COGNITIVE DISSONANCE IN ONLINE SHOPPING WITH REFERENCE TO SELECT PRODUCT CATEGORIES

THESIS

Submitted in partial fulfilment of the requirements for the degree

of

DOCTOR OF PHILOSOPHY

by

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MARCH, 2023

DECLARATION

(By the PhD Scholar)

I hereby declare that the Research Thesis entitled "Cognitive Dissonance in Online Shopping with Reference to Select Product Categories" which is being submitted to the National Institute of Technology Karnataka, Surathkal, in partial fulfillment of requirements for the award of the degree of Doctor of Philosophy in Management, is a bonafide report of the research work carried out by me. The material contained in this Research Thesis has not been submitted to any University or Institution for the award of any degree.

165138SM16P01

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Place: NITK Surathkal

Date: 16th March 2023

CERTIFICATE

This is to certify that the Research Thesis entitled, **"Cognitive Dissonance in Online Shopping with Reference to Select Product Categories"** submitted by **Haritha S (Register Number: 165138SM16P01),** as the record of the research work carried out by her, *is accepted as the Research Thesis submission* in partial fulfilment of the requirements for the award of the degree of Doctor of Philosophy.

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ACKNOWLEDGEMENT

I am immensely grateful to the almighty for having given me the strength, courage and opportunities to progress in life despite all the difficulties and hurdles.

First and foremost I would like to extend my gratitude to National Institute of Technology Karnataka, for the valuable opportunity of pursuing research in an esteemed institute of national importance. I am thankful to the Director and the Dean of the institute and all the relevant staff for their timely support.

My profound gratitude and appreciation for my guide Dr. Bijuna C Mohan for her unwavering support, motivation, perseverance and immense expertise. Her patience, diligence and in-depth knowledge was a driving force for the completion of my research work.

I would also like to thank the Head of the Department of School of Humanities, Social Sciences and Management, Dr. Sheena, for her support and motivation. My sincere gratitude and appreciation to Research Proposal Assessment Committee (RPAC), Dr. A.H. Sequeira, Dr. Aparna, Dr. K.B.Kiran, Dr. Pavan, Dr. Rajesh Acharya H and Dr. Savita Bhat for their valuable feedback and suggestions that eventually fine-tuned my research work.

I would also like to express my gratitude to my fellow research scholars for their timely help and support.

I am thankful to all the respondents for their responses, without which the research study would not see the light of the day.

I also wish to thank the Director, Dean, Head of the Department of Under Graduate studies and Post Graduate studies and the research coordinator at International School of Management Excellence (ISME) and all my colleagues for their support and immense faith in me.

Last but not the least, my heartfelt gratitude to my father Dr. Sridhar Sambatur for nudging me towards research and academics, failing which this study would not have been born. Most importantly, I sincerely appreciate the support of my husband Mr. Kiran NCLN for having been a part of this journey and encouraging and helping me in the toughest of times. Contribution of my mother-in-law Mrs. Vaidehi NC is very significant as she held the fort for me at home while I was busy with my research work. I would like to thank my twin daughters Mihika NC and Mihira NC for their sweet support and encouragement. I would also like to thank my mother B.Renuka, my brother Hemant Sambatur and my sister-in-law Radhika for their support and motivation.

Haritha S

ABSTRACT

Online shopping is burgeoning exponentially due to the changing lifestyles. Consumer behavior in online shopping is complex and dynamic. Cognitive dissonance is a state of tension arising due to conflicting cognitions and is considered to be more prevalent in online shopping than in traditional offline shopping due to the high risks and uncertainty associated with online shopping. Excessive competition is driving switching behavior among the consumers causing huge losses to E-tailers. Growth in online shopping is driven by a loyal customer base. Cognitive dissonance may hamper satisfaction which may eventually impact post-purchase outcomes like repurchase intention and e-WOM. There is a lack of adequate research assessing the strength of these relationships in online shopping in an emerging market. Hence this study is important to understand the influencing factors of cognitive dissonance in online shopping and the impact of cognitive dissonance on satisfaction. An extensive literature review revealed a considerable gap in understanding the relevant factors influencing cognitive dissonance in online shopping. The study assessed the impact of satisfaction on repurchase intention and e-WOM. The study also addresses the research gap concerning the prevalence of cognitive dissonance in high and low-involvement products. The current study considers all the dimensions of cognitive dissonance i.e., emotional dimension, concern over the deal, and wisdom of purchase for measurement of cognitive dissonance.

The study adopted a deductive research approach and a descriptive research design. The sample is derived from a multi-stage sampling technique. Self-administered questionnaires were used to collect primary data. The primary data was assessed using quantitative techniques.

The findings revealed that product involvement has a significant influence on cognitive dissonance. Cognitive dissonance eventually impacts satisfaction. Satisfaction has the strongest influence on repurchase intention followed by e-WOM in online shopping. The findings are of value to E-tailing organizations as they are currently dealing with customer retention issues. The findings indicate that it is important to mitigate cognitive dissonance

as it is a precursor to dissatisfaction. As product involvement influences cognitive dissonance, E-tailers can accordingly create strategies to mitigate cognitive dissonance.

