variables of the study in ratios to illustrate the factors that will determine whether cart stacking will occur or not.

$$\frac{pre\ intentioned\ cart + impulse\ cart}{free\ delivery\ threshold} > 1\ \neq cart\ stacking$$

The above equation illustrates the ratio that, if a consumer's pre intentioned cart plus their impulse cart divided by the free delivery threshold is greater than 1, cart stacking will not occur. This is caused by the total cart exceeding the threshold for free delivery thus giving the consumer free delivery as they have exceeded the threshold. This consumer will not be faced with a decision of cart stacking or paying for delivery as they will automatically get free shipping. The consumer will exercise optimal stopping theory once they have found the item they have intended to purchase or once they have minimized cost and maximized result in their impulse buy search process.

$$\frac{pre\ intentioned\ cart + impulse\ cart}{free\ delivery\ threshold} < 1\ = delivery\ fee\ OR\ cart\ stacking$$

The above equation illustrates the ratio that, if a consumer's pre intentioned cart plus their impulse cart divided by the free delivery threshold is less than 1, the consumer will either pay for delivery or cart stack. The Script theory may apply in this case on a consumer who has purchased multiple times and has paid for delivery and to a consumer who often shops on e-commerce platform and ensures that their cart always meets the threshold for free delivery. The prospect theory also applies here in relation to what a consumer considers a gain rather than a loss, whether it is paying for delivery or increasing the cart to obtain free delivery.

2.3.2 Conceptual Framework

The conceptual framework of this study will illustrate the different customer journeys an ecommerce consumer may embark on, the point in which the research constructs are occurring and the theories that support the decision making of the consumer in the process.

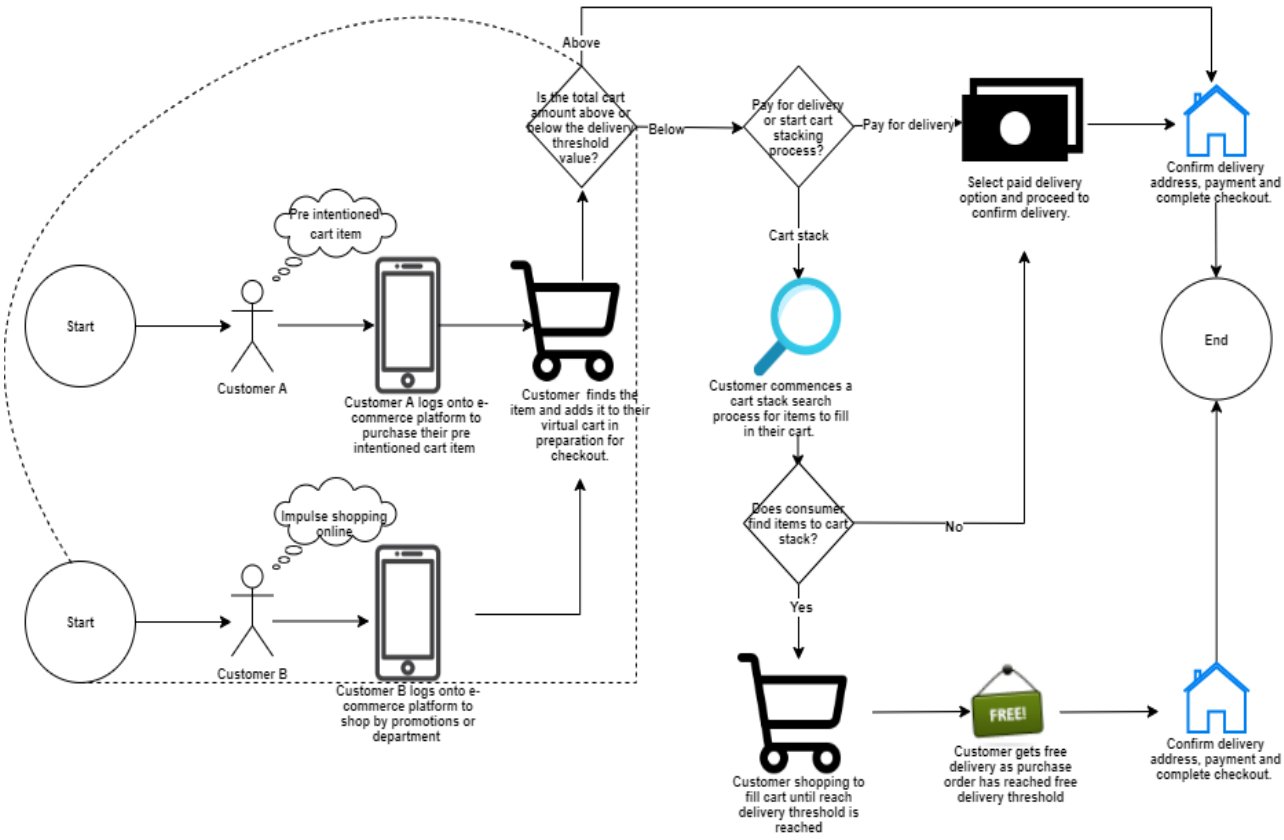


Figure 1: Customer journey for e-commerce consumer

The below table is a narration of the customer journey and the relevant theories from the literature review that are relevant to the customer journey action.

Table 1: Customer journey narrative and relevant theory

Customer Action	Relevant Theory
1. Customer A has an idea of what they would like to purchase on an e-commerce platform before they proceed to login. (Pre intentioned cart item)	
1.1 Customer B does not have an idea of what they would like to purchase. They are impulse shopping and initiating the customer journey with no pre intentioned cart item.	Hedonism
2. Customer A logs onto the platform and searches for their pre intentioned cart item.	Script theory
2.1 Customer B log onto the platform and shops by promotions or by department.	Prospect theory
3. Customer A finds the pre intentioned cart item and adds it to their shopping cart.	Script theory
3.1 Customer B finds the impulse purchase item and adds it to their shopping cart.	Script theory
4. The first decision block is determining whether the total cart value is above or below the delivery threshold. 4.1 If the total cart amount is above the delivery threshold, customer will automatically get free delivery and complete checkout process. OR 4.2 If total cart amount is below delivery threshold, the customer will be faced with a decision of either paying for delivery or cart stacking.	
5. The second decision block is determining whether the customer would like to cart stack or pay for delivery. 5.1 Pay for delivery: Customer pays for delivery, completes checkout process, and chooses not to cart stack. OR 5.2 Cart stack: Customer chooses to initiate the cart stacking process.	Prospect theory

