

Cognitive Factors Affecting Consumer Purchase Decisions

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ABSTRACT

This study aims towards exploring the effect of cognitive factors towards influencing consumer purchase decisions. This study mainly focuses on the two distinct decision-making routes and also includes the factor of post purchase regret that gives us a complete understanding of how previous experiences affect future consumer purchase behaviour. This research has seventeen independent variables: Sustainable Behaviour, Intuition Pathway, Analytical Pathway, Post-Purchase Regret, Promotion and Discount, Cost Consideration, Demographic Factors, Online Reviews, Word of Mouth, Product Origin, Product Presentation, Shopping Environment, Mood Based Buying, Open-Mindedness in Consumers, Customer Service, Product Feature and Customer Experience. Further it also has two mediator variables Social Image and Brand Loyalty that significantly influence the independent variables and the dependent variable purchase decision.

This study analysed 354 responses collected through an online survey by quantitative research methodology. This study further used a mixed method approach by using random forest to predict the dependent variable purchase decision and multiple regression models to understand the influence of various predictor variables on consumer purchase decision. From the results of this study, it can be found that word of mouth and online reviews significantly impact purchase decisions. Additionally, it was found that analytical decision-making pathway is positively linked to post purchase regret, while it was also found that high income individuals are less likely to experience any regret. Both intuitive and analytical decision-making styles influence purchase decisions but the extent to which they are used vary across situations. It was also confirmed that brand loyalty and social image play a significant role in the relationship between consumer behaviour and purchase decisions.

Overall, this study proves all the proposed nine hypotheses recognising major cognitive factors that influence customer purchase decisions. The innovative approach of this study combines different decision-making pathways and confirms the interrelationships between various independent variables, mediating variable and the dependent variable that is the final purchase decision by contributing to both academic literature and practical real-world implications. Finally, this research addresses the limitations in the current methodology and suggests recommendations for future studies to enrich the understanding in this field.

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CHAPTER 1: INTRODUCTION

1.1 Research Background

Decision making processes has been the topic of debate for centuries and many researchers have delved into understanding how human psychology, emotions and behaviour affect the decision-making process. Traditional Consumer decision making theories assume that consumers adopt a linear and rational process while making decisions by gathering decisions, evaluating diverse options, and finally making choices. They were unable to address the complex and dynamic nature of real-world decision-making scenarios which involves biases, unforeseen events, emotions, cognitive limitations, etc. (Futia, 1977). The decision-making process in customers initiates due to needs like any personal necessity, goal, any sudden problem, etc. It can be further triggered by external factors like advertisement, peer influence and environmental changes. Next, they start seeking information from their memory about products or services that might solve their problem. When internal information is insufficient, they seek for additional information from external sources like family, friends, acquaintances, product ratings, advertisements, company sales stunts, social media bias, etc.

Further customers establish criterions like price, quality, technology, etc. to evaluate various opinions available. From various available alternatives customers narrow down their choices to a small set of options that meet their evaluation criteria. Based on the evaluation of alternatives, consumers make up their minds to buy a product or service that is influenced by various additional factors like product availability, promotional offers or discounts, financial constraints, etc. According to a study by Brindha & Parameswaran (2017) they identified five stages in the consumer decision making process: recognising the problem consumers are facing, search for information, evaluation of alternatives, making purchase decisions and their post purchase behaviour.

The reviews from social media and peer reviews provide consumers with valuable information to make better choices but it can also lead to data overload (Hu & Krishen, 2019). Gu, Park, and Konana (2012) through their research found that external word of mouth such as social media review blogs by influencers about that product, personal review of a previous customer or online reviews are a critical component that influence consumer decisions and the sales of retailers (Gu, Park, & Konana, 2012).

1.2 Aim of the Research

The aim of this research is to comprehensively investigate the cognitive factors that affect consumer decision making process. By integrating various consumer behaviour theories this study aims towards developing a holistic understanding of how these factors shape consumer choices in various contexts The research will also explore how the different modern elements and cognitive biases like (e-WOM) electronic word of mouth, mood-based purchase, brand loyalty, social image and online reviews influence consumer decisions and enhance satisfaction.

1.3 Research Questions

The proposed research questions are as follows:

- 1. What role does online reviews and word of mouth play in influencing the decisions of consumer?
- 2. What impact does post purchase regret have on future purchasing behaviour, and how can businesses mitigate its effects?
- 3. Are there significant differences in the decision-making styles of younger versus older consumers, and how do factors like income and education influence these styles?
- 4. What are the primary cognitive factors and decision-making styles influence consumer purchase decisions?
- 5. How do promotions and discounts affect consumer decision making process?

1.4 Research Objectives

The following are the research objectives of the dissertation:

- 1. To explore the interaction between internal cognitive factors and external stimuli in consumer decision making process.
- 2. To examine how promotions or discounts and product features influence consumer perceptions and purchase decision process.
- 3. To investigate the effect of demographic differences on consumer decision making process.
- 4. To identify and explore the key cognitive factors that influence consumer purchase decisions.
- 5. To investigate the role of post purchase regret on future purchase decisions.

1.5 Research Structure

This dissertation that illustrates the topic of Cognitive factors affecting consumer decision making process is divided into six chapters. Chapter 1 is going to introduce the research background, research aim, research questions and objectives. The chapter 2 is going to present the literature review and critically analyse the definitions and theories and provide an overview of various cognitive factors that affect consumer decision making process. Further this chapter is going to present the research model and propose research hypothesis. Chapter 3 is going to outline the methodology, including research design, data collection and analysis. Chapter 4 is going to provide the findings of the analysis and test the proposed hypotheses. Chapter 5 is going to discuss theoretical contributions and practical implications of this study. Finally, Chapter 6 is going to conclude with the insights of the study, limitations and recommendations for future research. Further appendices and references are going to support the study with supplementary material.

CHAPTER 2: LITERATURE REVIEW

This chapter gives a comprehensive overview of the theories relevant to the subject of study, cognitive factors affecting consumer decision making process. The first section 2.1 defines all the related theories and rest of the sections 2.2 to 2.7 further introduce the variables of the study and propose the hypothesis for this paper and explain them in detail. The eighth section 2.8 involves the construction of the research model and finally the last section 2.9 gives the entire summary of the presented literature review.

2.1 Consumer Decision Making Theories

Initially according to classical economic theories, it was assumed that consumers always act rationally and always try to get maximum benefit out of everything and try to take decisions to get the best possible results. This idea supports most of the traditional economic theories which suggest that consumers carefully consider the pros and cons of each decision (Jarboui & Boujelbene, 2012). Later numerous studies have highlighted inconsistencies in actual human behaviour highlighting that consumers do not act rationally as previously proposed by these classical theories. These anomalies encouraged researchers towards conducting research to recognise numerous factors that trigger intuitional or irrational decision making in consumers (Kaya & Tanış, 2019). Further Customer Behavioural Study emerged as a new field of study which contradicted the traditional theories and provides a clear picture about how psychological, cognitive, cultural, and social factors influence economic decision-making process of consumers (Knoll, 2010). Utility Theory which is one of the foundation stones of consumer behaviour study and economics proposes that consumers always act rationally and take decisions that maximise their satisfaction and overall happiness they obtain compared to other alternative options.

Prospect theory developed by Daniel Kahneman and Amos Tversky contradicts the utility theory by suggesting that consumers often deviate from the rational decision-making path due to various cognitive biases. It further examines how individuals experience the pain of losing something more intensely compared to the pleasure of gaining something even if the gains are substantial (Kahneman & Tversky, 1979; Thaler, 1980).

According to the dual process theory consumers make decisions with a combination of both intuitive or spontaneous judgement also called (System-1) and deliberative or rational processes also called (System-2) (Samson and Voyer, 2012). Intuitive decisions are rather quick, based on the pure gut feeling of consumers rather than following a path that involves analysing information to make rational data influenced decisions. The dual process model in consumer psychology introduces ideas regarding how persuasion, attitude change and buying behaviour affect customer decisions. Furthermore, this theory gives us an idea regarding interplay between intuitive and reflective mindset in consumers and how they respond to marketing messages, product evaluation and online reviews to make purchase decisions based on heuristic and systematic processing (Ruiz-Mafé, Chatzipanagiotou, & Currás-Pérez, 2018).

Lye et al. (2005) In their paper proposed the decision wave theory as a solution to address their shortcomings of traditional decision-making models. They proposed that consumers follow a multi-phase process influenced by both internal factors such as brand loyalty, personal preferences and psychological states, and external factors such as advertisements, customer reviews, market condition and social influences rather than following a straightforward process. Further Bettman, Luce, & Payne (1998) proposed the constructive consumer choice processes model that states that consumers never have any fixed choices while making decisions. This model highlights that consumer decisions are more flexible and can change depending on the context and complexity of the available situation (Bettman, Luce, & Payne, 1998). Based on the above literature review the following hypothesis is proposed:

H1: Both intuitive and analytical decision-making styles coexist during consumer decision making process however, the extent to which these styles are employed varies significantly.

The relationship between product features and brand image affects the consumer perception about a product. According to the product feature theory by Campbell & Keller, (2003) consumers often perceive the value of a brand based on the features of the product they offer. Further Hoch & Ha, (1986) in their study found that enhanced product features such as upgraded functionality, aesthetics, and technological advancements elevates the perceived brand image that leads to greater consumer trust. Additionally, the research by Rompay & Pruyn (2011) also underscores that the visual product features positively affect consumer brand perception. Tran & Fabrize (2015) have also found that product attributes significantly

influence consumer purchase decision making process. From the above literature the following hypothesis is made:

H2: Product features have a significant positive impact on brand image, such that improvements in product features are associated with enhanced consumer perceptions of the brand.

2.2 The Role of Cognitive and Emotional Influences

Decision making is a complex process, and human emotions can sometimes play a significant role when cognitive resources of an individual such as attention, memory, problem solving skills, reasoning, etc. are limited due to which they are unable to think clearly and take decisions out of emotional triggers. In their study Shiv and Fedorikhin (1999) argued that when cognitive resources are constrained humans rely on emotions for decision making rather than engaging in thorough rational analysis. This phenomenon highlights the impact of emotions in the decision-making process which often overrides the rational thought process (Shiv & Fedorikhin, 1999).

Promotion and discounts significantly impact consumer purchase decision by introducing financial incentives and reducing the perceived risk and urgency. Promotions are effective in influencing the willingness of consumers to purchase the products with low ratings by making them appear as better deals (Kuo & Nakhata, 2016). Additionally, promotions can effectively increase consumer confidence and trigger immediate purchases (Li et al., 2020). Through their study He et al. (2021) have found that time and money influence consumer cognitive processes before they make any kind of practical purchase decision. According to their research consumers are more likely to engage in detailed thinking when marketing messages focus more on time such as how much time or energy a product can save for them or the amount of time they can enjoy a particular service. Whereas they tend to think quicker when marketing messages are related to finances or money such as discounts and price savings. This research can help companies towards designing their marketing strategy based on the fact that, whether they want consumers to take sudden decisions or consider their options carefully (He et al., 2021). Based on the above literature the following hypothesis is proposed:

H3: Promotions and Discounts heavily influence Consumer Purchase Decisions.