Keywords: Cognitive dissonance, product involvement, trust, choice difficulty, perceived risks

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ABBREVIATIONS

TAM	Technology Acceptance Model
UTAT	Unified Theory of Acceptance and Use of Technology
WOM	Word-of-Mouth
B2C	Business to Customer
B2B	Business to Business
IBEF	Indian Brand Equity Foundation
IANS	Indo-Asian News Service
ICT	Information and Communication Technology
PTI	Press Trust of India
DTH	Direct To Home
FMCG	Fast Moving Consumer Goods
POD	Payment On Delivery
COD	Cash On Delivery
GMV	Gross Merchandise Value
IAMAI	Internet and Mobile Association of India
IMRB	Indian Market Research Bureau
USA	United States of America

FDI	Foreign Direct Investment
CCI	Competition Commission of India
e-WOM	Electronic-Word-of-Mouth
EKB	Engel-Kollat-Blackwell
GVU	Graphic, Visualization & Usability Center
NCR	National Capital Region
KPMG	Klynveld Peat Marwick Goerdeler
CII	Confederation of Indian Industry
CAGR	Compounded Aggregated Growth Rate
ANOVA	Analysis of Variance
SEM	Structural Equation Modeling
KMO	Kaiser–Meyer–Olkin
AMOS	Analysis of Moment Structures

CHAPTER 1
INTRODUCTION

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INTRODUCTION

1.1 CHAPTER OVERVIEW

The current chapter introduces the topic of research study. Section 1.2 is a brief introduction to the study which gives a brief overview on the transition to online shopping from the traditional offline mode. The background of the study is explained in section 1.3. This section discusses briefly the online consumer behavior. A detailed overview of online shopping in the Indian context as well as the global scenario are discussed in section 1.4. The key drivers of online shopping are discussed in detail. Section 1.5 elaborates on the concept of cognitive dissonance. The evolution and application of cognitive dissonance are also discussed in detail. The need for the study is explained in section 1.6. The problem statement of the research study is discussed in section 1.7. Section 1.8 presents the research questions. Research objectives are discussed in section 1.9. Section 1.10 discusses the significance of the study. The scope of the study is highlighted in section 1.11. Section 1.12 provides a brief outline of the thesis.

1.2 INTRODUCTION

Traditional retailing or offline retailing has been one of the most popular ways to shop until the early 2000s. Changes in consumer lifestyles, increasing use of the internet have led to the growth of online shopping (Davis et al., 2021). Traditional retailing is reaching a stagnation phase, unlike online shopping, which is on a growth trajectory (Singh, 2021). Owing to its limited storage space, limited reach, and limited assortment, traditional retailing is losing its sheen. Traditional retailers often find it challenging to match the discounts given by online retailers, as online shopping portals buy products in voluminous quantities thus getting a better bargain in margins. Eventually, this benefit is passed onto the consumers in the form of discounts. The growing popularity of online shopping has led traditional retailers to adopt omni channel fulfillment. Multi-brand outlets like Croma,

Spencer's retail, Reliance digital, and few others have adopted the online format. Brands across different categories have also adopted online formats; for example, Samsung, LG has started selling through their online portals. Online retailing has been growing exponentially over the past few years. The pace of growth has further been accelerated by the pandemic COVID 19. In certain developed economies like the USA, the proportion of online retail sales grew from 9.9 percent in 2018 to 14 percent in 2020. In the UK, it grew from 14.9 percent in 2018 to 23.3 percent in 2020 (United Nations, 2021). The increase in the adoption of online shopping fueled by the pandemic is here to stay.

E-commerce has drastically transformed the way retail business is conducted in India. In India, the online retailing segment is expected to reach a staggering 71.94 billion dollars by 2022 (Salman, 2018). A considerable number of factors like demographic characteristics of the population, past experiences of the consumers with online shopping, product categories, reach, internet infrastructure, etc., influence the acceptance of online shopping. Changing landscape of demographics in India, particularly dual working couples, nuclear families, lifestyle and workplace changes, scarcity of parking in malls, lack of time for shopping, penetration of smartphones, and several other factors, has led to many consumers opting for online shopping. This is unlike their previous generations who had enough leisure to do shopping in traditional stores. Penetration of smartphones in conjunction with the huge investments made by the E-tailers in warehousing and delivery infrastructure has subsequently improved the reach.

Marketing researchers primarily focused on factors that influence the adoption of online shopping using the Technology Adoption Model (TAM) (Srinivasan, 2015; Reyes-Mercado et al., 2017), innovation diffusion theory (Lennon et al., 2007), Unified Theory of Acceptance and Use of Technology (UTAT) (Tandon, 2021). However, there is a vital requirement for E-tailers to get a more detailed understanding of consumer behavior in a complex shopping environment like online shopping. Hence researchers have to focus on the impact of various relevant factors on post-purchase behavior, which in turn channelizes the resources to improve customer experience. Online shopping has now reached a stage where E-tailers are vying for consumers and are looking frantically for differentiating their

services, identifying loopholes that can impact customer experience, factors or reasons that dissuade the customer or force the customer to quit online shopping in their respective portals. By identifying these reasons, the online retailing organizations can focus on the retention of customers, which costs much less than customer acquisition. A five percent increase in customer retention rates can increase profitability by 25-95 percent (Jiang & Rosenblom, 2005).

Online shoppers face several uncertainties because they do not get to see and touch the product. They also get anxious about aspects like product delivery, payment security, product condition, product mismatch, better deals elsewhere, etc. These uncertainties can lead a consumer to rethink their purchase decision. The result can be conflicting cognitions or beliefs leading to mental discomfort, which is called cognitive dissonance (Festinger, 1957). Cognitive dissonance is considered to be more relevant in online shopping than in traditional offline shopping (Soutar & Sweeney, 2003). In traditional offline shopping, a consumer can inspect the product and get immediate delivery of the product. However, in online shopping, neither can you inspect the product personally; for specific products, the payment has to be made before product delivery, and specific products cannot be returned on purchase.