Customer Action	Relevant Theory
6. Customer commences the cart stack search process for items to fill in their cart.	Optimal stopping theory
7. The third decision block is determining whether the customer finds items to cart stack with. 7.1 No - Customer pays for delivery, completes checkout process. 7.2 Yes – Customer continues shopping to fill cart until delivery threshold is reached.	Image theory
8. Customer gets free delivery as total cart has reached the free delivery threshold. 9. Customer confirms delivery address, confirms order payment, and completes checkout process.	Prospect theory

2.4 Conclusion of Literature Review

In summary, the literature review has provided a reference from existing literature supporting why consumers make the decision to cart stack, how they would choose to cart stack and which products would they use to fill in their carts. The answer to the 'why' is supported by prospect theory which supports that an individual will decide based on what they perceive as a gain rather than a loss. To answer the 'how' question, the literature review references script theory which suggests that an individual may decide based on a past experience or a script they have created. The literature review also references the optimal stopping theory to answer the 'how'. This theory suggests that an individual will stop a search at a point where they have minimized the cost and maximized value. To answer the 'which' question, the literature review references image theory which categorises an individual's decisions into images and suggests that an individual will decide based on the compatibility of past experience and future expectations. Three hypotheses have been generated to support the research questions:

Hypothesis 1

H1: If a consumer perceives cart stacking as a gain rather than a loss, the more likely they are to cart stack.

Hypothesis 2

H2: If a customer's pre intentioned cart is less than the minimum threshold for delivery, they are likely to cart stack to avoid paying for delivery.

Hypothesis 3

H3: If a customer is cart stacking, they are likely to select products that they have purchased before to fill their cart.

CHAPTER 3: RESEARCH METHODOLOGY

3.1 Introduction

The research methodology chapter will highlight how the research was conducted and how the hypotheses were tested. The research was investigating cart stacking as a response to free delivery threshold in the South African e-commerce industry. The data was collected in the form of a survey that was distributed electronically to respondents. The data was anonymized and analysed using correlation analysis and regression analysis. Inferential statistics and linear comparison were also used to analyse the data and generate results.

3.2 Research approach

The research approach for this study is quantitative as the study will require data to be collected to support the research purpose and address the research questions. Quantitative research can be used to test for causal relationships between two variables and can generalize results to wider populations. This study implements correlational research which investigates a relationship between two variables. (Bhandari, 2020) The research site used for this study is one of South Africa's e-commerce platforms, Takealot. The study will take a causal comparative approach as the aim is to analyse whether there is a cause – effect relationship that exists between the threshold for free delivery policy and cart stacking.

A quantitative research approach will allow for neutrality and accuracy in the data that will be collected as the nature of the data collection requires close ended questions. However, a quantitative approach will also impose limitations as the close ended questions have pre-defined answers, and the respondent may not feel represented by the options. (Mander, 2017).

3.3 Research design

The overall study design or research instrument that was used for this study is a survey that was completed by users of the Takealot platform. The survey was cross – sectional survey which refers to data collected at a particular point in time which is the year 2022. A survey is appropriate for this study as it collects data from Takealot users who share their experience on their decision making during a purchase process. Surveys are a good research instrument as they are reliable, secure and allow the respondent to complete at their own discretion without the pressure of the researcher. Surveys are adaptable in their structure as the questions can be formulated in different ways to generate a response from the respondent.

Surveys allow for the collection of data from a large group of people which strengthens the statistical ability of the results, however obtaining the necessary sample to complete the survey may be a challenge as individuals may be averse to completing surveys (Jones et al., 2013).

3.4 Data collection methods

Data for the study has been collected in the form of a survey which was distributed to users of the Takealot platform. A survey is a tool that can generate a significant amount of data that will be used as a representation of the sample of the study. The survey was completed by Takealot users located in different geographical locations in South Africa as the distribution was electronic. The structure of the survey questions was prepared to induce answers that guide the respondent in answering the research questions. The survey required respondents to answer honestly on their experience of the Takealot platform.

3.5 Population and sample

The population that is relevant to this study are users of the Takealot platform. Currently, Takealot has over 1.8 million users registered on their e-commerce

platform. For this study, a sample of 385 users was surveyed to make a generalization of the results. Takealot only serves South Africa therefore, the sample and survey was limited to consumers who make use of the platform in South Africa.

Sample size of 385, from a population of 1.8 million was calculated using the below formula:

$$\frac{(Z-score)2\ x\ StdDev\ x\ (1-StdDev)}{(margin\ of\ error)2} = \frac{((1.96)2\ x\ 5(5))}{(0.5)2} = 385\ respondents$$

Population

The research site for the research is Takealot which is a South African e-commerce retailer which was launched in June 2011. The population for study is registered users of the Takealot platform, particularly users that have made a purchase or purchases on the Takealot platform, whether it's on the web or on the application.

Sample and sampling method

The targeted sample for the study was 385 Takealot users and both nonprobability and probability sampling methods were used. The population for the study is residents of South Africa who are registered on the Takealot platform and make purchases. A simple random sampling method was used where members of the population were selected at random to participate in the survey via the Witwatersrand email channel to students. From a nonprobability perspective, respondents from the researcher's network, shared the link with their friends and colleagues to start a snowball sampling process to provide the data. A target sample of 385 users was a sufficient sample to make a generalization on the overall population.

3.6 The research instrument

The research instrument that was used for this study is a survey that was developed in Qualtrics. The survey was structured such that it was eliciting feedback from the users to address the three research questions. The survey consisted of 13 questions, and the last three questions of the survey was requesting demographic information from the respondent. The data collected from the survey was anonymized, meaning respondents were not required to enter any personal details that will identify who they are. The survey was aimed at prompting users to provide the necessary decision making that takes place during their purchase journey on the Takealot platform. The focus was mainly on the consumers' behavioural elements of the purchase journey, particularly cart stacking behaviour. The survey was web based and accessed by users with a smartphone, pc or laptop. The survey also requested respondents for their demographic information including age, gender, and race. A consent letter was provided to the respondent with information on the research, what their rights are and how the data will be used.

3.7 Procedure for data collection

Data was collected by approaching the respondents directly and requesting them to complete the survey. The link to the survey was shared to respondents via email, via instant messaging platforms and via Witwatersrand email to reach students. The data was collected from respondents within my network who shared the link with their acquaintances and thus initiating snowball sampling. The aim of the snowball sampling technique is to increase the reach of the survey in efforts to establish the 385 respondents (Explorable.com, 2009).