2.3 Effect of External factors on Consumer Decisions

In order to completely understand the mechanism behind the decision-making process of consumers it is necessary to understand the crucial role that external influences play in defining consumer choices. According to social influence theory the decisions and behaviour of an individual are often defined by the opinion of people around them such as family members, friends, teachers, social groups, etc. This theory has been supported by many studies such as one by Sheu, Chu, and Wang (2017) that proposes that reference from social groups or friend circle considerably impact the purchase decision of consumers particularly in the case of entertainment and media because it involves the component of social validation by these groups (Sheu, Chu, & Wang, 2017). According to research by Sherman et al., (1997) overall external factors such as shopping convenience, well designed store environment and store atmosphere trigger emotional responses that positively impact consumer purchase decisions. Further have also found that a pleasant store environment enhances the emotional state of customers that lead to higher spending and customer satisfaction (Sherman et al., 1997). In their study Gidlöf et al., (2017) have highlighted that the way products are presented and packaged create a perception of good brand quality and influences consumer attention and purchase decision. By drawing insights from the above literature this paper posits the following hypothesis:

H4: External factors such as (shopping convenience, store environment, packaging, origin of the product, etc) significantly influence consumer purchase decisions.

2.4 Impact of Social Media on Consumer Decision

In this modern era content from digital and social media have become an integral part of the consumer decision making process. Social media marketing plays a significant role in defining consumer decision making behaviour as they act as an interface for interacting and influencing with consumers (Mazeed et al., 2019). From studies it has been found that consumers are strongly influenced by digital environments like social media, online word of mouth, reviews on ecommerce platforms, interactive advertising campaigns on mobile applications, etc and these platforms act as important decisive factors (Stephen, 2016). Digital marketing through channels like online advertisements, social media and search engines lead to electronic word of mouth (eWOM) and hence influence consumer choices (Kurdi et al., 2022). Due to extensive use of the internet by consumers due to change in habits and recent technological advancements

that led to change in digital marketing approach by firms and enhanced consumer experience (İpek, 2019). Voice assistants have changed how people make decisions by narrowing down the options and helping customers choose certain products tailored for them through personalised recommendations based on personal preferences and past behaviour (Melumad et al., 2020). Hence the above context the following hypothesis stipulates that:

H5: Online reviews and word of mouth significantly influence consumer decision-making processes.

2.5 Analysis of Consumer Psychology

Motivation is one of the crucial factors that drive consumers towards buying new products in order to satisfy their needs and desires. Motivation in consumer behaviour is influenced by internal and external factors such as personal goals, emotional state, economic condition, peer pressure, emotions, personal beliefs, etc (Bagozzi, Gurhan-Canli, & Priester, 2002). These kinds of motivations guide consumers throughout the entire decision-making process from realisation of a need to buy a product to final purchase decision. Consumers prioritise their purchase based on the level of need that they are trying to satisfy with basic necessities dominating over sophisticated desires (Pieters & Baumgartner, 2002).

Consumer perception is driven by the way in which information is presented to them through advertisements, the individual's previous experience and pre-purchase expectations (Hoch & Ha, 1986). The opinion of Consumers about a product is one of the crucial factors that affect the decision-making process and is often influenced by the brand reputation and transmitted marketing message by the marketing team of the company (Smith & Swinyard, 1988). In a study it was found that consumer learning occurs mostly through direct experience with the product, indirect experience through the review given by others and the brand image of the product (Alba & Hutchinson, 1987). The frequency of exposure of an individual to a brand changes their perception about the brand leading to an increase in familiarity, favourable attitude, and positive perception towards that brand. This familiarity overtime can lead to brand loyalty (Campbell & Keller, 2003; Zajonc, 2001). Consumers use their memory about past experience to make informed decisions which suggest the crucial role of memory in the decision-making process (Bettman, Luce, & Payne, 1998). From the above insights the study proposes the following hypothesis: H6: Brand loyal consumers favour analytical decision making and are influenced by online reviews while making purchase decisions.

2.6 Socio Cultural and Demographic Influences:

To completely decode the consumer decision making process it is necessary to understand how sociocultural and demographic factors influence consumer choices because they vary across various cultures and demographic groups. According to research by Lee and Kacen, (2008) it was found that cultural norms and level of socialisation affect consumer satisfaction levels and finally their purchase decision.

In a study by Fekete-Farkas et al. (2021) they found that purchase decisions of consumers vary across different age and gender groups. They found that younger consumers engage more in online purchases and both genders male and female exhibited distinct purchase patterns in case of online purchases (Fekete-Farkas et al., 2021). According to a study it was found that demographic factors like income and education are positively correlated with impulsive buying nature while age and gender showed an inverse relationship (Abbas, 2015). According to research by Quevedo, (2019) he found that when young consumers are given time and resources, they are more likely to engage in intuitive purchase decisions. Further Saliagas & Kellaris, (2015) have also found that younger consumers are more susceptible to make impulsive and mood-based unplanned purchase decisions. In addition to that in a study by Antinienė et al. (2021) they found that younger generation consumers who belong to lower income households are more materialistic. They further found that men and women have different psychological pathways in which they link materialistic possession with satisfaction and success. Through their research they concluded that economic background and age drive the values and priorities of a consumer and influence their purchase decision making process (Antinienė et al., 2021). Based on the findings from relevant studies, the subsequent hypothesis is suggested.

H7: Younger consumers are more likely to make intuitive and mood-based purchase decisions compared to others.

2.7 Post Purchase Behaviour and Regret

Understanding the role of post purchase regret is necessary to understand the psychological components influencing the decision-making process in consumers. Consumer satisfaction, brand loyalty and potential future purchase behaviour is completely driven by post purchase

regret. According to research by Cooke, Meyvis, and Schwartz (2001) they found that consumers compare before and after purchase results which completely influences their purchase time. Further they found that information gathered after purchase has more impact on consumer satisfaction than information learned before the purchase is made. Consumer personality traits like openness to experience, extraversion, agreeableness, conscientiousness, and neuroticism decide their post purchase regret (Zulkarnain et al., 2018). According to a study by Cooke et al., (2001) they were found that post purchase regret led consumers to become more analytical in order to avoid similar future regrets. Bui et al., (2011) further added that regretful consumers engage in more analytical thinking in order to ensure they choose a better option while taking future purchase decisions.

Consumer post purchase behaviour is further affected by numerous factors like perceived responsibility, reversibility, and the number of alternatives which lead to their chances of experiencing post purchase regret and further actions like changing brands or intention towards buying again (Moakhar et al., 2018). Post purchase regret can lead to negative effects like reevaluating alternatives and intentions towards switching brands which highlights the impact of post purchase regret on consumer loyalty (Bui, Krishen, & Bates, 2011). In their study Park and Hill's (2018) found that the cognitive energy and resources that a consumer uses while making decisions and after purchase decision justification help consumers reduce regret especially during unplanned purchases that resulted in negative outcomes. The above literature explores the impact of post purchase regret during consumer decision making process and the factors driving it. It is necessary for businesses to reduce post purchase regret in consumers to reduce customer churn. On the basis of the above literature survey the following hypothesis are:

H8: Consumers who experience post purchase regret are more likely to engage in increased analytical decision making while taking future purchasing decisions.

Additionally, individuals who belong to higher income category are better equipped to choose alternatives in order to decrease post purchase regret (Tzeng & Shiu, 2019). Moreover, they have access to quality information and more likely to engage in proper pre purchase analysis that reduces the chances of post purchase regret (Keaveney et al., 2007). Whereas lower income individuals are more likely to experience post purchase regret when they think that better options might have been available because they are unable to properly pre evaluate their

purchase having less access to quality resources and time (Chen et al., 2017). In summary this gives rise to the following hypothesis:

H9: Higher-income individuals are more likely to experience lower levels of post-purchase regret.

2.8 Research Model

The research model explores the influence of various factors on consumer purchase decisions. It explores an intermediate path by integrating both intuitive and analytical decision-making pathways (H1). Further, additional factors like Brand Loyalty (H6), Product Features (H2), Promotions and Discounts (H3), and External Factors (H4) all contribute to these pathways towards shaping the final purchase decision. Additionally Online reviews and word of mouth (H5) significantly impact consumer purchase behaviour. Further the research model gives emphasis on the fact that brand loyal consumers (H6) are likely to prefer analytical decision-making processes when making purchase decisions. Notably younger customers (H7) are more likely to be involved in intuitive and mood driven purchase decisions. Lastly the model suggests that consumers with higher income (H8) experience less post purchase regret and consumers who experience post purchase regret (H9) are more likely to be involved in analytical decision making while making future purchases. These notions are represented in the model below:

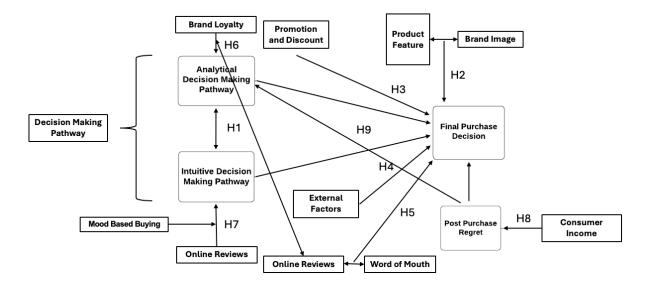


Figure-1: Research Model

2.9 Summary

The classical economic theories initially argued that consumers make rational decisions based on the concept of maximizing utility as discussed in utility theory (Leonov, 2023). However, the succeeding research such as prospect theory underscore the fact that cognitive biases influence purchase decision making. Consumers deviate from rational path when the emotional impact of the loss are greater than the gains (Bushra, 2015). These findings laid the groundwork for future theories such as dual process theory that incorporates intuitive and analytical pathway during the decision-making process (Ruiz-Mafé, Chatzipanagiotou, & Currás-Pérez, 2018). Further the influence of social and environmental components such as online reviews, product presentation, store environment and peer recommendations have shown significant impact on consumer purchase decisions (Zulkarnain et al., 2018). Further post purchase regret plays a crucial role when consumers regret their impulsive purchase decisions due to unfulfilled expectations leading to more careful analytical decision making in future (Zulkarnain et al., 2018). This chapter gives a comprehensive literature review of the decision-making styles, cognitive and external factors that affect the consumer decision making process, based on which nine hypotheses are proposed, based on which a research model is constructed. This study sets itself apart from previous research by taking an exhaustive approach towards understanding the decision-making process in detail by examining how various factors affect the purchase decision.

CHAPTER 3: METHODOLOGY

In the below chapter is going to propose a detailed methodology through which we can prove the nine hypotheses proposed in the above section. This dissertation paper is going to opt for a positivist philosophy in order to proceed further with the study. In Section 3.1 the research philosophy and its scope are properly defined. In section 3.2 the overall design of the study is presented, various independent variables, one dependent variable that is purchase decision, proposed hypothesis of the study and their connection with the research questions are justified. In section 3.3 we are going to discuss the questionnaire design, and which questions measure which variable is going to be discussed. Section 3.4 is going to explore the entire data collection process. Section 3.5 is going to discuss the entire data analysis process. In Section 3.6 the ethical considerations that are discussed and finally the limitations of the study are going to be discussed in section 3.7.

3.1 Research Philosophy

This dissertation study is going to follow the research philosophy of positivism. Positivism philosophy advocates the idea that ensures that research findings can be generalised across various contexts (Bryman, 2008). Positivism emphasises on objective empirical validation and is one of the best methods which is applicable across various contexts (Simonson & Tversky, 1992).

This study involves quantifying cognitive factors that affect consumer decision making process hence this study is following positivism as it uses a standardised scale to measure these factors ensuring the findings are based on empirical data rather than depending on personal interpretation of the data Kahneman & Tversky, 1979). As this paper is aimed towards testing specific proposed hypotheses related to consumer behaviour and the positivist approach allows testing of hypotheses using statistical methods providing straightforward evidence supporting or opposing each proposed hypothesis (Bettman, Luce, & Payne, 1998).