1.3 BACKGROUND OF THE STUDY

A consumer satisfies two of his primary motivations through shopping; the first one is achieving the goal of purchasing a product or utilitarian motive (Babin et al., 1994), and the second one is to have fun or hedonistic motive (Hoffman & Novak, 1996). These goals can be achieved either by shopping offline through traditional retail channels or online shopping. However, in the recent few years, online shopping has struck a chord with consumers, which has led to a change in the way they perceive shopping. Online shopping has become an integral part of our lives, with almost all the products being offered on online portals starting from a toothbrush to a water purifier to medicines. The shift is not just seen among consumers but also among vendors. Many of the traditional retailers and

manufacturers have realized the importance of selling online and improving the reach and, hence, improving sales.

Extant research in traditional retail management concerning consumer behaviour is available; however, consumer behavioural aspects in E-tailing are yet to be dissected in detail by researchers. Several studies (Donthu & Garcia 1999; Bellman et al.,1999; Childers et al., 2001; Levin et al., 2005; Wong et al., 2018; Oloveze et al., 2021) differentiating online and offline retail buying behaviour were conducted. These studies focused on identifying the factors influencing online purchase intention and post-purchase behaviour like satisfaction, loyalty, and repurchase intention in online shopping. Schibrowsky et al., (2007) emphasized that understanding the behaviour of online shoppers is one of the main four research areas in the field of online marketing studies.

Research indicates that most online shoppers are goal-oriented or have utilitarian motives (Gilly & Wolfinbarger, 2000; Delafrooz et al., 2009; Harris et al., 2018; Wu & Yu, 2020), followed by online shoppers who displayed exploratory behavior. The most commonly identified utilitarian motivations to shop online are assortment, convenience, economy, availability of information, adaptability/customisation, payment services, desire for control, the absence of social interaction, good value for money (Martínez-López et al., 2014). Many consumers opt for online shopping as they are variety seekers and search costs are relatively cheaper in online shopping.

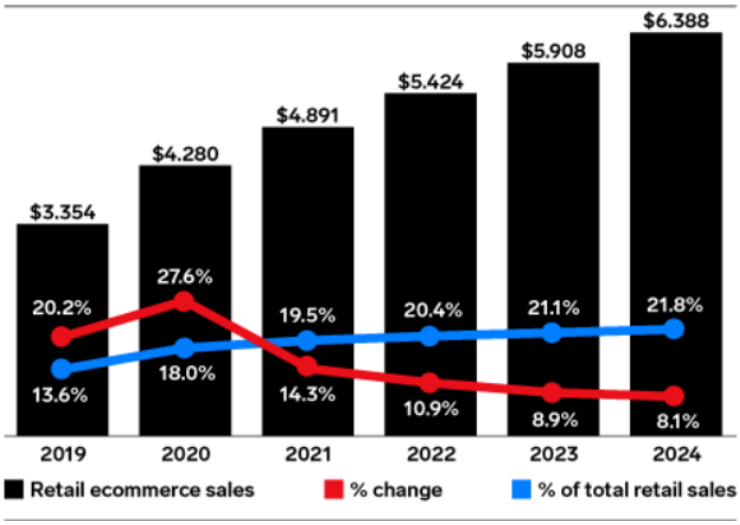
Online consumer behavior is a complex socio-technical phenomenon. It is challenging to gauge consumer behavior in an online shopping scenario than in traditional offline shopping. E-tailers need to understand consumer behavior as it can lead to more focused merchandising and marketing strategies with a higher return on investment. Many factors could hinder an online shopper from completing a purchase or to think about the product post purchase, one such factor is cognitive dissonance which is experienced due to conflicting cognitions. The current study tries to discern cognitive dissonance in online shopping as cognitive dissonance is an uncomfortable feeling or tension that a consumer faces due to the product purchased. Several factors influence cognitive dissonance like product involvement, price, perceived risks, choice difficulty, disconfirmation of

expectations, intangibility, information source credibility, etc. However, these influencing factors may vary based on the context. There is a dearth of research in identifying relevant factors that influence online shopping. Often consumers try to mitigate negative feelings; however, during the mitigation process, they might abandon the shopping cart, switch brands or e-tailers, leading to enormous losses for the E-tailer. Cognitive dissonance can eventually have a negative impact on post-purchase constructs like satisfaction, repurchase intention, and Word-of-Mouth (WOM). Despite the growth of online shopping, it contributes to only 20 percent of total retail sales globally (Statista, 2022) and 3.6 percent of the total retail sales in India in 2020 (BL Mumbai Bureau, 2022). This indicates that many consumers are still hesitant to adopt online shopping. Given such a scenario, it is paramount for e-tailers to identify situations wherein consumers can face cognitive dissonance and try to mitigate it at the earliest.

1.4 OVERVIEW OF ONLINE SHOPPING

In the past few years, a significant transformation is seen in the way consumers' shop, with offline retail slowly losing its sheen and online retail gaining a solid foothold globally. The pandemic has further fueled the rise of online shoppers.