3.8 Data analysis strategies and interpretation

The data collected during the survey research was analysed using inferential statistics. Inferential statistics aims to establish a causal or linear relationship between variables (Paltridge & Phakiti, 2015). The variables in this study are the

threshold for free delivery policy and cart stacking behaviour. Correlation analysis, within inferential statistics, is relevant for this study as it measures the relationship between two variables, scientifically. Additional to correlation analysis, regression analysis further analyses whether there is a cause and effect between the two variables. This also relevant to the study as we aim to understand whether cart stacking is a response to the threshold for free delivery policy. (Jansen & Warren, 2020).

3.9 Possible limitations and challenges of the study

- The study is only limited to South Africa.
- Obtaining 385 research survey respondents.
- The outcome of the study will be generalised.
- The outcomes of the study will be based on what has been plotted on the survey which is limited in its nature.

3.10 Quality Assurance

Quality assurance for the study was based on the reliability and validity of the research design and the survey as a research instrument. Validity in a study refers to how successful the research findings are in representing the rest of the population that was not part of the targeted sample (Patino & Ferreira, 2018).

External validity

External validity refers to the degree to which the results of a study are generalizable to the population. It represents the truth of the study in real and the extent to which the results characterise the population. To ensure external validity, a broad criterion of respondents with characteristics that best describe the population is necessary. (Patino & Ferreira, 2018)

This study sufficiently represented the population as all Takealot users were considered and none were discriminated against.

Internal validity

Internal validity refers to the degree to which the results represent the truth in the population and are not impacted by methodological errors. Internal validity may be put at risk by the selection of the respondents or the errors in measurement. Internal validity represents the truth in the study. The absence of internal validity will result in inconclusive conclusions and thus rendering the results invalid. (Patino & Ferreira, 2018)

To ensure internal validity in this study, adequate planning and quality controls have been implemented to ensure that the applicable research instrument (survey), the appropriate data collection methods and the correct sample size has been deployed.

Reliability

Reliability describes the consistency of a measure in quantitative research. It states that if the research instrument is reliable, a respondent can take the survey multiple times and still get the same result. Reliability can be measured through stability, equivalence, and homogeneity. (Heale & Twycross, 2015)

To ensure reliability in this study, the use of scales was adopted in the survey and some questions were negatively phrased.

3.11 Ethical considerations

The following ethical considerations were implemented for the purpose of this study:

- The research ensured that the respondent is aware that participation in the survey research is voluntary and can opt out of the process at any point in time.
- The respondents were requested to provide consent to the survey and were informed on the purpose, benefits, risk and how the data will be used.

- Anonymity was maintained in the research survey. All questions did not require responses that will identify a respondent's identity.
- Confidentiality was sustained and all data was anonymized to ensure that respondents are not identifiable.
- All potential physical, social, or mental harm was kept at a minimum.
- All research conducted is referenced and free of plagiarism and all results were accurately documented.

Table 4. Consistency table: research questions, propositions, data collection and data analysis

RQ #		State Research Question	Hypothesis #	Hypothesis	Data collection detail	Data analysis method
1.		Why do e-commerce consumers cart stack to meet the threshold for free delivery?	1.	H1: If a consumer perceives cart stacking as a gain rather than a loss, the more likely they are to cart stack.	Survey (Q9)	Linear Comparison
2.		How do e-commerce consumers choose to take part in the cart stacking process?	2.	H2: If a customer's pre intentioned cart is less than the minimum threshold for delivery, they are likely to cart stack to avoid paying for delivery.	Survey (Q6, Q7, Q8, Q11)	Correlation analysis & Regression analysis
3.		Which products will e-commerce consumers include during cart stacking to reach the threshold for free delivery?	3.	H3: If a customer is cart stacking, they are likely to select products that they have purchased before to fill their cart.	Survey (Q10, Q11)	Linear comparison

CHAPTER 4: PRESENTATION OF RESULTS

4.1 Introduction

This chapter will present the results that have been generated by the survey that was distributed, in relation to the hypotheses that were discussed in chapter 2. Three research questions have been inquired for the study and three hypotheses were produced from the research questions. This chapter will discuss how the sample that was contacted has responded. The dependent variable for this study is the threshold for free delivery, which is R450 for Takealot. The independent variables include the respondent's cart intention, cart stacking and the pre intentioned cart. In a cause-and-effect relationship, the independent variable is the cause, in this case the respondents reaction; and the dependent variable is the effect, which is the threshold for free delivery. (Thomas, 2020) Other variables that have been measured are participants demographics and the product categories that a respondent would regularly shop from. The demographics that were asked include age, gender, and ethnicity.

This chapter will also present the demographic profile of the respondents and the results that were drawn from the data collected from the respondents. The research question and hypotheses will be stated and thereafter, the results will be presented.

4.2 Demographic profile of respondents

The survey has been distributed to respondents in South Africa who make use of the e-commerce platform, Takealot. Below are the demographics of the respondents.

Table 4: Gender demographics table

Gender	Frequency	Percentage
Female	123	75,5%
Male	36	22,1%
Non – binary	1	0,6%
Prefer not to say	3	1,8%

Table 5: Age demographics table

Age	Frequency	Percentage
18 - 29	67	41,6%
30 - 45	85	52,8%
45+	9	5,6%

Table 6: Ethnicity demographics table

Ethnicity	Frequency	Percentage
Asian	1	0,6%

Black	131	81,4%
Indian	4	2,5%
Other	1	0,6%
White	24	14,9%

4.3 Results pertaining to Hypothesis 1

H1: If a consumer perceives cart stacking as a gain rather than a loss, the more likely they are to cart stack.

Cart stacking has been defined as increasing the products in on individual's cart to meet the minimum expenditure threshold implemented by an e-commerce retailer to acquire free shipping. Hypothesis one has been designed to answer the first research question which queries why e-commerce consumers cart stack. In the survey, respondents were requested to list the intention of each of their cart items. There were 3 options to choose from namely, 'added to cart because you liked the item', 'added to cart to reach delivery threshold of R450, and 'Intended to buy before initiating purchase journey'.