As this paper is going to use a positivist philosophy hence, we are going to use the quantitative analysis method to perform statistical data analysis to find the correlation between various variables and prove our proposed hypothesis (Markus, 2007). This method completely aligns with the method opted by Wirtz and Bateson (1999) who used quantitative methods by allowing empirical data to validate their findings. This study is going to use statistical analysis to understand how various cognitive factors affect the consumer decision making process.

3.2 Research Design

Consumer decision making is a very complex process affected by numerous heuristics, biases, cognitive perceptions and numerous other factors. In order to completely understand consumer behaviour, it is necessary to incorporate multiple theories that give us insight regarding different dimensions consumers consider while making purchase decisions. This research model contains multiple theories to provide a holistic view about how consumers move from initial need realisation till the final purchase decision and the post purchase behaviour. This also includes various emotional, demographic, external and cognitive factors that affect the entire process.

The stimulus organism response model (SOR) is one of the important frameworks that helps us understand how environmental influences trigger cognitive triggers in consumers. This model is aimed towards analysing consumer and surrounding psychology initially proposed by Mehrabian and Russell (1974) who aimed towards analysing how overall store environment and ambience influence the final purchase decision in consumers. According to this model stimuli refers to an external surrounding component that invokes a psychological trigger in an individual. In a study by Donovan and Rossiter (1982) they demonstrated that the atmosphere of a retail store can invoke cognitive stimuli in consumers that can influence them towards either browsing through different products, finally making a purchase decision. The next component in this model is an organism that represents the inner psychological state of a consumer that is influenced by the stimuli. According to research by Eroglu, Machleit, and Davis (2001) they found that online shopping platforms invoke certain emotions in consumers that acts as an intermediary between the external stimuli and internal response that leads to the final purchase decision. The final component is response which is the result of the above two processes that can be either making or avoiding the invoked stimuli. In their study Sherman, Mathur, and Smith (1997) found that positive store ambience can lead to increased chances of making a purchase decision while negative store surroundings lead to avoidance of purchase stimuli in consumers.

The AIDA model also known as Stern's model is one of the crucial models that helps us understand the stages through which consumers go through during the purchase decision making process starting from product awareness till making a purchase (Lewis, 1898). This model is very useful in developing strategies during marketing and advertising aimed towards targeting consumers when they go through this process. The first component of this model is capturing attention of the consumers through flashy taglines, visuals or other different forms

of media. In his paper Lewis (1898) completely discussed how to draw consumer attention through advertisement that is even prevalent in the present day. After capturing consumer attention, the second component is to generate their Interest for that particular product or service by highlighting their advantages, features and how they meet consumer demands. In his research Aaker (1996) discussed how constructing a strong brand equity not only involves capturing consumer attention but also retaining that interest through convincing messages.

Once the consumer has established a convincing interest in a particular product then the third component desire comes into play which can be done by either emotional appeal or by proving the product's superiority over other competitor products. According to a study by Keller (1993) the role of fostering desire through brand associations represents that favourable brand perception can enhance the chances of purchase. The final component of this model is action, it is critical because it converts all prior efforts into action through purchase decision. The above model provides us insights regarding how marketing messages capture consumer attention, generate their interest in that product, triggers desire about owning that product and finally all the previous steps lead to the final purchase, the above steps are critical during consumer decision making process (Prasad, Garg & Prasad, 2019). Based on the above theoretical models nine hypotheses are formulated in the literature review section.

3.3 Questionnaire Design

This survey is aimed towards understanding the cognitive factors that influence the purchase decisions taken by consumers. According to a study by Fowler (2014) they found that the success of a survey highly depends upon the fact that how well defined it is and how clearly it is aligned with its objectives. In order to effectively test my proposed hypothesis based upon my literature review, it is very essential to find a proper data collection method that will not only help me to do a thorough analysis of my hypothesis but also help me accurately measure the dependent variable, that is the purchase decision taken by the consumers. By understanding the limitations of conducting real time social experiments and understanding the lack in quality and number of participants in offline survey scenarios it was necessary to find an alternative data collection method. In order to understand the consumer decision making process I found that online questionnaire surveys are an effective alternative method for collecting data which has been tried and tested by many researchers. Online surveys are very versatile, and they give multiple advantages that include potential to rapidly accumulate data from a diverse demographic population, increased versatile geographical reach and cost affordability (Couper,

2001). This not only increases the inclusivity of the survey by incorporating participants from different time zones but also decreases the carbon footprint by reducing the logistics and other resources involved in the data collection process.

The design of an online survey questionnaire should be clear, concise, and must follow the best practices by aligning with the research objectives. The online survey questionnaire must be well structured, the order of the questions and their layout must be optimised in order to reduce the burden on the participant, reduce the chances of survey fatigue and improve survey completion rates (Dillman, Smyth & Christian, 2014). According to a study by Scherpenzeel and Saris (1997) they found that including numerous broader sense questions in the survey will increase the reliability, quality and validity of data which will further lead to comprehensive analysis of variables. This survey aimed towards understanding the psychology behind purchase decisions in consumers contains five sections: survey Instruction and consent, consumer demographics, consumer purchase scenarios, consumer decision making styles and consumer shopping habits. In the last four sections of the survey a total nineteen variables were measured using 63 questions. A 5-point Likert scale with a range of 1 to 5 was used to measure the questions, with '1' being consumers are unsatisfied with their purchase and '5' being consumers are very satisfied with their purchase.

The Instruction and Consent section of the survey outlines the purpose of the survey, specifies the expectations the eligibility and requirement of participant engagement, promises the confidentiality and anonymity of the collected data, provides contact information of the researcher and the institution in case of any enquiries and finally includes a protocol for participants to give their informed consent. The consumer demographics section contains nine questions exploring various characteristics of the participants which is crucial towards understanding how demographic factors influence consumer purchase decisions. The first section is crucial because it ensures that participants who are below the age of eighteen are not included in the study, as a result excluding individuals who do not meet this age requirement. This is essential towards maintaining the ethical standards of this study. Secondly, the consumer purchase scenario section has three scenarios: grocery shopping, choosing between a sports car and a family car, and buying a smartphone. Each scenario has twelve questions designed to explore the consumer priorities, analyse their decision-making process and understand the factors influencing consumer purchase decisions in different contexts. The third section explores consumer decision making styles across three dimensions: intuition or decisions

driven by gut feelings or instincts, analytical or choices made through proper analysis or logical reasoning and post purchase regret that focuses on how potential regret influences consumer behaviour. This section contains a total of fifteen questions, with five questions dedicated towards measuring each type of consumer decision making style. Lastly, the final section of this survey explores consumer shopping habits by understanding their shopping frequency, repeated purchase likelihood, satisfaction with recent purchases and the influence of consumer mood on their purchase decisions.

Table-1: Table representing all variables and the questionnaire measuring them.

Variable	Measuring Questions	References
	"I prioritize purchasing organic products over	(Joshi & Rahman, 2019)
Sustainable Behaviour	conventional ones."	
	"I choose grocery items that promote sustainability."	(Antošová & Stávková, 2023)
	"The environmental impact of the products is important in my purchasing decisions."	(Carpinelli et al., 2022)
	"I am likely to choose a lesser-known brand if it offers greater features and environmental benefits."	(Chekima et al., 2016)
Intuition Pathway	(Epstein et al., 1996)	
Analytical Pathway	(Epstein et al., 1996)	
Post-Purchase Regret	(Epstein et al., 1996)	
Promotion and	decisions." "I try new products if they are on promotion or discount."	(Širola & Sudac, 2021)
Discount	"Brand promotions or discounts are important factors while making a purchase."	(Komara, 2023)
Gat Gardinati	"I value cost efficiency over luxury while making a purchase decision."	(Komara, 2023)
Cost Consideration	"The cost of a product is a decisive factor when I am making a purchase decision."	(Rahayu, Sugandini, & Wisnalmawati, 2019)

"What is your age?"
"What is your gender?"
"What is the highest level of education you have completed?"

"What is your current employment status?"

"What is your marital status?"

"What is your household's total annual income before taxes?"

"Which of the following best describes your race or

(Malhotra, 2006)

ethnicity?"

"In which region do you currently reside?"

"Do you have any children? If yes, please indicate their

age range(s)."

age range(s)." 'I consider online reviews before making a purchase Online Reviews decision.' (Zhang et al., 2014) "My purchase decisions are influenced by the experiences Word of Mouth and recommendations of others." (Antošová et al., 2023) "Recommendations from friends or family impact my choice." (Antošová, Pšurný, & "The origin (local vs. imported) of the products **Product Origin** influences my purchase decisions." Stávková, 2023). **Product Presentation** "I am influenced by product packaging and presentation (Sanusi, 2022). while making purchase decisions." "Convenience and store environment (e.g., store location, Shopping parking availability, cleanliness, layout, lighting, etc.) are (Rahayu et al., 2019). **Environment** deciding factors while shopping." "How often do you make purchases based on your (Kacen, Hess, & Walker, **Mood-Based Buying** mood?" 2012) "I try new products or brands while shopping." (Nadeem & Siddiqui, **Open-Mindedness in** "I am open to trying new brands that I haven't used **Consumers** 2020). before." "The customer service reputation of the brand affects my (Dwijavanti & **Customer Service** Mutmainnah, 2023) decision." "I value a product's technology and innovation highly while making a purchase decision." **Product Feature** (Sanusi, 2022) "The technical features, design, and aesthetic of a product influence my decision." **Customer Experience** "How satisfied were you with your last online purchase?" (Rahayu et al., 2019) "I consider that my product choice reflects my social **Social Image** (Dagher & Itani, 2014) image." "I think that the product I use defines my societal status." "My past experiences with a brand influence my current (Nadeem & Siddiqui, **Brand Loyalty** product purchase." 2020).

"How likely are you to buy from the same brand/company again?"

3.4 Data Collection and Sampling

3.4.1 Data Collection

For this study titled cognitive factors affecting customer purchase decisions data was collected using an online survey questionnaire. This survey was conducted using Google Forms and distributed across social media platforms and ethical survey websites. This survey was done in the English language to address a wide demographic population. The data collection started with the ethical approval on 29th of July and lasted till 10th of August. During this time period a total of 383 responses were collected out of which 29 responses (approximately 7.2% of the responses) were excluded from analysis because they were submitted by participants below the age of 18. Hence a total of 354 responses were retained for analysis that gives us a data retention rate of 92.4%. This high data response retention rate indicates the inclusive nature of the collected data and signifies that the majority of the collected data was suitable and relevant to be used for study. This robust sample size enhances the reliability of the findings and allows for a comprehensive analysis of consumer behaviour and decision-making process.

3.4.2 Data Sampling

This study has no specific participation requirements but for ethical reasons the participants need to be above 18 years of age that means any individual born on or before June 2006 are eligible to participate in this study (Sanci et al., 2004). This study was conducted through google forms and a participant recruitment post was shared across various social media platforms and ethical research survey sites in order to recruit adult participants who are voluntarily interested to give their responses. The participant recruitment post included information regarding the purpose and aim of the study, the participant eligibility criteria, contact information and the criteria to withdraw their responses from the study.

In this study, a random sampling method was employed to ensure that the sample is a proper representation of the broader population, reducing the chances of potential bias and broadening the application of the outcomes of this study (Babbie, 2016). Random sampling methodology is widely used in studies exploring consumer behaviour because it allows each individual in the target population an equal chance to be selected (Saunders, Lewis, & Thornhill, 2019). The personal information of the participants was not collected during the survey in order to maintain complete anonymity of the study. This was done in order to avoid any kind of interaction with the participants so that identity of participants is not reidentified and to respect their anonymity

and privacy (Mulder, 2014). Thereupon it was ensured that participants data is completely arbitrary and comprehensive, which encouraged more and more participants to participate in the study.