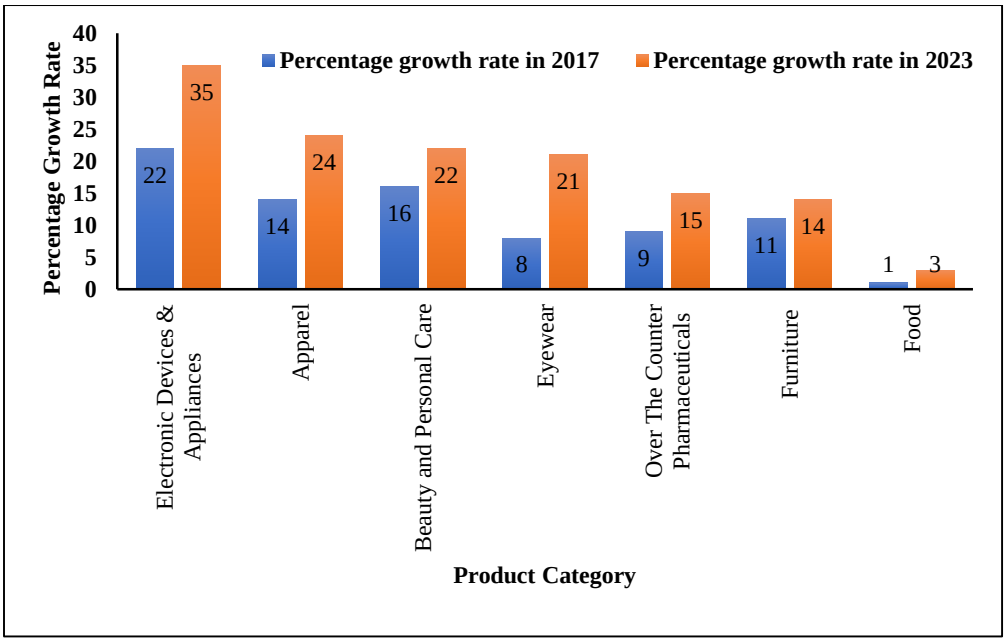
Increasing internet penetration and adoption have led to considerable growth in online shopping. As of 2020, worldwide online sales crossed 4.2 trillion USD (Coppola, 2021). The proportion of online sales as a part of total sales is also said to increase from 13.6 percent in 2019 to 24.5 percent in 2025 (Statista, 2022). Currently, China leads the retail E-commerce market, with 52.1 percent of its total retail sales attributed to online shoppers, followed by the US and UK (Keenan, 2021). The growth trajectory of global E-commerce sales is depicted in figure 1.1. Online shopping portals, which first started as online booksellers, eventually branched out to different product categories.



Source: Emarketer (2020)

Figure 1.1: Retail E-commerce Sales Worldwide

Categories like apparel, consumer electronics, furniture were added onto online shopping portals. The proportion of online sales contributed by different product categories is given in figure 1.2.



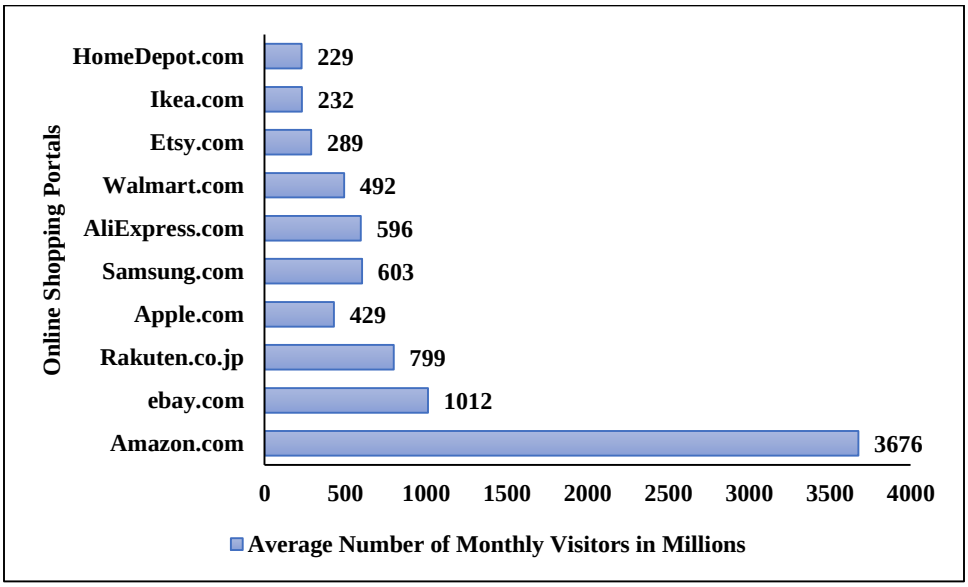
Source: Statista Consumer Market Outlook (2020)

Figure 1.2: Share of Global E-commerce Sales

The contribution of electronic devices and appliances is expected to increase by 26 percent in the year 2023, followed by household appliances and apparel.

The growth in online shopping has led to an increase in the number of online shopping portals globally and locally. Globally the first and the most popular online shopping portal is Amazon. Amazon was launched in the year 1995. Amazon ranks first in online retailers in traffic; it registered a massive footfall of 5.2 billion unique visitors (Coppola, 2021). Figure 1.3 provides a snapshot of leading global online retail websites. Amazon started as an online bookseller; later, it started serving other categories.

E-bay was also launched in 1995; unlike Amazon, eBay catered to B2C(Business to Consumers) and B2B (Business to Business). It was more famous for collectable items, which otherwise were difficult to procure in retail stores. Eventually, Ebay started expanding its business and added more product categories into its catalogue.



Source: Statista (2020)

Figure 1.3 Average Monthly Traffic of E-tailers

Rakuten, which is popularly known as Amazon of Japan, was founded in 1997 in Japan. Rakuten, apart from selling products online, offers online hotel reservations, financial

services as well. Rakuten eventually expanded its wings outside Japan and opened its branches in countries like France, United States, United Kingdom, etc.

1.4.1 Key Drivers of Online Shopping

The key drivers of online shopping based on different research studies ((Growth from Knowledge(GfK) Futurebuy, 2015; Tandon, 2020)) are

Lower Prices- Owing to the better reach, online shopping portals procure a voluminous quantity of products which gives them an edge in gaining better margins, and hence they can price the products relatively lower than the traditional offline stores.