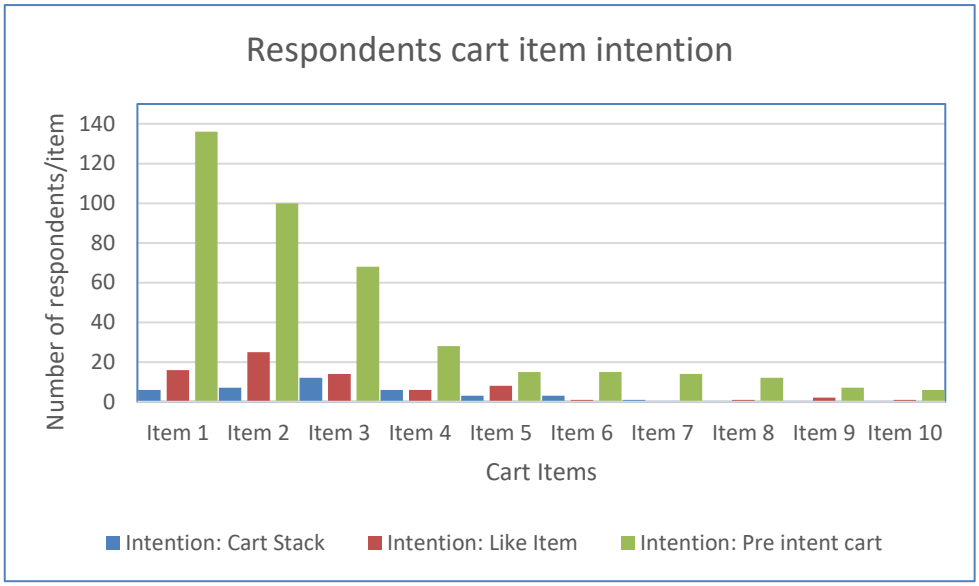


Figure 2: Bar graph illustrating respondent cart item intention

The results of this research question, as illustrated by the bar graph, indicate that the overall percentage of respondents adding items to their cart to cart stack is 7.4%, respondents adding items to their cart because they like the item is 14.4% and lastly respondents adding items to their cart because it is a pre intentioned cart item is 78.2%. These findings suggest that the majority of respondents only add pre-intentionally chosen goods to their carts, and that the majority of respondents do not engage in cart stacking.

4.4 Results pertaining to Hypothesis 2

H2: If a customer's pre intentioned cart is less than the minimum threshold for delivery, they are likely to cart stack to avoid paying for delivery.

The Pearson's R correlations was executed to measure whether a correlation exists between a respondent's pre intentioned cart and the decision to cart stack.

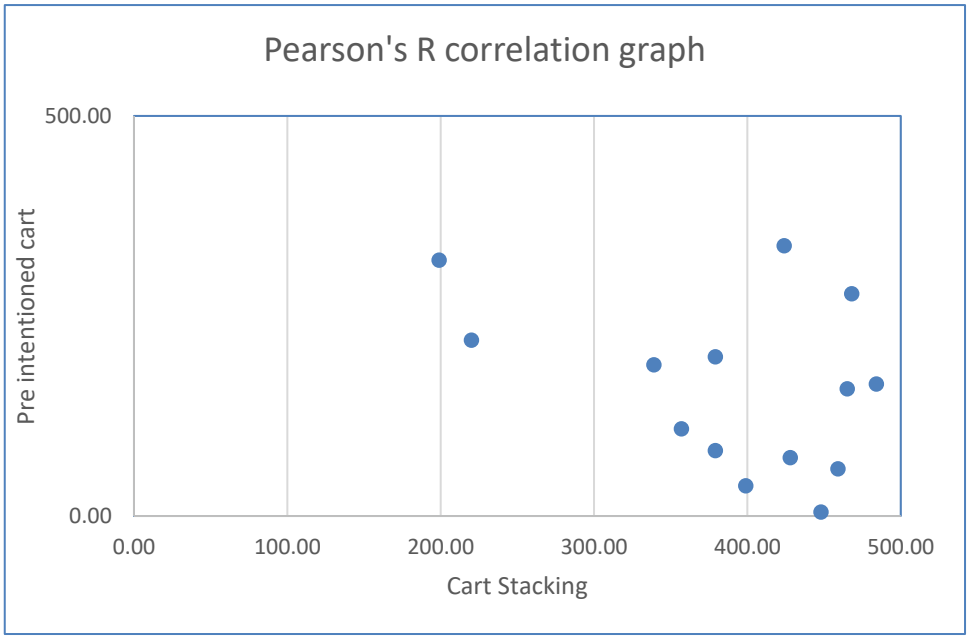


Figure 3: Pearson's R correlation coefficient between a respondents pre intentioned cart and cart stacking

The correlation coefficient is a measure that describes the relationship between two variables. This hypothesis suggests that there is a relationship between a respondents pre intentioned cart and the probability of them cart stacking. The relationship further entails that if the pre intention cart is less than the threshold for free delivery (R450), then there is a high probability that the respondent will cart stack. The calculated correlation coefficient for this relationship is (-0,3651). This suggests that there is a negative correlation between the two variables, which indicates that if a consumers' pre intentioned cart is less than R450, the consumer may not cart stack as there is a negative relationship between the two variables.

A regression analysis was also completed to test the relationship between the pre intentioned cart and the threshold for free delivery.

SUMMARY OUTPUT

Regression Statistics	
Multiple R	0,0328911
R Square	0,0010818

Adjusted R Square	-0,0056223
Standard Error	4676,8499
Observations	151

ANOVA

	df	*SS*	*MS*	*F*	*Significance F*
Regression	1	3529562	4E+06	0,16137	0,688477
Residual	149	3,3E+09	2E+07		
Total	150	3,3E+09			

	Coefficients	*Standard Error*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*	*Lower 95,0%*	*Upper 95,0%*
Intercept	2461,9603	380,597	6,4687	1,3E-09	1709,896	3214,024	1709,896	3214,024
Threshold for free delivery	0	0	65535		0	0	0	0

The regression statistics of the analysis include multiple R, R square, adjusted r square and standard error. The multiple R statistic for this analysis is (0,032891129) which the correlation coefficient of the relationship. The result of 0,03 is an indication that there is a negative relationship between the two variables. The result is closer to zero than it is to 1. The R squared is the coefficient of determination, which stipulates the points that fall on the regression line. In the case of the pre intentioned cart and the threshold for free delivery, only 1% of the regression line fits the data. The variables do not influence each other. The adjusted R squared will not be taken into consideration as it is only used for multiple regression, in this case, simple linear regression is being used. The standard error is (4676,849947) which represents the confidence interval for the predicted values. Significance F (0,688476922) suggests that the hypothesis should be rejected, there is no correlation between the two variables.

4.5 Results pertaining to Hypothesis 3

H3: If a customer is cart stacking, they are likely to select products that they have purchased before to fill their cart.

The respondents were asked if they frequently use the Takealot platform to make repeat purchases. According to the findings, 45,2% of respondents indicated that they agree with the statement, while 54,8% disagreed.