3.5 Data Analysis

The statistical analysis for this study used python as a tool to analyse the collected data, by following a structured approach to explore the relationships between various consumer purchase behaviours and decision-making factors. Before proceeding forward with data analysis, validity and reliability analysis were conducted to ensure the internal consistency of the questionnaire. Initially reliability analysis was done using Cronbach's alpha to evaluate the reliability of the questionnaire (Streiner, 2003). Further, validity analysis was performed using KMO measure and Bartlett's Test that confirms that the variables in the study are sufficiently correlated, and the questionnaire is internally consistent (Nkansah, 2018). After the completion of reliability and validity analysis, descriptive analysis will be performed to understand the distribution of the sample population (Fekete-Farkas et al., 2021). Furthermore, correlation analysis was conducted to explore the relationships between several key variables offering insights into how various variables affect consumer purchase patterns (Campbell & Keller, 2003). Finally numerous regression analysis was conducted to understand the impact of variables on dependent variable purchase decision. These statistical techniques were used to validate different hypotheses and helped in demonstrating how various internal and external factors affect consumer behaviour. Finally, Mediator analysis was performed to understand the effect of mediator variables on the dependent variable and the independent variables. Finally, Mediator analysis was performed using regression analysis and Sobel test to understand the effect of mediator variables on the dependent variable and the independent variables (Mackinnon et al., 2002).

3.6 Ethical Standards

During this study serious attention was given towards ensuring that this study completely adhered with the highest standards of integrity. Initially the survey questions were thoroughly reviewed by the dissertation supervisor to ensure it aligned with the ethical guidelines and after his approval ethical approval was obtained from the University of Bristol ethical approval committee. A compulsory protocol of informed consent was included along with the online survey questionnaire such that only with the positive consent of the participants they were

allowed to participate in the study ensuring that participants are fully aware of their rights, the objectives of the study, and also gave participants the autonomy to withdraw from the study at any time. Along with that the participants were asked to give a unique keyword to their responses and were given a time frame of seven days to withdraw their response with no questions asked with full anonymity. Once the time period was over the keyword was removed and the response was added to the final dataset. Any request after that time period to remove their response was not considered and this clause was clearly mentioned in the participant recruitment post and consent section of the survey. In order to protect the privacy of the participants the study took serious measures to maintain confidentiality of responses given by participants, anonymise their identity and maintain data security. To maintain data security the collected data was stored in a password protected system inside University of Bristol OneDrive to comply with current GDPR and data protection requirements. Finally, after the study is completed, all data collected will be destroyed to maintain data confidentiality and anonymity.

3.7 Limitations of this Study

Even if the study is conscientiously designed to explore the cognitive factors influencing consumer purchase decisions there are several limitations that must be addressed in order to give an exhaustive interpretation of the findings. Firstly, the data collected through questionnaires can introduce social desirability bias, due to which in this case participants give answers that are socially acceptable rather than revealing their true behaviour or thoughts (Podsakoff et al., 2003). Furthermore, they can exhibit memory recall bias which could significantly compromise the accuracy of the data, as the human mind is volatile, and participants may not accurately recall their past decisions or the factors that influenced their decisions (Hassan, 2006). Even if this survey data collection method reduced the overall carbon footprint of this study still due to the lack of qualitative methods like in depth interviews or focus group research which could have complemented the quantitative survey data by offering clear insights into consumer purchase behaviour (Creswell, 2014). This study did not provide any kind incentives to the participants which is one also one of the reasons to decrease the motivation of the participants to properly answer all the questions present in the questionnaire which will in turn impact the quality of the data collected. Additionally excluding consumers under 18 years of age due to ethical considerations, this study missed out the insights that it could have obtained about purchase behaviour of younger consumers who have a distinct cognitive process as compared to adults.

CHAPTER 4: DATA ANALYSIS AND FINDINGS

The below chapter presents the results of statistical analysis that are divided into nine main sections. The Initial section of this chapter 4.2 and 4.3 are going to focus on reliability and validity analysis to test reliability and internal consistency of the survey questionnaire. Further section 4.4 is going to focus on descriptive analysis of the demographic population. Section 4.5 is going to conduct correlation analysis in order to understand the correlation between various variables. Additionally, section 4.6 is going to delve into consumer perception analysis and section 4.7 is going to analyse the dependent variable the customer purchase decision. Furthermore, Section 4.8 is going to conduct regression analysis in order to prove the proposed hypotheses. Lastly, Section 4.9 is going to conduct mediation analysis of brand loyalty and social image on overall consumer satisfaction using regression analysis.

4.1 Reliability Analysis

Reliability analysis is crucial in research as it helps in accessing the consistency and stability of the measuring survey questions, a high reliability implies that the questions will measure the same result through multiple iterations ensuring that they are reliable for the study (Bashir & Marudhar, 2018). Cronbach's alpha is one of the most widely used measures for quantifying internal consistency reliability. This analysis was done on total 60 questions and the results are represented in the table below:

Table 2: The below table represents the results of reliability analysis.

Number of Items	Cronbach's Alpha
60	0.934797

From the above table it can be found that reliability analysis was conducted on a set of 60 questions and their Chronbach's alpha coefficient was found to be (0.934797) which is higher than (0.8). Hence it can be concluded that the questionnaire has an internal consistency of (93.48%) demonstrating excellent internal consistency suggesting a higher reliability of the questionnaire.

4.2 Validity Analysis

Validity analysis refers to the process of evaluating whether the survey questions are measuring what they are intended to measure, ensuring the results are accurate and meaningful (Ahrens, Lirani, & Francisco, 2020). The KMO (Kaiser Meyer Olkin) measure is a statistic that measures the proportion of variance, higher KMO value (closer to 1) indicates more shared variance thus suggests that the data is suitable for factor analysis (Önder, 2023). Bartlett's Test of Sphericity is a statistical test that examines if a correlation matrix is an identity matrix or not. The results of KMO measure and Bartlett's Test of Sphericity are presented in the table below:

Table 3: Findings of validity test through KMO Measure and Bartlett's Test.

Statistic		Value
Kaiser Meyer Ol	kin Measure	0.9732755025
	Approx. Chi-Square	17609.75936
Bartlett's Test of Sphericity	Degrees of Freedom	1275
	Sig. (p-value)	<0.001

As found in the above table the KMO value was found to be (0.973) which is an excellent value which indicates that the sample is highly adequate. Further the result of Bartlett's Test of Sphericity was found to be (p<0.001) which indicates that the correlation matrix is not an identity matrix and variables are related to each other (Dziuban & Shirkey, 1974).

4.3 Descriptive Analysis of Demographic Distribution

Through the online survey questionnaire, a total of 383 responses were collected out of which 354 responses were considered for the analisis and the rest 29 responses were not considered because they were given by non-adult participants. The findings of demographic analysis give us significant information regarding the participating demographic population in the survey which is crucial for understanding population composition and making precise interpretations (Yusifov & Akhundova, 2022). The table below represents a detailed breakdown of the demographic characteristics and shopping habits of the survey participants.

Table 4: The below table represents the descriptive analysis of the demographics data.

Category	Classification	Frequency	Percentage	
	18 - 24	160	45.20%	
	25 - 34	71	20.06%	
Aga	35 - 44	53	14.97%	
Age	45 - 54	41	11.58%	
	55 - 64	20	5.65%	
	65 or older	9	2.54%	
	Male	185	52.26%	
Candan	Female	148	41.81%	
Gender	Prefer not to say	11	3.11%	
	Non-binary/Third gender	10	2.82%	
	Post Graduate degree or higher	85	24.01%	
	Bachelor's degree	76	21.47%	
	Some college, no degree	57	16.10%	
Education Level	High school graduate	56	15.82%	
	Some high school	31	8.76%	
	Associate degree	30	8.47%	
	Trade/technical/vocational training	19	5.37%	
	Student	102	28.81%	
	Employed full-time	65	18.36%	
	Employed part-time	62	17.51%	
English of Section	Unemployed	35	9.89%	
Employment Status	Self-employed	29	8.19%	
	Homemaker	21	5.93%	
	Retired	20	5.65%	
	Unable to work	20	5.65%	
	Single/Never married	181	51.13%	
	Married or domestic partnership	104	29.38%	
Marital Status	rital Status Divorced			
	Separated	21	5.93%	
	Widowed	18	5.08%	

	Less than \$20,000	106	30.64%
Household Income	\$20,000 to \$39,999	53	15.32%
	\$80,000 to \$99,999	40	11.56%
	\$40,000 to \$59,999	38	10.98%
	\$60,000 to \$79,999	38	10.98%
	\$100,000 to \$149,999	21	6.07%
	\$150,000 or more	18	5.20%
	Prefer not to answer	32	9.25%
	No children	204	57.63%
	Teenager(s) (13-19 years)	36	10.17%
	Adult children (20 years and older)	35	9.89%
Children	Child/Children (6-12 years)	31	8.76%
	Toddler(s) (3-5 years)	27	7.63%
	Infant(s) (0-2 years)	19	5.37%
	Other unique child statuses (not common)	2	0.56%
	Weekly	128	36.16%
Classica Francisco	Monthly	108	30.51%
Shopping Frequency	Daily	70	19.77%
	Rarely	48	13.56%
	Weekly	124	35.03%
ulius Chamaina Farancea	Monthly	100	28.25%
nline Shopping Frequency	Daily	87	24.58%
	Rarely	43	12.15%
	USA	62	17.51%
	South Asia	58	16.38%
	South America	37	10.45%
	Canada	35	9.89%
	West Europe	23	6.50%
	North Europe	23	6.50%
	Africa	20	5.65%
Region	Middle East	18	5.08%
Region	Central Europe	16	4.52%

	South Europe	13	3.67%
	Oceania	10	2.82%
	Southeast Asia	9	2.54%
	Central Asia	9	2.54%
	East Europe	9	2.54%
	Caribbean Islands	8	2.26%
	North Asia	4	1.13%
	Caucasian (White)	78	22.03%
	Asian	66	18.64%
	Black or African American	49	13.84%
	Native American	41	11.58%
Race or Ethnicity	Multiracial or Mixed Race	37	10.45%
	Hispanic or Latino	29	8.19%
	Middle Eastern	23	6.50%
	Pacific Islander	16	4.52%
	Mixed Race Combinations	15	4.24%

From the above table (Table-4) we can find that the analysis represents a relatively balanced gender distribution, with (52.26%) Males and (41.81%) Females participants followed by negligible number of non-binary participants (2.82%) and (3.11%) participants who were preferring not to disclose their gender. By analysing the educational background of the participants, it was found that (24.01%) of participants have a postgraduate degree or higher, followed by (21.47%) participants having a bachelor's degree and (16.10%) of the participants have attended some college which signifies the presence of an educated population. It signifies that due to the presence of an educated population the survey responses will be more thoughtful, informed, accurate and consistent making the quality of the survey more robust and increasing the overall reliability of the survey (James & Rajan, 2004). This also supports the age analysis by confirming the presence of a younger student population. These statistics also represent that the respondents are diversely distributed across different regions and belong to distinct racial or ethnic communities which makes the survey results to be very inclusive capturing a wide array of the society. Finally, the shopping habits reveal that the respondents have (35.03%) preference for weekly online shopping and (36.16%) towards in-store shopping (36.16%)

which indicates a strong inclination of the participants towards regular online or in-stores shopping.

4.4 Correlation Analysis

For this study correlational analysis is one of the significant methods towards understanding customer purchase behaviour by identifying possible relationships between different variables that influence purchase decision making in consumers (Zhao et al., 2014). A correlation is considered highly positive if the correlation coefficient (r) is above 0.7, considered moderate if between 0.5 to 0.7 and considered weak if between 0.3 to 0.5 or less than that (Schober et al., 2020). In order to completely understand the correlation between different variables a correlational analysis was conducted using python and the results are presented in the table below.