Convenience – Online shopping saves time for a consumer as one can avoid travelling to a physical store, avoid crowds, checkout lanes. Consumers who are differently-abled and old can make purchases much more quickly. Most importantly, online shopping is available 24/7, unlike physical stores, which operate at specific timings.

Better product assortment – Physical stores sell a limited number of products owing to constraints in storage space. Online shopping portals do not have this constraint. They can follow different models like drop shipment - where a seller directly ships the product to the customer, marketplace model – where an online portal fulfils only the delivery of the product by procuring the product from the seller. Another significant advantage of online shopping portals is that they can own warehouses in multiple parts of the country; they can choose locations that provide them with certain tax benefits, lower real estate costs, and reduce storage costs.

Enriched information –Consumers are provided easy access to product information enriched with reviews and ratings of customers who have already purchased and used the product. This reduces the effort of information search to make the buying decision.

1.4.2 Risks Associated with Online Shopping

Consumers perceive online shopping to be riskier than offline shopping (Tan, 1999; Kim et al., 2008). Some of the most commonly associated risks with online shopping are

1) Financial risk – indicates the degree of financial uncertainty while making an online transaction.
2) Privacy risk – indicates the probability of data collected not being kept confidential.
3) Product risk – refers to the probability of the purchased product not functioning according to the expectations.
4) Security risk – indicates the probability of online shopping portals not having adequate safety measures like encryption, etc.

1.4.3 New Trends Emerging Globally in Online Shopping

To improve customer experience and engage customers for a longer time, E-tailers have started adopting the latest technological advancements, which increases the time spent on the shopping portal and addresses the consumer's gap of intangibility. Even though these advancements are in the nascent stage, they are bound to be game-changers eventually. According to Medda (2021) and Ufford (2017), a few of the popular trends are

Augmented Reality – Augmented reality is an immersive technology that adds layers of digital information to our existing physical world. Augmented reality will aid the customers to visualize a product, which will make the purchase decision easy. An excellent example of the same is the IKEA catalogue app which helps the customers place virtual items of the furniture catalogue in their rooms in real-time.

Voice Search – Voice search is slowly becoming popular among online shoppers, especially when it comes to repeat orders like toothpaste, milk, etc., wherein consumers need not re-login to the shopping portal and add products to the cart. The entire process is shortened, saving much time for the consumers. Amazon's Alexa, Apple's Siri, and Samsung's Bixby are a few examples.

Chatbots – The most crucial benefit of using a chatbot is that the E-tailer can provide 24/7 service. Chatbots also help in engaging passive customers in providing a personalised experience. Chatbots can recommend products, collect customer

information which helps in lead generation. Chatbots have been increasingly used to improve the conversion rate in online shopping portals.

Subscription – The subscription model is beneficial both for the online shopping portals and the consumers. The subscription model enables consumers to make recurring orders with automatic payments. It helps E-tailers in customer retention and maintaining a more predictable revenue.

Sustainability – With growing awareness of Earth's limited resources, several companies weave sustainability into their product marketing and fulfilling strategies (Medda, 2021). By focusing on going paperless, using recyclable supplies, etc., many companies opt for optimising packaging solutions and avoiding excessive packaging material usage.

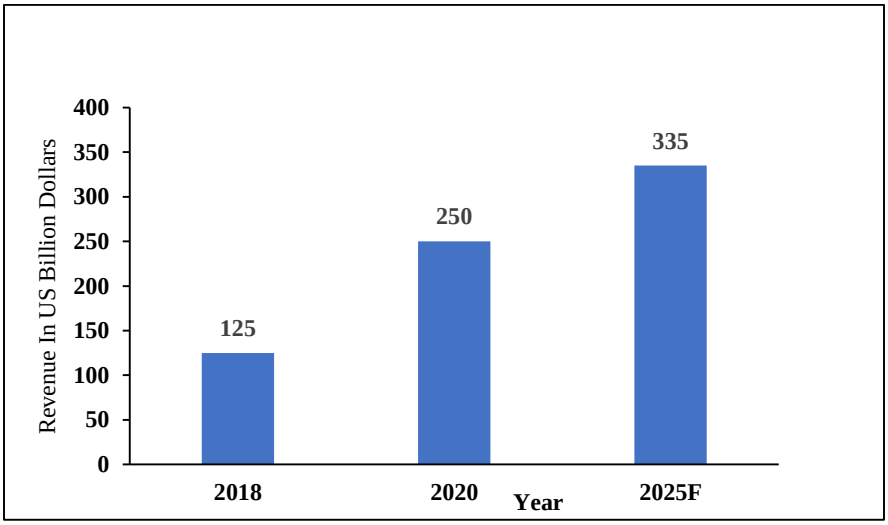
Retail Gamification – E-tailers use gamification to engage customers and increase the time spent on their shopping portals. E-tailers generally reward participation in these games with discounts, promotions, free merchandise or wallet cash, etc. It is expected that almost 9 out of 10 retailers will use gamification in the upcoming years (Ufford, 2017).

1.4.4 Online Shopping in India

Significant internet penetration and changing demographics have fuelled the growth of online shopping in India. Internet penetration grew from 4 percent in 2007 to 52 percent in 2019 (IBEF, 2020). Figure 1.4 gives a snapshot of the expected increase in the internet economy of India. It is expected to reach US $ 335 billion by 2025 from the US $ 125 billion, which is a two-fold increase.