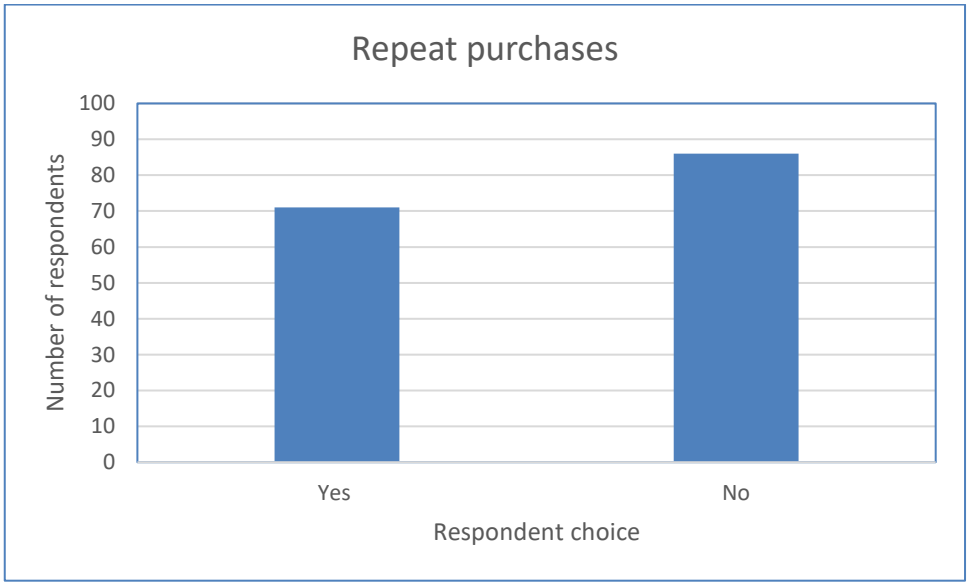


Figure 4: Bar graph illustrating the results for repeat purchases

The below table is an indication of the total number of products purchased in each product category on Takealot. Home & Kitchen is the category that had the most purchases with a total of 126 items purchased. Gaming and vouchers were tied at the lost with both 2 purchases respectively.

Table 3: Takealot product category and items purchased

Takealot category	Total items purchased
Baby & Toddler	27
Beauty	79
Books	45
Cameras	3

Camping & Outdoors	3
Cell phones & Wearables	54
Computers & Tablets	34
Fashion	24
Gaming	2
Garden, Pool & Patio	13
Health	13
Home & Kitchen	126
Luggage & Travel	11
Music	8
Office & Stationery	29
Pets	3
Sport	16
Toys	14
TV, Audio & Video	20
Vouchers	2

4.6 Summary of the results

The survey findings that were provided by the Takealot respondents were depicted in Chapter 4. Each hypothesis was presented in the chapter along with the survey's extrapolated results. This chapter mainly served as a summary of the results without elaborating on their significance. Chapter 5 will cover the interpretation of the results in line with the literature review. Hypothesis 1 results have illustrated that respondents mostly add items to their cart as pre intentioned cart items rather than cart stacking. Hypothesis 2 results demonstrate that there is a negative relationship between a respondents pre intentioned cart item and their decision to cart stack. Hypothesis 3 has shown that there is a significant number of respondents that make repeat purchases on Takealot, however, majority of the sample doesn't.

CHAPTER 5: DISCUSSION OF THE RESULTS

5.1 Introduction

This chapter will discuss the results generated in chapter 4 in context to the literature review of the report. The findings will either confirm or disprove the theories highlighted in the literature. This chapter will begin with providing demographic details of the respondents that have completed the survey. They will be categorized according to race, age and ethnicity as requested in the survey. This chapter will then proceed to discuss the results according to each hypothesis and relative to the literature.

5.2 Discussion pertaining to Hypothesis 1

H1: If a consumer perceives cart stacking as a gain rather than a loss, the more likely they are to cart stack.

Prospect Theory

Hypothesis 1 is related to research question 1 which is questioning why consumers cart stack to meet the threshold for free delivery. The next question in the study asked participants about their motivations for choosing to add products to their carts. As the results suggest, majority of respondents have added pre intentioned items to their cart. As Prospect theory suggests, an individual is likely to make a decision based on the perceived value of the outcome. Individuals assess outcomes of their decision making as either a gain or a loss, and the risk measured of that decision. (Abdellaoui et al., 2007) The first hypothesis aimed to prove that individuals perceive cart stacking as a gain and are likely to influence their decision making towards it. The results, however, have shown that only 7,4% of the respondents perceive cart stacking as a gain and are likely to make that decision when shopping on Takealot. Majority of the respondents (78,2%) initiate the purchase journey with a pre-determined idea of what they would like to purchase and conclude it in that manner. This group of

respondents allocates value, in this purchase journey, on items that they have already thought of purchase prior to logging on to the Takealot platform. Another portion of respondents (14,4%), allocates value to hedonism, as they have selected items for their cart because they have come across the product on the platform and have liked the product.

5.3 Discussion pertaining to Hypothesis 2

H2: If a customer's pre intentioned cart is less than the minimum threshold for delivery, they are likely to cart stack to avoid paying for delivery.

Script theory

Hypothesis 2 is related to research question two which questions how consumers choose to cart stacking during an e-commerce journey. The Pearson's R correlation coefficient measured the correlation between a consumers pre intentioned cart and their cart stack and found a negative correlation between the variables. Script theory suggests that an individual is likely to make the same decision if they are in a situation that have been in before. Humans create mental scripts of scenarios they have been in and will decide in the same manner should they find themselves in the same or similar scenario. (Leonard, 2002) Although there is no correlation between the two variables, it is possible that respondents purchase behaviour is aligned with their mental scripts. If a consumer has always paid for delivery on Takealot, they may continue to do so irrespective of their total cart amount. This also applies to consumers who add items to their cart to reach the threshold for free delivery, they may make this decision based on existing script. The latter unfortunately forms a small percentage of the sample.

Optimal stopping theory

Optimal stopping theory refers to the phenomenon of an individual stopping a search process once they have maximized its gain or minimized the cost of the search (Vannestål, 2011). In relation to the hypothesis, the regression analysis

has shown that a consumer's pre intentioned cart is not related to the threshold for free delivery which will in turn trigger the cart stacking process. This theory suggests that if a consumer has found the items in their pre intentioned cart, they are likely to check the cart out to complete the purchase whether it has reached the threshold or not. The threshold for free delivery therefore does not greatly impact consumers. Once they have found what they are looking for, they are likely to conclude the purchase process.