Table 5: The below table represents the results of correlation analysis.

	Sustainability	Promotion or Discount	Cost Consideration	Product Origin	Shopping Environment	Word of Mouth	Mood Based Buying	Open Mindedness in Consumers	Intuition	Analytical	Post Purchase Regret	Customer Service	Product feature	Customer Experience	Social Image	Brand Loyalty	Online Reviews
Sustainability	1	0.734	0.656	0.558	0.603	0.732	-0.143	0.712	0.41	0.607	0.597	0.638	0.676	-0.077	0.612	0.662	0.675
Promotion or Discount	0.734	1	0.735	0.352	0.703	0.788	-0.172	0.742	0.296	0.68	0.675	0.751	0.738	-0.109	0.448	0.739	0.744
Cost Consideration	0.656	0.735	1	0.304	0.654	0.716	-0.172	0.615	0.175	0.616	0.618	0.657	0.656	-0.107	0.376	0.696	0.677
Product Origin	0.558	0.352	0.304	1	0.305	0.339	0.023	0.305	0.465	0.196	0.174	0.298	0.39	0.002	0.654	0.315	0.341
Shopping Environment	0.603	0.703	0.654	0.305	1	0.669	-0.147	0.541	0.191	0.58	0.573	0.622	0.598	-0.079	0.349	0.651	0.646
Word of Mouth	0.732	0.788	0.716	0.339	0.669	1	-0.239	0.713	0.303	0.635	0.654	0.701	0.718	-0.046	0.455	0.732	0.764
Mood Based Buying	-0.143	-0.172	-0.172	0.023	-0.147	-0.239	1	-0.147	0.336	-0.06	-0.044	-0.122	-0.172	-0.032	0.156	-0.162	-0.21
Open Mindedness in Consumers	0.712	0.742	0.615	0.305	0.541	0.713	-0.147	1	0.307	0.609	0.621	0.642	0.602	-0.07	0.429	0.614	0.6
Intuition Analytical	0.41 0.607	0.296 0.68	0.175 0.616	0.465 0.196	0.191 0.58	0.303 0.635	0.336 -0.06	0.307 0.609	1 0.386	0.386	0.445 0.894	0.271 0.619	0.219 0.607	0.019 -0.019	0.615 0.241	0.26 0.652	0.244 0.658
Post Purchase Regret	0.597	0.675	0.618	0.174	0.573	0.654	-0.044	0.621	0.445	0.894	1	0.625	0.586	0.008	0.302	0.68	0.652
Customer Service	0.638	0.751	0.657	0.298	0.622	0.701	-0.122	0.642	0.271	0.619	0.625	1	0.647	-0.076	0.392	0.689	0.692
Product feature	0.676	0.738	0.656	0.39	0.598	0.718	-0.172	0.602	0.219	0.607	0.586	0.647	1	-0.159	0.496	0.667	0.637
Customer Experience	-0.077	-0.109	-0.107	0.002	-0.079	-0.046	-0.032	-0.07	0.019	-0.019	0.008	-0.076	-0.159	1	-0.072	-0.06	-0.044
Social Image	0.612	0.448	0.376	0.654	0.349	0.455	0.156	0.429	0.615	0.241	0.302	0.392	0.496	-0.072	1	0.446	0.406
Brand Loyalty	0.662	0.739	0.696	0.315	0.651	0.732	-0.162	0.614	0.26	0.652	0.68	0.689	0.667	-0.06	0.446	1	0.727
Online Reviews	0.675	0.744	0.677	0.341	0.646	0.764	-0.21	0.6	0.244	0.658	0.652	0.692	0.637	-0.044	0.406	0.727	1

The Correlation analysis was found to have a significance level of 0.001 (p<0.001). From the above correlation analysis numerous variable interrelationships were identified that can significantly help us in understanding consumer behaviour. Firstly, a positive correlation was found between Brand Loyalty with both Product Features (r = 0.667**) and Online reviews (r=0.726**), indicating that the brand loyalty in consumers is interrelated with their faith in online reviews and the features of that product. Similarly, Sustainability has a positive correlation with numerous variables: Word of Mouth (r = 0.732**), Product Features (r = 0.732**), Product Features (r = 0.732**), Product Features (r = 0.732**)

0.676**) and Promotion or Discount (r=0.734**). Further a strong positive correlation of Open Mindedness in Consumers was found with Word of Mouth (0.712**) and Promotion or Discount (r=0.741**).

Moreover, a positive correlation of Shopping Environment was found with Promotion or Discount (r = 0.702**) and Online Reviews (r=0.646**). A significantly high positive correlation of Promotion or Discount was found with Word of Mouth (r = 0.788**), Customer Service (r = 0.751**) and Analytical Decision-Making Style (r = 0.680**). Finally, considerably high positive correlation of Word of Mouth was found with Product Features (r = 0.718**) and Customer Service (r = 0.701**). A positive correlation signifies that when one variable increases the other variable also increases this is represented by a correlation coefficient (r) ranging between 0 and +1, more the value closer to +1 the more positive correlation is established (Schober, Boer, & Schwarte, 2018). Similarly, a weaker correlation implies that the changes in one variable does not significantly affect the change in the other variable.

4.5 Analysing the Dependent Variable

The aim of this study is towards analysing and identifying various psychological factors that affect the consumer decision making process. But predicting the possibility of a purchase decision is a complex task as it includes numerous internal and external factors. In order to recognise these variables an online survey was conducted that collected a total of 354 valid responses capturing the desired variables that trigger the purchase stimulus in consumers like the shopping environment, product features, word of mouth from fellow consumers, open mindedness in consumers, cost consideration, online reviews, and customer service reputation.

Multiple studies have found random forest models to be highly effective in predicting consumer purchase decisions by using different characteristics and variables (Ghosh & Banerjee, 2020; Valecha et al., 2018). Further, Valecha et al. (2018) and Chen et al. (2023) have also found that random forest algorithms exceed other algorithms in terms of prediction accuracy and efficiency while predicting consumer behaviour. As there is the absence of a single survey question that directly measures purchase decision a combination of the above seven variables were used as proxies to predict purchase decision. Bastani (2018), Hou et al. (2018), and Jardine et al. (2020) have used proxies in place of dependent variables in their studies to enhance predictive analysis in the absence of direct measures of the dependent variable. Then

the random forest model was used for its capability to identify complex dependencies between variables to predict the chances of a purchase decision by synthesising these features into a predictive measure (Breiman, 2001).

Initially permutation importance analysis was done, which measured the impact of each feature by computing the decline in the accuracy of the model when the values of the variables were randomly shuffled (Altmann et al., 2010). From the above analysis product feature were found to be the most significant variable with an importance score of (0.0411), followed by open mindedness in Consumers (0.0290), cost consideration (0.0234), word of mouth (0.0187), shopping environment (0.0131), online reviews (0.0103) and customer service (0.0084). Below table represents the findings of the permutation importance analysis:

Table-6: The results of permutation importance analysis.

Feature	Importance Score	Std. Deviation
Product Feature	0.0411	0.0157
Open-Mindedness in Consumers	0.029	0.0135
Cost Consideration	0.0234	0.0075
Word of Mouth	0.0187	0.0132
Shopping Environment	0.0131	0.0062
Online Reviews	0.0103	0.0088
Customer Service	0.0084	0.0106

Further, the random forest classifier was used on the set of selected variables, and the performance of the model was evaluated using several methods like cross-validation, baseline and shuffled accuracy tests, and a permutation test. The findings of the above analysis are represented in the table below:

Table-7: The results from Random Forest Model.

Metric	Value
Baseline Accuracy	0.963
Accuracy on Shuffled Labels	0.8704
Model Accuracy	0.9802
(p-value) of Permutation Test	<0.01
Predicted Purchase Percentage	70.50%
Average CV Accuracy	0.986
Overall Accuracy	0.97
Macro Average F1-Score	0.96
Weighted Average F1-Score	0.97

From the above table it can be found that the classifier model yielded a high precision for predicting purchase decisions (1.00), a high recall value of (0.96), an F1 score of (0.98), and a high model accuracy of (97.20%). Next, a 10-fold cross-validation was conducted, and a high cross-validation score of (98.60%) was obtained, indicating that the model is robust, reducing the likelihood of overfitting (Kohavi, 1995). Additionally, a comparison between baseline and shuffled accuracy was conducted. From the analysis, the baseline accuracy was found to be (96.30%) and the shuffled accuracy was found to be (88.89%). This slight reduction between baseline and shuffled accuracy indicates that the high accuracy of the model is not coincidental and that the identified features genuinely influence the purchase decision (Altmann et al., 2010). Finally, a permutation test was conducted to determine the statistical significance of the model, and it was found that the model accuracy is 98.02% and the p-value is 0.0099, which confirms the statistical significance of the model. This model predicted a purchase percentage of (70.50%), which means that the model effectively identifies that around 70.50% of the participants are likely to make a purchase based on the identified factors like shopping environment, product features, word of mouth, open mindedness in consumers, cost consideration, online reviews, and customer service reputation (Ghosh & Banerjee, 2020).

4.6 Regression Analysis

4.6.1 Logistic Regression of Word of Mouth and Online Reviews on Purchase Decision

In this study, Logistic Regression was employed to explore the relationship between the predictors word of mouth and online reviews with the outcome variable purchase decision. The analysis is aimed towards determining how these factors influence the likelihood of a consumer making a purchase. The results of the regression analysis are presented in the table below:

Table-8: Regression analysis of word of mouth and online reviews on purchase decision

Feature	Coefficient	Std. Error	z-value	p-value	95% Confidence Interval
Intercept	-10.86	1.63	-6.67	_	(-14.05, -7.67)
Word of Mouth	1.43	0.31	4.56	< 0.001	(0.82, 2.05)
Online Reviews	1.13	0.24	4.76	_	(0.66, 1.59)

From the output of the analysis as presented in the table above it can be observed that word of mouth has a higher influence with a coefficient of 1.43 and an odds ratio of approximately (3.71). Further online reviews also show a strong positive coefficient of (1.13) with an odds

ratio of about (2.93). In both the cases the p value is far below the ideal threshold of (p<0.001) which confirms the reliability and robustness of the findings. From the analysis it can be concluded that both word of mouth and online reviews were found to have a substantial impact on the likelihood of purchase decision, strongly supporting hypothesis (H1).

4.6.2 Linear Regression of Analytical Decision Making on Post Purchase Regret

In this study linear regression was used to study the effect of post-purchase regret on consumers by quantifying their tendency to engage in analytical thinking during the decision-making process. The study aimed to explore the influence of analytical decision-making on post-purchase regret among consumers. The results of the analysis are presented in the table below.

Table-9: Regression analysis of post-purchase regret on analytical decision-making.

Variable	Description	Coefficient	Std. Error	t-Value	P- value	95% Confidence Interval
Intercept	Baseline Regret	0.363	0.091	3.99	<0.001	(0.184, 0.542)
Analytical Decision	Impact on Post Purchase Regret	0.894	0.024	37.483		(0.847, 0.941)

From the analysis outputs as present in the table above it can be found that post purchase regret has a coefficient of (0.894) which represents that analytical decision making is positively associated with post purchase regret. Further the R-squared value of (0.800) suggests that the model demonstrates a strong fit, while the adjusted R-squared value of (0.799) confirms that there is minimal risk of overfitting. Additionally, the robustness and reliability of the model is further validated by a p-value that is far below the ideal threshold of (p<0.001) and an F-statistic value of (1405). These findings further support the validity of hypothesis (H2), which proves the significant impact of post purchase regret on increased analytical decision making in consumers.