Historically the focus of E-tailers was on metro cities; however, Tier 2 and Tier 3 cities are catching up and giving stiff competition to the metro cities. Increasing internet penetration, digital literacy, which was a consequence of demonetisation, and the COVID-19 pandemic are leading this change. The contribution share of smaller cities

to retail E-commerce sales increased to 46 percent in the fourth quarter of 2020 from 32 percent in 2019 (IANS, 2021).



Source: IBEF (2021)

**F indicates Forecasted*

Figure 1.4: India's Internet Economy (US $ Billion)

The majority of the online shoppers fall in the age group of 15-34 years (IBEF, 2021). Among the online shoppers in India, the age group between 25-34 is considered the most active on online shopping portals. This indicates that millennials are the consumers online shopping portals need to focus on.

Cultural differences and Information and Communications Technology (ICT) infrastructure are critical in assessing the adoption of online shopping. While E-commerce contributed to 3.6 percent of total retail sales previously, post-pandemic, the adoption has surged to 10 percent, stabilising at 6 percent (PTI, 2020). This growth trend is expected to continue till the pandemic completely subsides, indicating that many consumers want to shop safely from the boundaries of their homes.

Yahoo and Sify set the ball rolling for Indian E-commerce retail or online shopping in 1995, since then online shopping has only seen an upward trajectory in India. Few major inflexion points in the online shopping scenario of India were ebay acquiring Bazee in the year 2005, Flipkart starting its business in 2007, and the entry of Amazon in India as Junglee.com in the year 2012.

The saturation of E-tailing in developed markets has led the leading players to set shop in Asian countries. Amazon and Walmart entered India and are in stiff competition. Apart from the big players, many new online shopping portals have sprung up in India like Snapdeal, Shopclues, Meesho, etc.

Few of the top online shopping portals of India (Ecommerce Guide, 2020) are

1) Amazon India – Amazon started its operations in India in the year 2013. Since its inception, Amazon has only seen a growth trajectory and increasing traffic.
2) Flipkart – Flipkart was founded by Binny Bansal and Sachin Bansal and was launched in 2007; it started as an online bookstore; later on, it grew to sell most of the categories. Several investors, Accel Partners, Tiger global, invested in Flipkart. The most significant investment to date, however, was of Walmart, which holds a stake of 77 percent in Flipkart.
3) Snapdeal – Snapdeal was founded by Kunal Bahl and Rohit Bahl in 2010. Since its launch, it has attracted significant investments from Alibaba group, Soft bank, and Foxconn (Ecommerce Guide, 2020). The most popular category sold on Snapdeal is Electronics; it also offers a vast product catalogue like home and kitchen, fashion, toys, beauty, health, etc.
4) Myntra – a 2007 online native fashion store stated by Mukesh Bansal, Ashutosh Lawania, and Vineet Saxena. Its primary objective was to sell on-demand personalised gift items. By the year 2011, it offered a gamut of fashion products. In the year 2014, it was acquired by Flipkart. Myntra is the most sought out destination for online shoppers in the fashion category.

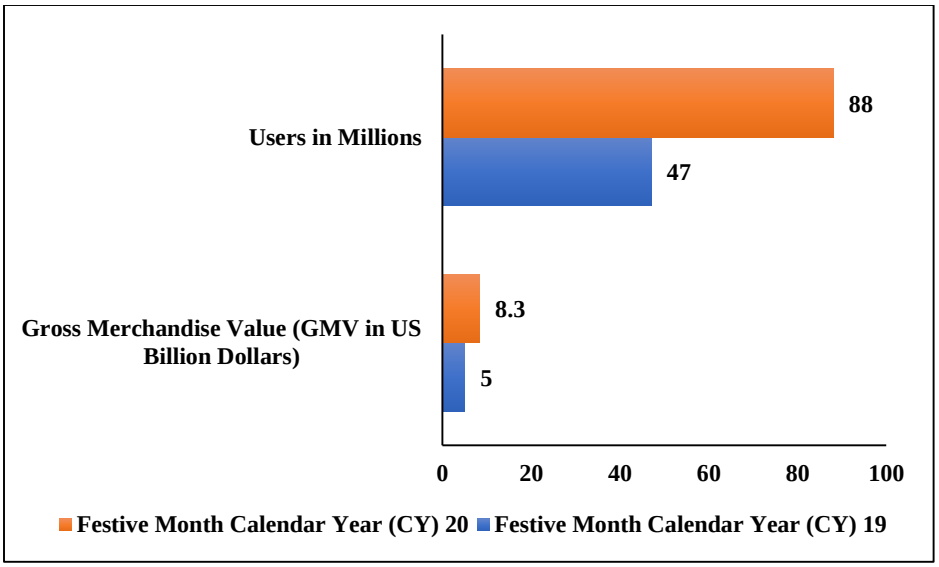
5) Paytm Mall– Paytm was founded by Vijay Shekhar Sharma in 2010. Mobile phones and consumer electronics are the top-selling categories by value on Paytm and FMCG products by volume (Mukherjee, 2017)
6) Bigbasket – Big basket is the most significant player in the delivery of online groceries; it was founded in the year 2011 by Hari Menon, Abhinay Choudhari, Abhinay Choudhari,V.S. Sudhakar; Vipul Parekh and V.S. Ramesh. The TATA group has acquired a major stake of 64 percent in Big Basket

1.4.5 Key Drivers for Online Shopping in Indian Scenario

According to Tandon (2020), key drivers of online shopping adoption in India are expectations on performance, anticipated transaction effort, social influence, facilitating conditions, hedonic motivation, price value, habit, reverse logistics, social media, and Payment On Delivery (POD). Reverse logistics, social media, and POD are new additions to the already existing variables of Unified Theory of Acceptance and Use of Technology 2 (UTAT2). Other studies (Tandon et al., 2017; Kandulapati & Bellamkonda, 2014) validated that COD (Cash on Delivery) encouraged online shopping among non-shoppers.