Hedonism

Hedonism refers to the feeling of pleasure an individual experiences when making a decision or taking part in an activity (Dietz, 2018). The study has illustrated that most of the respondents initiate contact with the Takealot platform to purchase an item that they have been thinking about. Only 14,4% of the sample have added items to their cart because they liked the item. These respondents find enjoyment in browsing on Takealot to come across items that they like. Respondents of this nature will add items to their cart without regarding the threshold for free delivery.

5.4 Discussion pertaining to Hypothesis 3

H3: If a customer is cart stacking, they are likely to select products that they have purchased before to fill their cart.

Image theory

Image theory is a model that concludes that individuals base their decisions on three images which are the value image, trajectory image and the strategic image. The value image is related to an individual's ethics and morals, the trajectory image is related to an individual's view of the future and the strategic image consists of the plans necessary to achieve the trajectory image. (Beach, 1998). The results for hypothesis 3 have illustrated that 45,2% of the sample make repeat purchases on the Takealot platform yet, 54,8% do not. These two

groups have different purchasing habits, yet they can both use image theory to inform their decision making. A consumer can go through all three images when making a decision to purchase on Takealot. When making repeat purchases, the same process will apply, which refers to script theory.

5.6 Conclusion

Chapter 5 has discussed the results and the meaning thereof and has referenced the literature that was discussed in chapter 2 of the report. According to hypothesis 1, it has been concluded that most of the respondents add items to their cart because they have initiated the purchase journey with an idea in mind. They do not necessarily add items to their cart to avoid paying for delivery. As prospect theory suggests, this behaviour occur because consumers perceive their pre intentioned cart as more valuable than cart stacking. According to hypothesis 2, a correlation was measured between a consumer's pre intentioned cart and cart stacking. A negative correlation was found and therefore there is no relationship between the two variables. Although there is no correlation between these two variables, it is possible for consumers to still implement script theory, optimal stopping theory and hedonism during their purchase journey. According to hypothesis 3, most of the respondents that have completed the survey do not cart stack. As image theory suggests, individuals will add items to their cart according to what is necessary to fulfil their trajectory image. A consumer who makes repeat purchases is exercising script theory.

CHAPTER 6: CONCLUSIONS & RECOMMENDATIONS

6.1 Introduction

In this chapter, the research questions, hypotheses, and the results will be concluded. Recommendations will be provided to Takealot and suggestions for further research will be stipulated.

6.2 Conclusions regarding research question 1

RQ1: Why do e-commerce consumers cart stack to meet the threshold for free delivery?

The research results have shown that e-commerce consumers are not likely to add items to their cart for the purpose of cart stacking. Alternatively, they are more likely to add items to their cart as items that they have pre intentioned prior to initiating the purchase journey. There are also several consumers that take part in impulse shopping by adding items to their cart because they liked the item. However, there is a number of consumers who add items to their cart to meet the delivery threshold, but they do not form majority of the sample. Prospect theory suggests, individuals will align their decision making based on what they deem as valuable. This study has shown that Takealot users value pre intentioned carts more than cart stacking and making impulsive purchases.

6.3 Conclusions regarding research question 2

RQ2: How do e-commerce consumers choose to cart stack during an e-commerce journey?

E-commerce consumers choose to add items to their cart at a point when they feel they have maximized gain and minimized loss, as optimal stopping theory suggests. E-commerce consumers may also add items to their cart as a repetitive task when making a repeat purchase, as script theory suggests. E-commerce

consumers also choose to add items to their cart as a they receive pleasure from the process of shopping, as hedonism suggests. The hypothesis has aimed to find a correlation between a pre intentioned cart and cart stacking and negative relationship was produced by the two variables. Consumers will choose to cart stack based on one or more of the theories, not because their pre intentioned cart is less than the threshold for delivery fee of R450.

6.4 Conclusions regarding research question 3

RQ3: Which products will e-commerce consumers include in their cart stacking to reach the threshold for free delivery?

The hypothesis to test this research question was aimed at proving that consumers are likely to make repeat purchases on the Takealot platform. This is in alignment with script theory. The results have shown that there are several consumers that does make repeat purchases but most of the sample is likely to make once off purchases on the platform. The results have also shown that the home & kitchen category of Takealot has the highest purchases, with gaming and vouchers having the lowest. As the previous research questions and results have shown, e-commerce consumers are not cart stacking to reach the delivery threshold.

6.5 Recommendations for practitioners

I would recommend that Takealot keep their threshold for free delivery policy as it does not deter consumers from making purchases and does not completely influence their purchase behaviour. Consumers will likely checkout their carts to conclude their purchases even in instances when the total cart value is below the threshold.

E-commerce providers, who utilize the policy, should retain the threshold for free delivery policy as the research illustrates that it minimally impacts consumers decision making. E-commerce providers may adopt this policy to generate

revenue or to streamline delivery costs. The state of the economy also plays a role in the fluctuation of the threshold amount; therefore, e-commerce providers should also factor this in when making the decision to implement the policy.

Cart stacking as a phenomenon should be studied more by e-commerce providers as it influences a portion of the population. E-commerce providers should ensure that their product catalogue allows for consumers to take part in cart stacking. This includes smaller items of smaller amounts which will allow a consumer to select in order to reach the threshold. It is imperative for providers to have a diverse product and pricing catalogue in support of the cart stacking phenomenon.

E-commerce providers who do not have a threshold for free delivery policy and either have no delivery or fee or a stand amount as a delivery fee are encouraged to consider implementing a threshold for free delivery policy. This may increase the spend amount for consumers who do participate in cart stacking and increase the number of products purchased on the platform. The e-commerce providers introducing this threshold for free delivery must ensure that it is communicated and is clear to the consumers at all relevant touch points in the consumer journey.

Lastly, e-commerce providers are encouraged to further study factors that influence consumer's decision making during the e-commerce journey, to ensure that they are providing the best experience for the consumer. These factors may range from perceived value, delivery timelines, return policy etc.

6.6 Suggestions for further research

Further research can be done to explore how e-commerce consumers react to policies implemented on the e-commerce platforms. Research on cart stacking and the threshold for free delivery can be explored into other industries that have a different product offering such as food delivery services or clothing and accessories. This research can also be expanded to other markets outside of South Africa with an e-commerce model that has a threshold for free delivery.

Researchers can also investigate whether people's purchase patterns or decisions would alter if the delivery price depended on cart value.