4.6.3 Linear Regression of Consumer Income on Post Purchase Regret

The main objective of this analysis is to use linear regression to understand the relation between consumer income level and post purchase regret. In this study individuals with an income above (\$80,000) were categorised as high-income individuals. Further a regression analysis was performed to understand the effect of consumer income on the post purchase regret they experience. The results of this analysis are presented in the table below:

Table-10: Regression analysis of post-purchase regret on analytical decision-making.

Variable	Description	Coefficient	Std. Error	t-Value	P-value	95% Confidence Interval
Intercept	Baseline Regret	3.8479	0.073	52.873	- <0.001	[3.705, 3.991]
High Income	Regret at >\$80,000 Income	-0.9017	0.145	-6.214	<0.001	[-1.187, -0.616]

According to the results in the above table the association between consumers in the high-income category predicts significantly lower levels of post purchase regret with a negative coefficient of (-0.9017). This model has a p value of (p<0.001) and t-value of (-6.214) that suggests a strong and reliable relationship between high income and low regret levels. This proves hypothesis (H3) indicating that higher income individuals experience less post purchase regret compared to low-income individuals.

4.6.4 Linear Regression of Intuitive and Analytical Decision-Making styles on Purchase Decision

In this analysis multiple linear regression was used to predict the dependent variable, purchase decision based on the used independent predictor variables intuitive and analytical decision-making styles. The findings of the analysis are summarised in the table below.

Table-11: Regression analysis results of purchase decision on intuitive and analytical decision-making styles

Predictor	Coefficient	Standard Error	Z-value	P-value	95% Confidence Interval
Intuitive Decision	0.028	0.006	4.655	- <0.001	(0.016, 0.039)
Analytical Decision	0.119	0.006	19.129	<0.001	(0.106, 0.131)

According to the findings present in the table it can be found that Intuitive decision-making style has a positive coefficient of (0.028) that increases the likelihood of a positive purchase decision. Additionally, a low p value of (p<0.001) and z value of (4.655) indicate that it is statistically significant. Further analytical decision-making style has a higher positive coefficient of (0.119) that indicates that analytical style of decision making has a stronger positive impact on purchase decision. This relationship also shows strong statistical significance, supported by a low p value of (p<0.001) and a higher z value of (19.129) that increases the impact of analytical decision making on purchase decisions. In both cases the predictor confidence interval doesn't include zero which confirms the reliability of these

findings. This analysis confirms the influence of both analytical and intuitive decision-making styles hence proving Hypothesis (H4).

4.6.5 Regression of Analytical Decision-Making Style, Brand Loyalty and Online Reviews on Purchase Decisions

In this analysis multiple linear regression was used on analytical decision-making style, brand loyalty and online reviews to regress purchase decisions and the findings are represented in the table below:

Table-12: Regression analysis results of analytical decision-making style, brand loyalty and online reviews.

Predictor	Coefficient	Standard Error	t-value	P-value	95% Confidence Interval
Constant	0.964	0.08	12.041	_	[0.807, 1.122]
Analytical Decision	0.178	0.029	6.209	< 0.001	[0.122, 0.235]
Brand Loyalty	0.257	0.027	9.503	<0.001	[0.204, 0.310]
Online Reviews	0.287	0.027	10.75	-	[0.235, 0.340]

From the above table it is evident that analytical decision making has a positive coefficient of (0.178), brand loyalty has a positive coefficient of (0.257) and online reviews have a significant positive coefficient of (0.287). This signifies the importance of analytical decision-making style, brand loyalty and online reviews on purchase decisions. A low p value of (p<001) for each predictor implies the statistical significance of the model and confirms that the above factors are individually crucial in shaping consumer purchase decisions. These findings validate the fact that consumers who are loyal to a brand favour analytical decisions and their purchase decisions are influenced by online reviews which proves hypothesis(H5).

4.6.6 Regression of Intuitive and Mood Based Decision Making across different Age Groups

In this analysis Ordinary Least Squares (OLS) Linear Regression was used to regress intuitive decision-making style and mood-based purchase behaviour of consumers across different age groups. The findings of the analysis are represented in the table below:

Table-13: Regression analysis results of intuitive decision-making style and mood-based purchase on consumer age group.

Model	Variable	Coefficient	Std. Error	t-Statistic	P-value
Intuitive Decision-Making	Constant (Base: Old Age)	3.488	0.091	38.46	
	Age (Young vs. Old)	0.246	0.055	4.456	<0.001
Mood-Based Buying	Constant (Base: Old Age)	3.176	0.122	25.97	\0.001
	Age (Young vs. Old)	0.305	0.075	4.093	

According to the result in the above table it can be observed that young customers show positive coefficient for both intuitive (0.246) and mood-based buying decisions (0.305) relative to older consumers. These coefficients are significant at a low p value of (p<0.01) for both models measuring mood based and intuitive purchase behaviour. These findings confirm that younger consumers are significantly more inclined towards intuitive and mood-based purchase behaviour compared to their older counterparts, thereby proving hypothesis (H6).

4.6.7 Regression of Product Features on Brand Image

This study is going to investigate the relationship between product features and brand image by using linear regression. The findings are represented in the table below:

Table-14: Regression analysis results of product features and brand image.

Variable	Coefficient	Std. Error	t-value	P-value	95% Confidence Interval
Intercept	0.41	0.082	5.011	- < 0.001	(0.249, 0.570)
Product Features	0.866	0.022	40.04	- \ 0.001	(0.824, 0.909)

From the findings as present in the above table it can be found that product features have a positive coefficient of (0.866) which signifies that enhancement of product features are likely associated with proportional improvement in brand image. With a low p value of (p<0.001) the intercept and slope of the regression model are both statistically significant. Further a R-Square of (0.820) signifies that product features significantly predict brand image. These findings confirm the product feature significantly influences brand image and hence proving hypothesis (H7).

4.6.8 Regression of External Factors on Purchase Decision

This analysis measures the effect of external factors like shopping convenience, store environment, product presentation, etc on consumer purchase decisions. The output of this regression analysis is represented in the table below:

Table-15: Regression analysis results of external factors on purchase decision.

Statistic	Value
Dependent Variable	Purchase Decision
Independent Variable	External Factors
Coefficient (External Factor)	0.9996
Standard Error (External Factor)	0.024
t-value	41.305
P-value	<0.001
Confidence Interval (95% for Coef.)	(0.952, 1.047)
R-squared	0.829
F-statistic	1706
Prob (F-statistic)	<0.001

According to the results in the above table it can be found that external factors have a high positive coefficient of (0.9996) that signifies that external factor like shopping convenience, store environment, product presentation, etc play a critical role in defining consumer purchase decisions. This strong correlation is statistically supported by a low p value of (p<0.001) and a R-squared value of (0.829) demonstrates that (82.9%) variance in purchase decision can be addressed by these external factors. These findings support the fact that external factors play a crucial role in influencing customer purchase decisions, hence proving hypothesis (H9).

4.6.9 Regression of Promotion and Discount on Purchase Decision

This analysis linear regression was used to measure the effect of promotion and discount on consumer purchase decisions. In this analysis promotion and discount was used to regress purchase decision and the findings are presented in the table below:

Table-16: Regression analysis of promotion and discount on consumer purchase decisions.

Description	Coefficient	Std. Error	t-value	P-value	95% Confidence Interval
Constant	1.176	0.067	17.669		(1.045, 1.307)
Promotions on New Products	0.334	0.022	15.477	<0.001	(0.291, 0.376)
Promotions on Purchase Decisions	0.336	0.021	15.723	•	(0.294, 0.378)

According to the data presented in the above table it can be found that the coefficient of promotion and discount is positive in both the cases with coefficients (0.334) and (0.336) respectively. Further a low p value of (p<0.001) signifies a strong statistical foundation and a n R-squared value of (0.80) indicates a strong model that properly predicts the effect of promotion and discount on purchase decisions. These results affirmatively support the

hypothesis indicating a major influence of promotions and discount on consumer purchase decision, thereby proving hypothesis (H9)

4.7 Analysing the Mediating Effect of Brand Loyalty and Social Image on Overall Consumer Satisfaction

The below analysis is focused towards understanding the influence of brand loyalty and social image in mediating the association with various customer behaviour catalysts and improving overall consumer satisfaction. In this analysis regression was used to quantify the effect of the mediating variables on the purchase decision. The findings are represented in the table below:

Table-17: Results of Mediation Analysis.

Mediator Variable	Coefficient	Std. Error	t-value	p-value	95% Confidence Interval	Sobel Test
Brand Loyalty	0.2036	0.023	8.766	- < 0.001	[0.158, 0.249]	6.63
Social Image	0.5316	0.026	20.743	- < 0.001	[0.481, 0.582]	8.98

According to findings of the analysis as presented in the table above it was found that the analysis has a p value of (p<0.001) that signifies that the analysis is statistically correct. Further it can be found that Social Image has a more significant mediating effect with coefficient (0.5316) compared to Brand Loyalty that has a coefficient of (0.2036). The Sobel test scores of both brand loyalty and social image are relatively high with test statistic scores of (6.63) and (8.98) respectively. This indicates that mediators play a substantial role in correlation between independent variables and consumer purchase decisions.

CHAPTER 5: DISCUSSIONS

The main motive of this study is to understand the psychological factors that affect the consumer decision making process. In the previous chapters nine hypotheses were proposed and were tested, it was found that all the hypotheses were valid. In this chapter we are going to discuss the theoretical and practical implications of this study based on the findings we obtained. In the first section of this chapter, we are going to compare the literature review with the findings and in the second chapter we are going to discuss the practical implications of the findings of this study.

4.1 Theoretical Contribution of the Study

This chapter will compare the analytical findings with the literature review, highlighting the theoretical contributions of this study to the existing research. The analytical findings from the regression analysis show that both intuitive and analytical decision-making processes coexist while making a purchase decision. The findings of the analysis align completely with prospect theory by Kahneman and Tversky (1979) which proposes that consumers deviate from the complete analytical pathway because of cognitive biases and is supported by empirical evidence (Levy, 2002). The findings also align with the Constructive Consumer Choice Processes Model proposed by Bettman, Luce, & Payne (1998) as the results of the analysis demonstrate that the decision-making pathways coexist but the degree to which they are employed are different in different scenarios. The findings from the regression analysis also revealed that post promotion and discounts have a positive influence on consumer purchase decisions. The empirical findings completely align with the findings from the studies by Kuo & Nakhata (2016) and Li et al. (2020), that claims that consumer confidence is enhanced by promotion and discount which further triggers purchase decision, that further confirms that consumer choices are shaped by promotional incentives.

The analytical findings from the regression analysis showed a positive and statistically significant relationship between product features and brand image that is supported by product feature theory by Campbell & Keller, (2003) discussed in the literature review that argues that updated product characteristics lead to improved brand image and increased consumer trust. The empirical analysis results also show a positive and statistically significant relationship

between external factors and consumer purchases. This is supported by the findings from the study by Sherman et al. (1997) and Gidlöf et al. (2017) that confirms that external environment factors (such as properly designed store environment, attractive product presentation influence, etc) play a critical role in defining consumer purchase decisions. The study also verified the significant positive impact of online reviews and word of mouth and consumer purchase decisions. These findings completely align with the studies of Stephen (2016) and Gu, Park, & Konana (2012) that emphasise the crucial role of word of mouth and online reviews in the purchase decision making process. The empirical findings of this study reveal that analytical decision-making process, brand loyalty, and online reviews all significantly influence consumer purchase decisions. The analytical results are supported by the studies of Campbell & Keller, (2003), who emphasised that brand loyalty is built through careful analytical consideration and (Alba & Hutchinson, 1987) who highlighted the role of online reviews in influencing consumer purchase decisions. The analysis also found that younger customers are more likely to engage in intuitive and mood-based purchase behaviour. This analytical finding by the studies of Lee & Kacen (2008) and Fekete-Farkas et al. (2021) who found that younger consumers are more impulsive and more easily influenced by emotions, social trends, and peer behaviour due to which they more likely to make impulsive and intuitive purchase decisions.