Internet usage has increased to 54 percent, indicating that one in two people is hooked to India's internet (Pinto, 2020). Digital payments have been one of the key drivers for increasing online sales in India; there has been a steady increase in online payments since demonetisation. Payment infrastructure is more robust. Mobile wallet transactions in India reached about 1.84 lakh crore in 2019 (Tiwari, 2020).

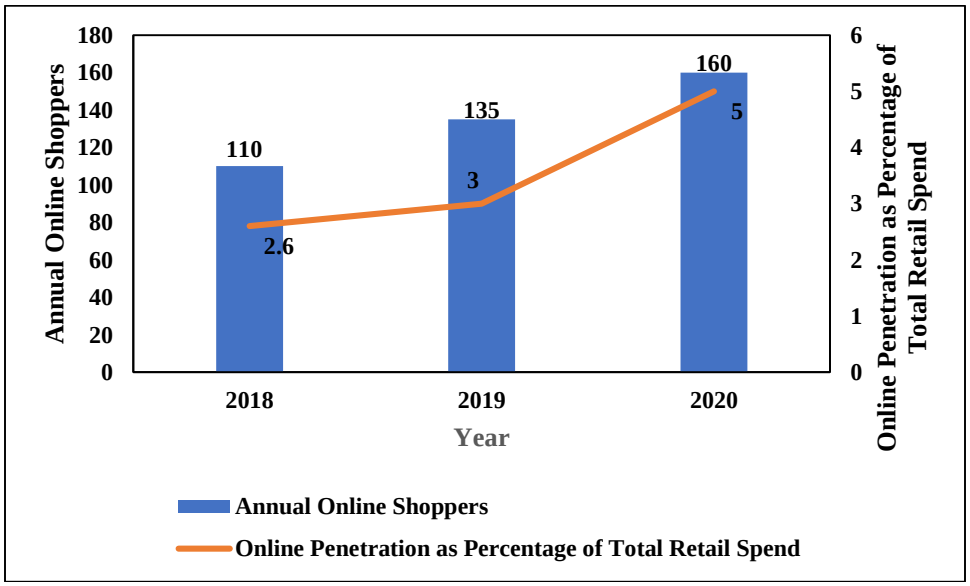
Festive season sales like the Diwali sale, Big billion days on Flipkart, Great Indian Amazon Shopping Festival on Amazon often provide deep discounts and offers which are attractive to even non-online shoppers. Such sales increase the Gross Merchandise Value (GMV) and pull a lot of first-time consumers, increasing the traffic to a great extent. Figure 1.5 provides a snapshot of how the sales and number of online shopping users increase during festival sales. The increase in GMV and online shoppers were significantly higher in the year 2020. One of the reasons for this higher growth could be the restrictions owning to lockdown in several parts of the country.



Source: IBEF (2021)

Figure 1.5: India's E-tailing Revenue in Festive Season

The pandemic has acted as a critical motivator in encouraging non-shoppers to buy in online shopping portals; Figure 1.6 gives a snapshot of the rise in online shoppers. It indicates a significant rise in online spending as a percentage of total retail sales, and this rise is significantly higher than the previous year.



Source: Redseer consulting (2020)

Figure 1.6: COVID Led Jump in Online Shoppers in India

Unlike the developed economies where most of the population communicates in English, India is diverse and multilinguistic. India has over 22 scheduled languages, which can hinder the adoption of online shopping. E-tailers have woken up to this reality and provide vernacular content, which is now acting as a critical driver. Popular online shopping portals like Flipkart and Snapdeal have provided content in regional languages like Tamil, Telugu, Kannada, and Hindi**.** Online shopping portals are putting more tremendous efforts to make the shopping experience more convenient by adding voice search; all the popular portals like Myntra, Amazon, Flipkart have added voice search.

There are some differences in key drivers of online shopping in the global context and emerging E-tailing market like India; unlike the developed economies in the growth stage, India is still in the market early adoption stage. The cultural and socio-demographic difference between developed and developing economies is significant. Internet penetration in the USA was 87 percent in 2021 (Kemp, 2020) against 45 percent in India in the same year (Kemp, 2020). Unlike the developed economies, India is more collectivistic and score low on uncertainty avoidance(Hofstede Insights, 2019). These differences indicate that studies conducted in developed economies cannot be generalised to an emerging market like India. This motivates the current study in assessing consumer behavior in online shopping in India.

1.4.6 Challenges for Online Shopping Adoption in India

E-tailing organisations face numerous challenges; E-tailing in the USA or any other developed economy is much easier than in India. In India, the government regulations and policies and lack of clarity regarding the same have led to staggering growth in E-tailing companies. The constant tug of war between local vendors and the E-tailing giants in India has led to the Indian government creating rules and regulations in favour of the local vendors. This has significantly hampered the fast growth rate of E-tailing organisations. As per the Indian Foreign Direct Investment (FDI) policy, two models of Ecommerce are identified 1) Marketplace model – indicates that the E-tailer will provide only the information technology platform that will act as a facilitator between the buyer and the

seller. 2) Inventory model – where the entity owns inventory. As per the government guidelines, 100 percent FDI is allowed only through the marketplace model. This has a significant impact as foreign players find it challenging to enter India. Even though Walmart and Amazon have entered India, they have positioned themselves as marketplaces; this makes it difficult for these organisations to operate as many restrictions bind them. Competition Commission of India (CCI) is constantly monitoring the various sale events conducted by the E-tailing giants like Flipkart and Amazon. It has created several regulations to control the deep discounts that are harming the local vendors. The latest regulations have banned flash sales, the promotion of private labels associated with online shopping portals, and the manipulation of search results in favour of specific products or brands (Reuters, 2021). These regulations can be a significant challenge to online shopping portals as flash sales, festive sales were the key drivers and were helping the online shopping portals in customer acquisition.