In-depth qualitative research can also be explored by researchers to better understand the thoughts, behaviours and actions that a consumer takes during an online shopping experience, particularly in relation to the threshold for free delivery policy. The qualitative research angle will provide an individual’s end to end decision making from logging on to the platform to check out. Qualitative research will afford researchers more detailed information and opinions and will avoid generalization of the results. Researchers can also take a mixed method approach on this topic, combining both qualitative and quantitative research with the purpose of comparing the results of both methods thereof.

Researchers can investigate longitudinal experiments, which call for sending follow-up questionnaires to the sample as an experimental intervention. In this method, researchers may examine both the sample's initial condition and the effects of interventions in a single research report. Due to data being collected at several points in time, the researcher is more likely to be able to identify causal correlations between variables.

Exploratory research is another option that researchers can apply to this research construct by conducting focus group interviews to explore what factors influence e-commerce consumers purchase behaviours or purchase decisions. This method will assist researchers to determine the imperative variables or issues for their research. Exploratory research is especially suitable in assessing research that has not been studied before and is relevant to the threshold for free delivery policy context.

REFERENCES

Abdellaoui, M., Bleichrodt, H., & Paraschiv, C. (2007). Loss Aversion Under Prospect Theory: A Parameter-Free Measurement. Management Science, 53(10), 1659–1674. https://doi.org/10.1287/mnsc.1070.0711

Beach, L. R. (1998). Image Theory: Theoretical and Empirical Foundations. In Google Books. Routledge. https://books.google.co.za/books?hl=en&lr=&id=oTORAgAAQBAJ&oi=fnd&pg=PP1&dq=what+is+image+theory&ots=HaNDHHnBts&sig=JgqtH7KK53dXbcHn8dPI_ssA90w&redir_esc=y#v=onepage&q=what%20is%20image%20theory&f=false

Beach, L. R., & Mitchell, T. R. (1987). Image theory: Principles, goals, and plans in decision making. Acta Psychologica, 66(3), 201–220. https://doi.org/10.1016/0001-6918(87)90034-5

Bhandari, P. (2020, June 12). What is quantitative research? | definition, uses and methods. Scribbr. https://www.scribbr.com/methodology/quantitative-research/

Bigne, E., Fuentes-Medina, M. L., & Morini-Marrero, S. (2020). Memorable tourist experiences versus ordinary tourist experiences analysed through user-generated content. Journal of Hospitality and Tourism Management, 45, 309–318. https://doi.org/10.1016/j.jhtm.2020.08.019

De Klerk, S., & Kroon, J. (2005). E-commerce adoption in South African businesses. South African Journal of Business Management, 36(1), 33–40. https://doi.org/10.4102/sajbm.v36i1.618

Dietz, A. (2018). Explaining the Paradox of Hedonism. Australasian Journal of

Philosophy, 97(3), 497–510. https://doi.org/10.1080/00048402.2018.1483409

Dunegan, K. J. (1993). Framing, cognitive modes, and image theory: Toward an understanding of a glass half full. Journal of Applied Psychology, 78(3), 491–503. https://doi.org/10.1037/0021-9010.78.3.491

Edwards, K. D. (1996). Prospect theory: A literature review. International Review of Financial Analysis, 5(1), 19–38. https://doi.org/10.1016/s1057-5219(96)90004-6

Explorable.com. (2009, April 24). Snowball Sampling - Chain Referral Sampling. Explorable.com. https://explorable.com/snowball-sampling

Gunasekaran, A., Marri, H. B., McGaughey, R. E., & Nebhwani, M. D. (2002). E-commerce and its impact on operations management. International Journal of Production Economics, 75(1-2), 185–197. https://doi.org/10.1016/s0925-5273(01)00191-8

Heale, R., & Twycross, A. (2015). Validity and Reliability in Quantitative Studies. Evidence Based Nursing, 18(3), 66–67. https://ebn.bmj.com/content/ebnurs/18/3/66.full.pdf

Hemmati, S., Elmaghraby, W., Kabra, A., Smith, R., & Jain, N. (2021). Design of Contingent Free Shipping Policy: The Role of Return Environment.

Huang, W.-H., & Cheng, Y.-C. (2015). Threshold free shipping policies for internet shoppers. Transportation Research Part A: Policy and Practice, 82, 193–203. https://doi.org/10.1016/j.tra.2015.09.015

Huang, W.-H., Shen, G. C., & Liang, C.-L. (2019). The effect of threshold free shipping policies on online shoppers' willingness to pay for shipping.

Journal of Retailing and Consumer Services, 48, 105–112. https://doi.org/10.1016/j.jretconser.2019.01.015

International Trade Administration. (2021, September 11). South Africa - ECommerce. Www.trade.gov. https://www.trade.gov/country-commercial-guides/south-africa-ecommerce

Jansen, D., & Warren, K. (2020, December 1). Quantitative Data Analysis Methods & Techniques 101. Grad Coach. https://gradcoach.com/quantitative-data-analysis-methods/

Jin, F., Gao, F., & Li, J. (2019). Impact of Free Shipping Threshold on PC and Mobile Channels: Evidence from an Online Retailer. SSRN Electronic Journal. https://doi.org/10.2139/ssrn.3426616

Jones, T., Baxter, M., & Khanduja, V. (2013). A Quick Guide to Survey Research. The Annals of the Royal College of Surgeons of England, 95(1), 5–7. NCBI. https://doi.org/10.1308/003588413x13511609956372

Kahneman, D., & Tversky, A. (1979). Prospect Theory: An Analysis of Decision under Risk. Econometrica, 47(2), 263. https://doi.org/10.2307/1914185

Koukova, N., Srivastava, J., & Steul-Fischer, M. (2011). The Effect of Flat Shipping Fee and Free Shipping Threshold on Consumer Evaluations.