Additionally, this study found that individuals belonging to high income brackets experience lower levels of post purchase regret. These findings are supported by the study of Tzeng & Shiu, (2019) who confirmed that individuals in higher income categories are better equipped to choose alternatives in order to decrease post purchase regret. Finally, this study also found that consumers who experience post purchase regret are more likely to engage in analytical decision making while making future decisions. This is supported by the study outcomes of Bui et al. (2011) who found that consumers who experience post purchase regret are more likely to avoid similar mistakes by being more careful and logical during their next decision-making process. This study stands out by integrating various factors to build a robust analytical framework that explores the psychological triggers of consumer decision making. Moreover, the focus of the study on the impact of mood-based buying, word of mouth, brand loyalty, online reviews, promotions, and social image among a diverse demographic population provides new insights into intuitive and analytical decision-making processes. This comprehensive approach addresses gaps in previous research by offering a modern data driven perspective on consumer psychology.

4.2 Practical Implications

This study has numerous practical implications for businesses and marketing strategists who are looking to optimise consumer engagement. These insights will help them design marketing campaign that will completely align with the cognitive, emotional and behavioural preference of the consumers leading to enhanced sales profitability. By customising marketing messages to target diverse group of consumers through segment marketing campaigns that align with each type of buyers, Intuitive buyers should be targeted with visually engaging, emotionally charged content, while analytical buyers should be provided with comparative data, detailed product descriptions, and transparent pricing in order to maximise engagement. (Malik & Hussain, 2017). By investing in reputation management businesses can respond to both positive and negative reviews and mitigate the negative feedback by implementing proper post purchase support (Liu et al., 2019). By incorporating emotional and value driven marketing campaigns companies can align consumer values like sustainability, diversity, ethical sourcing, etc to enhance brand loyalty and make themselves unique from their competitors (Guo et al., 2020). Businesses should focus on reducing post purchase regret of consumers by offering seamless return policies, personalised post purchase messages and encouraging customers to leave feedback through multiple channels as positive post purchase engagement reduces remorse in consumers and encourages them to make further purchases (Liu et al., 2019). Physical retailers should focus on improving the overall layout of their store and enhancing the ambience of their store because this can increase the likelihood of impulse purchases and enhance the shopping experience of consumers (Inman et al., 2009).

Based on the findings of the study few policy recommendations are made that focus on enhancing consumer protection, ethical marketing practices, and market transparency. The government should establish regulations to ensure transparency and credibility of online reviews by establishing norms for authentication to verify users, this will reduce the fake manipulated reviews on e-commerce platforms (Ibrahim, 2023). Policy makers can enforce guidelines to reveal about sponsor reviews and influencer content to avoid misleading consumers and differentiate between promotional content and user feedback (Park & Lee, 2009). Government should implement policies to promote sustainability driven consumer engagement by incentivizing companies through tax rebates or subsidies which will foster responsible consumption and put effort towards contributing to the environment (Guo et al., 2020).

CHAPTER 6: CONCLUSION

The first section of this chapter is going to discuss the principal insights of the study. and the second section is going to demonstrate the limitations and future research.

6.1 Principal Insights from the Study

This study investigated the cognitive factors affecting consumer decision making process. It has nineteen variables across various dimensions measuring consumer purchase behaviour. The online survey gathered 354 valid responses ensuring a broad and diverse representation of consumer behaviours. This study used python as the primary tool for analysis ensuring robust and precise data processing. In this study validity and reliability tests were performed before data collection to confirm that the study is both reliable and valid. The findings of this study not only have theoretical contributions but also provide practical real-world solutions for businesses, policy makers and marketing strategists. This study proposed nine hypotheses and all of them were tested and proved. From this study it was found that word of mouth and online review significantly influence customer purchase decision, post purchase regret is positively correlated with analytical decision-making process and income is inversely related to post purchase regret that means individuals who belong to higher income bracket experience less post purchase regret. Furthermore, it was found that both analytical and intuitive decisionmaking styles affect consumer purchase decisions. Moreover, it was also found that consumers who belong to younger age groups are more likely to be involved in mood based intuitive purchase decisions. Lastly product features were found to greatly influence brand image and external factors, promotions, and discounts play a crucial role in defining consumer purchase decisions.

This study uses a unique approach by breaking down consumer decision making into analytical and intuitive pathways and additionally including post purchase regret that offers a comprehensive understanding of how previous experiences influence future consumer purchase decisions. Moreover, the survey employed in this study was made accessible to all individuals aged 18 and above. This inclusive nature of the survey ensured that a diverse variety of participants could participate giving us a thorough analysis of consumer behaviours across various demographic groups. This also demonstrates how brand loyalty and social image act as critical cognitive triggers and shape how consumers process and perceive the presented information from various sources.

6.2 Limitations and Recommendation for Future

Even if this study has made significant contributions to both theoretical and practical framework, there are some limitations that need to be addressed. The limited sample size in this study collected through the online survey questionnaire was capable of collecting 354 responses. But it is unable to completely capture the diversity of the consumer behaviour across different demographic and psychographic segments. Data collected based on self-reports by filling a survey questionnaire have more chances of introducing biases such as social desirability or memory recall errors.

Future research could use experimental designs that manipulate the psychological factors by making more controlled observation of their effects on consumer decision making process, by providing stronger proof of cause and effect in consumer behaviour (Clement, 2007). Further future studies could also expand the research by examining different cultures around the world to understand the universality of these purchase behaviours (Chen et al., 2022). Moreover, integrating qualitative data by conducting interviews and focused group research to complement quantitative data and offering a deeper understanding of consumer behaviour (Wolf & Ueda, 2021). Further future studies can focus on analysing industry specific consumer behaviour to make more precise marketing strategies.

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APPENDIX

APPENDIX I: CONSUMER PERCEPTION ANALYSIS

Consumer perception analysis is a crucial step that will help us understand the perception of consumers about various variables and how these variables influence consumer purchase decisions. Understanding the cognitive triggers that influence consumer purchase decisions is the primary focus of the survey questionnaire analysis, but we also need to pay attention to the influence of various variables that are measured by those questions on the final purchase decision of consumers. The consumer perception analysis can help us improve the robustness of the questionnaire analysis by understanding the extent to which various variables influence purchase decisions. The findings of the analysis are represented in the table below:

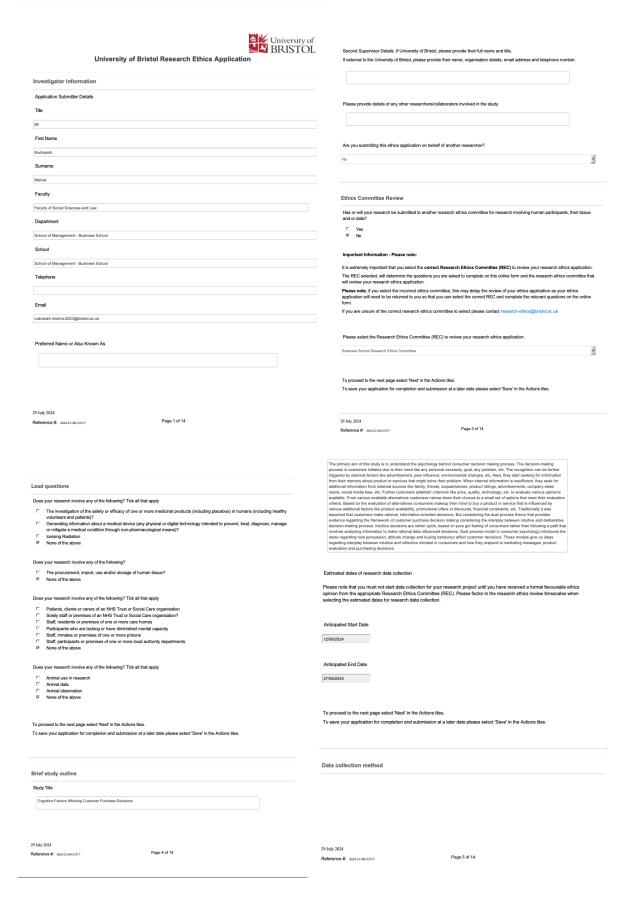
Table-18: The below table represents the descriptive statistics of the variables.

Variables	Number of Entries	Number of Questions	Minimum Score	Maximum Score	Mean	Standard Deviation
Sustainability	1416	4	1	5	3.526	1.311
Promotion and Discount	708	2	1	5	3.504	1.373
Cost Consideration	708	2	1	5	3.547	1.364
Product Origin	354	1	1	5	3.681	1.229
Product Presentation	354	1	1	5	3.48	1.357
Shopping Environment	354	1	1	5	3.489	1.302
Word of Mouth	708	2	1	5	3.487	1.338
Mood Based Buying	354	1	1	5	3.599	1.256
Intuitional Decisions	1770	5	1	5	3.829	1.133
Analytical Decisions	1770	5	1	5	3.642	1.281
Post Purchase Regret	1770	5	1	5	3.619	1.303
Customer Service	354	1	1	5	3.489	1.38
Product Feature	708	2	1	5	3.585	1.304
Customer Experience	354	1	1	5	4.24	0.93
Social Image	708	2	1	5	3.585	1.304
Brand Loyalty	354	2	1	5	3.593	1.318
Open Mindedness in Consumers	708	2	1	5	3.452	1.38
Online Reviews	354	1	1	5	3.424	1.343

The analysis results include descriptive statistics that describes the variability of the collected

data through survey responses. These variables were measured on a Likert scale ranging from 1 to 5, where '1' indicates that consumers strongly disagree with the statement, and '5' indicates that consumers strongly agree with it. Mean of each variable is calculated to understand the average consumer perception towards each variable and identifying general trends by making comparison across the different variables. The mean in this analysis ranges from the lowest of (3.424) for Online reviews to a highest of (4.240) for Customer Experience. The average score for each variable is around 3.5 indicating a moderately high level of positive perception among the participants. Therefore, it was found that consumer decision making process was highly influenced by Customer Experience (4.240) and Intuitional Decisions (3.829). Furthermore, consumer decisions are significantly influenced by factors like Product Origin (3.681), Analytical Decisions (3.642), Post Purchase Regret (3.619), Mood Based Buying (3.599), Product Feature (3.585), Social Image (3.585), Promotion and Discount (3.504), Sustainability (3.526), Cost Consideration (3.547) and Brand Loyalty (3.593). Additionally, it was also found that Consumer decisions are moderately influenced by factors like Product Presentation (3.480), Shopping Environment (3.489), Word of Mouth (3.487), Customer Service (3.489), Open Mindedness in Consumers (3.452) and Online Reviews (3.424). A lower standard deviation indicates uniformity in responses of participants while a higher standard deviation indicates variability in opinion of participants. In this analysis standard deviations were found to be less than (1.4) for all variables hence it suggests that the data is balanced and offers significant useful insights without any variability.