Leonard, D. C. (2002). Learning Theories, A to Z. In Google Books. Greenwood Publishing Group. https://books.google.co.za/books?id=nNcoAO5Za9YC&pg=PA166&dq=script+theory+Roger+Schank&hl=en&sa=X&ved=2ahUKEwjYhc3Jq7T4AhWXQUEAHf6jCpwQ6AF6BAgGEAI#v=onepage&q=script%20theory%20

Roger%20Schank&f=false

Li, C., Chu, M., Zhou, C., & Xie, W. (2020). A 2020 perspective on “Is it always advantageous to add on item recommendation service with a contingent free shipping policy in platform retailing?” Electronic Commerce Research and Applications, 40, 100960. https://doi.org/10.1016/j.elerap.2020.100960

Mander, J. (2017, July 14). Qualitative & Quantitative Research Methods. GWI. https://blog.gwi.com/trends/qualitative-vs-quantitative/

McCombs School of Business. (2013). Hedonism - Ethics Unwrapped. Ethics Unwrapped. https://ethicsunwrapped.utexas.edu/glossary/hedonism

Nguyen, S. (2021, October 1). Online Shopping Cart - How does it work? Mageplaza. https://www.mageplaza.com/blog/online-shopping-cart-how-does-it-work.html

Nwogugu, M. (2005). Towards multi-factor models of decision making and risk. The Journal of Risk Finance, 6(2), 163–173. https://doi.org/10.1108/15265940510585824

Paltridge, B., & Phakiti, A. (2015). Research Methods in Applied Linguistics: A Practical Resource. In Google Books. Bloomsbury Publishing. https://books.google.co.za/books?hl=en&lr=&id=wU69CAAAQBAJ&oi=fnd&pg=PA27&dq=data+analysis+strategies+for+quantitative+research&ots=swV6usHKMk&sig=y7kIfQz7cbwstUcRrr1-cjV4zJw#v=onepage&q=data%20analysis%20strategies%20for%20quantitative%20research&f=false

Patino, C. M., & Ferreira, J. C. (2018). Internal and external validity: can you

apply research study results to your patients? Jornal Brasileiro de Pneumologia, 44(3), 183–183. https://doi.org/10.1590/s1806-37562018000000164

Prietzel, T. T. (2019). The effect of emotion on risky decision making in the context of prospect theory: a comprehensive literature review. Management Review Quarterly, 70(3), 313–353. https://doi.org/10.1007/s11301-019-00169-2

Sam, N. (2013, April 28). What is SCRIPT THEORY 1? definition of SCRIPT THEORY 1 (Psychology Dictionary). Psychology Dictionary. https://psychologydictionary.org/script-theory-1/

Takealot. (2011). About - Takealot.com. Takealot.com. https://www.takealot.com/about/our-journey

The University of California. (n.d.). OPTIMAL STOPPING AND APPLICATIONS Chapter 1. STOPPING RULE PROBLEMS.

Thomas, L. (2020, May 20). Independent and dependent variables. Scribbr. https://www.scribbr.com/methodology/independent-and-dependent-variables/

Vanneståℓ, M. (2011). Optimal stopping and the American put under incomplete information.

Villa, E., Ruiz, L., Valencia, A., & Picón, E. (2018). Electronic Commerce: Factors Involved in its Adoption from a Bibliometric Analysis. Journal of Theoretical and Applied Electronic Commerce Research, 13(1), 39–70. https://doi.org/10.4067/s0718-18762018000100104

Weichbroth, P., & Kubiak, B. F. (2016). Cross-And Up-selling Techniques In E-

Commerce Activities.

Zande, J. V. (2020, January 19). What is e-commerce? Definition, benefits, examples. The Future of Customer Engagement and Experience. https://www.the-future-of-commerce.com/2020/01/19/what-is-e-commerce-definition-examples/

Zheng, Q., Liu, X., Wang, W., Wu, Q., Deveci, M., & Pamucar, D. (2023). The integrated prospect theory with consensus model for risk analysis of human error factors in the clinical use of medical devices. Expert Systems with Applications, 217, 119507. https://doi.org/10.1016/j.eswa.2023.119507

APPENDIX A – Participant information sheet

UNIVERSITY OF THE WITWATERSRAND, JOHANNESBURG

Private bag 3 Wits, 2050

Fax: 0270865536132

Tel: 027117178007

Dear Participant

As a busy individual in the current digital age, you are likely to make use of e-commerce platforms to facilitate your online shopping. E-commerce comes with many advantages which includes shopping for items and having them delivered in the comfort of your home. Many individuals make use of Takealot to purchase a variety of items from their different departments, that assist with their daily lives. There is a lot to understand within e-commerce, especially when it comes to the threshold for free delivery policy. Online consumers are likely to have different responses to the threshold for free deliver policy imposed by e-commerce retailers. If you are a Takealot user, could you kindly participate in this survey that explores cart – stacking as a response to the threshold for free delivery policy. The survey will take about 10 - 15 minutes of your time.

https://qfreeaccountssjc1.az1.qualtrics.com/jfe/form/SV_6PArmy7ij3Mj5SS

My name is Yolisa Mayaba, a Masters student in Digital Business at the University of the Witwatersrand, Johannesburg. As part of my studies, I must undertake a research project, and I am investigating cart stacking as a response to free delivery thresholds in South African e-commerce under the supervision of Prof. Gregory Lee. The aim of this research project is to find out whether e-commerce consumers are likely to react by cart stacking towards a threshold for free delivery policy.

There will be no personal costs to you if you participate in this project. You will not receive any direct benefits from participation and there are no disadvantages or penalties if you do not choose to participate or if you withdraw from the study. You may withdraw at any time or not answer any question if you do not want to. The online survey will be completely confidential and anonymous as I will not be asking for your name or any identifying information, and the information you give to me will be held securely and not disclosed to anyone else. I will be using a pseudonym (false name) to represent your participation in my final research report.

If you have any questions during or afterwards about this research, feel free to contact me on the details listed below. This study will be written up as a research report which will be available online through the university library website. If you have any concerns or complaints regarding the ethical procedures of this study, you are welcome to contact the University Human Research Ethics Committee (Non-Medical), telephone +27(0) 11 717 1408, email hrecnon-medical@wits.ac.za

Yours sincerely,

Yolisa Mayaba

Researcher: Yolisa Mayaba, 558953@students.wits.ac.za, 0791363212

Supervisor: Prof. Gregory Lee, Gregory.Lee@wits.ac.za

APPENDIX B – Participant consent form

UNIVERSITY OF THE WITWATERSRAND, JOHANNESBURG

Private bag 3 Wits, 2050
Fax: 0270865536132
Tel: 027117178007

Title of project: Investigating cart stacking as a response to free delivery thresholds in South African e-commerce.

Name of researcher: Yolisa Mayaba

I, …….., agree to participate in this research project. The research has been explained to me and I understand what my participation will involve. I agree to the following:

(Please circle the relevant options below).

I agree that my participation will remain anonymous	YES	NO
I agree that the researcher may use anonymous quotes in his / her research report	YES	NO
I agree that the information I provide may be used anonymously after this project has ended, for academic purposes by other researchers, subject to their own ethics clearance being obtained.	YES	NO

…… (signature)
…… (name of participant)
…… (date)

…… (signature)
…… (name of person seeking consent)
…… (date)

APPENDIX C – Qualtrics Survey



Takealot Survey
Yolisa Mayaba 55895