APPENDIX II: ETHICAL APPROVAL DOCUMENT



Pleas	se select the method of data collection relevant to your research. Tick all that app
₩	Questionnaire / Survey method
	Interviews method
	Focus group discussion
	Participant observation method
	Case study method
	Diaries method
П	Experimental method
	Internet Mediated Research e.g. analysing data provided in forums, social me public
	Secondary data analysis
	Other (Please specify)

- earch e.g. analysing data provided in forums, social media or spaces on the internet that are intentionally

Please upload copies of the questionnaire you wish to distribute to participants for review, Questionnaires must be uploaded as a word or PDF version. Please ensure that you properly consider the amount of time it will take participants to complete the survey.

		Documents			
Type	Document Name	File Name	Version Date	Version	Size
Questionnaire	Online Survey Method	Online Survey Method.pdf	23/07/2024	Final	94.6 KB

To proceed to the next page select "Next' in the Actions tiles.

To save your application for completion and submission at a later date please select 'Save' in the Actions tiles.

Checklist questions

Checklist Questions Does your research involve any of the following? Tick all that apply

Participants who are particularly vulnerable or unable to give informed consent

Examples of vulnerable participants are children, people with learning difficulties, patients, people experiencing emotional distress or mental litiess, people living in case or running homes, and people recruited through self-help groups, participants in a dependent or unequal relationship with the researcher(s) or research supervisor.

- Participants to take part without their knowledge and consent at the time
 Examples include the covert observation of people or incidental recording of others

* Examples include deliberately falsely informing participants, withholding information from participants or misleading participants in such a way that they are likely to object or show unease when debriefed about the study.

- Discussion or collection of information on sensitive topics or considered special category status under GDPR
 - * Special Category Status under GDPR include:

 - personal data revealing racial or ethnic origin;
 personal data revealing political opinions;
 personal data revealing religious or philosophical beliefs;
 personal data revealing trade union membership;
 - personal data reveam₀ uses a second purposes);
 penetic data (where used for identification purposes);
 data concerning health;
 data concerning a person's sex life;
- 29 July 2024

Reference #: 2024-21100-23317

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lable for review, please upload any site approvals / letter of access from a site where you wish to undertake your resea

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1 Background and aims of the research.

The primary aim of this study is to determine the psychology behind the decision-making process of consumers while making purchase decisions and identify the type of products and situations and how they make decisions. If further aims to understand the satisfaction and colorisons of decisions make by procuremen and examine the factors due to which they drose the intralies feeling over analytical reasoning or this versus and understand the interplay between Doth the processes. This will also investigate how deep processes are considered to the processes. This will also investigate how deep processes are considered to the processes. The visit also investigate how deep processes are considered to the processes. This will also investigate how deep processes are considered to the processes. This will also investigate how deep processes are considered to the processes. This will also investigate how decision processes are considered to the processes. This will also investigate how deep processes are considered to the processes. This will also investigate how deep processes are considered to the processes. This will also investigate how deep processes are considered to the processes. This will also investigate how deep processes. This will also investigate how deep processes. This will be also investigate how deep processes. This will be also investigate how deep processes. This will be also investigate how deep processes. This will be also investigate how deep processes. This will be also investigate how deep processes. This will be also investigate how deep processes. This will be also investigate how deep processes. This will be also investigate how deep processes. This will be also investigate how deep processes. This will be also investigate how deep processes are considered as a support of the processes. This will be also investigate the processes are considered as a support of the processes. This will be also investigate the processes are considered as a support of the processes. This will be also investigate t

2 Outline the design of the study and list the procedures/activities to which the participants will be subjected:

The main aim of this survey is to understand the psychology behind the purchase decision of participants. This study aims to use a structured questionnaire survey be a diverse sample of consumers and will also explore the sepect of how economic background and turnam emotions refloremen countering purchase decisions. This further aims to understand the reflorations believes were various demorpatic variables like (eps. income, education level, etc) and decision-making capabilities. All the Participants in this survey will be adult more than it is passed passed ander encomplised, their belowly will be marketined by united extreme strength productions and are complisted of their below of the aims of the participant will aim are these questions on a scale from 1" to 5 where 1" being they storogly disagree to the question and 5" being they storogly disagree to the question.

3 Is this research project funded?

•

- 4 Do any of the investigators have any actual or potential conflict of interest in this study?

Research Location and Approvals

6 Where will the research data collection take place? Please be as specific as possible and if any access approvals are required.

Legit oriine survey conducting sites like survey morkey, Prolific, etc to target a larger demographic population. Further Google and Microsoft form will also be used to increase the survey coverage across various groups. Participating population in Survey will be adultin more than 19 years of age and the acceptively of their discribly will be maintained by utmost ethical standards. The process will be carried out with the proper consent from participants.

- 7 Have or will appropriate site approvals / letters of access be obtained before the research is undertaken?
- Yes
 Yes (In progress)
 No (None required)

(E.g. confirmation from a school Principal that you can undertake your research data collection at their school)

Participant recruitment

29 July 2024

Reference #: 2024.21109.23317

8 Who will be recruited to participate in the research? (Please be as specific as possible)

and data concerning a person's sexual orientation.

Photographs, videoing, audio recording or similar of research participants ☐ Financial inducement (other than reasonable expenses and compensation for time)

□ Funds received from politically or culturally sensitive funding sources

□ Politically, culturally or socially sensitive topics

None of the above

Study design and background Business School Research Ethics Application Form

☐ Invasive procedures * Invasive procedures may include:

☐ Scans or x-rays of research participants

If the research is in relation to any of the sensitive topics listed then the legal issue requiring such scrutiny in such cases that 'explicit consent' must be obtained and the consenting process reviewed by the ethics committee

Administration of drugs placebox:

Other substances (e.g., drinks, foods, food or drink constituents, delary supplements) to study particip

Biological samples from participants be obtained.

Pain or more than mild discornfel likely to result from the study.

☐ The use or storage of information about living people whose personal identity could be discovered from that information

The risk of causing psychological stress or anxiety or other harm or negative consequences beyond that normally encountered by the participants in their life outside research

*Examples include the defence sector, projects with potential environmental effects and other internationally regulated or prote industries. For more information, please follow the link to the 'Research Governance and Integrity Policy'

Research involving humans by all academic and related Staff and Students in the University of Bristol Business School is subject to the standards set out in the University of Bristol Ethics of Research Policy and Procedure which can be found

at: http://www.bristol.ac.uk/redresearch-governance/practice-training/researche/respoilty.pdf
It is requirement prior to the commencement of all funded and non-funded research that this form be completed and submitted to
the School's Research Ethics Committee (REC). The REC will be responsible for issuing certification that the research meets
accoptable ethical standards and will. If recessary, require changes to the research meethodology or reporting stategy. It is a
requirement that prior to the commencement of all funded and non-funded research that this form be completed and submitted to the
School's Research Ethics Committee (REC). The REC will be responsible for issuing certification that the research meets
acceptable ethical standards and will, if necessary, require changes to the research methodology or reporting strategy.

Participating population in Survey will be adults more than 18 years of age and the anonymity of their identities will be maintained by utmost ethical standards. The process will be carried out with the proper consent from participants.

9 How many participants will be recruited? Provide justification for the sample size.

For the Survey It is necessary to target a larger demographic population with more than 300 participants to get some valuable insights

10 How will the participants be identified and recruited to take part in your research?

For surveys it is necessary to target a larger demographic random population (More the Participants the better will be the quality of research and clear will be the understanding of the scenario)

11 Are there any potential participants who will be excluded? If so, what are the exclusion criteria?

Only individuals above the age of 18 (Adults) are allowed to participate in this study.

Please provide any recruitment material used to recruit potential participants to take part in your research for review

		Documents			
Туре	Document Name	File Name	Version Date	Version	Size
Participant Recruitment	RECRUITMENT FORM	RECRUITMENT FORM.pdf	23/07/2024	Final	42.5 KB

Informed consent

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Parental / Guardian Information Sheet (P/GIS) Child Assent Information Sheet	
15 Clearly outline how informed consent will be obtained from all participants and / or their parents / guardians prior to individuals entering the research study?	Yes, it will not be possible to easily identify the participants as the data will be anonymised during collection stage. But, Participants will have the right to withdraw their responses up to 7 days from the data they submit the survey. After 7 days their duta will be assumptivated and will continue to be part of the study distanct and cannot be withdrawn because it would be impossible for those data to be identified.
They will be asked about their consent during the data collection process. Participation in this study is entirely voluntary. Participants will have the right to withdraw their responses up to 7 days from the data they submit the survey without any penalty.	Please provide copies of any documentation such as Consent Forms used to obtain consent from participants before taking part in your research.
	Documents Type Document Name File Name Version Date Version Size
16 How much time will participants be given to decide whether to give consent to participate after having been fully informed?	Consent Form Consent Form for Participation in Survey Consent Form for Participation in Survey.pdf 23/07/2024 Final 200.2 KB
Participants will be asked to give their consent while filling up the survey form. If they agree to participate in this study they will be asked to complete a questionnaire that will take less than 15 minutes to complete.	
	Participant and Researcher Safety
17 Has an independent named contact been provided if a participant wished to make a complaint or raise any concerns regarding any ethical issues with the research?	25 Are there any benefits to participants in taking part?
Participants should be informed that they can contact the Research Governance Team (research-governance@bristol.ac.uk)	Be clear and realistic – if there are no direct benefits for the participant, then please state this.
as an independent contact if they wish to make a complaint or raise any concerns with this research.	No
R Yes □ No	
19 Will participants be kept informed of new information that becomes available during the study which may influence their continued participation?	26 Describe potential risks to research participants (physical, psychological, legal, social) arising from the research and outline the processes implemented to mitigate against the identified risks:
Yes participents be kept informed of new information that is available during the study.	No potential risks are associated with research participants.
20 Will participants be made aware they can withdraw their person or data from the research study at any time without having to	
	27 Describe potential risks to the researcher (physical, psychological, legal, social) arising from the research and outline the processes implemented to mitigate against the identified risks:
give a reason for doing so? Ves	No, there are not any kind of risk involved this research.
P Yes □ No	
20.1. If use outling the withdrawal process participants will pead to follow to withdraw their names and for data from the	28 Is there likely to be any risk eg. legal, adverse publicity, to the University of Bristot?
20.1 If yes, outline the withdrawal process participants will need to follow to withdraw their person and / or data from the study. If they decide to withdraw any data thou have provided it will be completely removed from the study.	No
If they decide to withdraw, any data they have provided it will be completely removed from the study Participants will have the right to withdraw their responses up to 7 days from the date they submit the survey. After 7 days their data	
will be anonymized and will continue to be part of the study dataset and cannot be withdrawn because it would be impossible for these data to be identified.	
	Prince and the second s
	Data management and information security
Page 10 of 14 Page 10 of 14 Discussion of the second of	29 July 2014 Reference 8: 2042119421111 Page 11 of 14
act in accordance with the relevant laws and University Information Security Policies?	
✓ Yes№ Not applicable	
	Supporting Information
2 What arrangements have been put in place to ensure confidentiality and security of data gathered in the study? Will the data be stored in hard copy or electronically, and where will it be held?	Supporting information Please provide any additional information in relation to your study that you think may be relevant.
Data will be stored electronically in password protected system and in University Onedrive to comply with current GDPR and data	
protection requirements. Finally after the study is completed, all data will be destroyed	
	Any other Please upload any other documents that you think may be relevant to your research. There is no limit to the
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Please provide copies of any participant facing study documentation used to inform participants about the nature of the research for review. Such as:

Submission Reminder

Please note - Once all signatures have been obtained. You must ensure you select the Submit button on the left hand side of the form

If you have not received an email alert confirming submission of your research ethics application, then your research ethics application has not been submitted for review.

If you have not received an OREMS submission confirmation email or if you are unsure whether your application has been submitted, please contact research-ethics@bristol.ac.uk.