Consumers perceive several risks in online shopping like product performance risk, financial risk, security risk, privacy risk, etc. However, the importance of these perceived risks may vary in order based on whether the economy is developed or developing economy. Perceived performance risk, perceived financial risk, perceived time loss risk affect the buying decision of Indian consumers to a greater extent (Guru et al., 2020). Indians are apprehensive about the quality of products sold online; 11 percent of the respondents in the study conducted by Guru et al., (2020) did not trust the product quality sold online. Concerning financial risk, consumers in India were more apprehensive if their financial details are divulged, due to which COD was a popular mode of payment. With demonetisation and pandemics, POD is more preferred. Time loss risks indicate that the delay in delivery of the product is expected due to infrastructural problems. Indian E-tailing organisations face a mammoth task in improving the logistics and supply chain infrastructure as they have to deliver to a vast number of scattered geographical areas of 6000 small cities and nearly 600,000 villages (Nielsen Report, 2017). E-tailing organisations are working on improving supply chain infrastructure by setting up warehouses in multiple locations. Amazon India has more than 26 million cubic feet of

storage space spread across 13 states and 50 fulfilment centres (Khan & Babar, 2020). There could be other risks associated with online shopping like web-associated risk (Crespo et al., 2009), loss of social interaction (Doolin et al., 2006), etc.; these perceived risks can cause anxiety in consumers.

Despite trying to lure customers through deep discounts, shorter delivery timelines, 30-day return policy, E-tailing organizations are still facing the problem of cart abandonment, order cancellations, and product returns. If a potential customer, after adding products to the cart, fails to complete the transaction, it is called cart abandonment. Cart abandonment is a phenomenon most applicable to online retailing than offline retailing, and the most pertinent reasons for cart abandonment are slow website, additional taxes or shipping charges, non-satisfactory return policy, lack of payment options, etc. (MattsenKumar, 2020).

Product returns are a significant hassle for online retailers in India, leading to huge costs; major reasons for product returns are damaged products received, the product looks different from the catalogue, received the wrong product (Saleh, 2021). Product returns are also triggered by the unavailability of the customer at home. Generally, the product returns are less in the electronics product category and high in the fashion category (Bhalla, 2020).

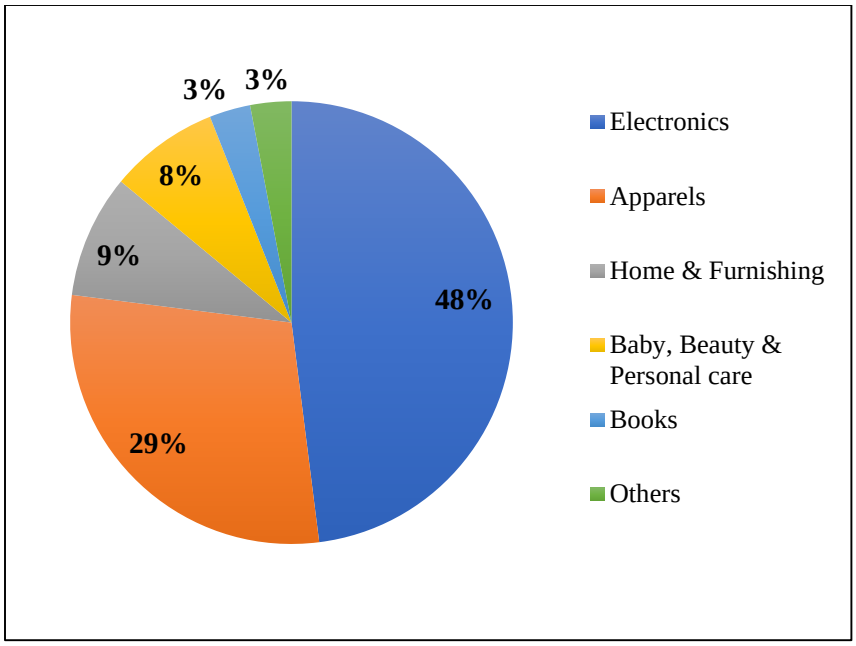
Despite the growth of online shopping adoption, none of the big players is close to profitability. In the financial year 2020, Flipkart reported losses to the tune of ₹ 3150 Cr, and Amazon reported losses to the tune of ₹ 5850 Cr (PTI, 2020). Even though there is growth in revenues, the losses are still huge, and these companies are nowhere near profitability. This is a significant concern for many E-tailers. In their fight to gain market share, many E-tailers are being myopic in marketing decisions and losing customers. It is pretty evident that despite the increasing adoption of online shopping, consumers perceive it to be riskier and hence face more anxiety when purchasing online. Many consumers experience cognitive dissonance post-purchase due to uncertainties in online shopping. If cognitive dissonance is not mitigated at the right time, online shopping portals may lose valuable consumers incurring further losses.

Online shopping since its inception has consistently been adding new product categories to its profile. Initially, it started with books, and eventually, products of home entertainment, toys, home and kitchen products, clothing, etc., were added. Product categories are structured in different ways in different online shopping portals for merchandising. These categorizations again differ within the portal's website, the upper horizontal tab and the dropdowns might reflect a slightly different merchandising tree. The search pages might reflect different results. The categorization used for merchandising might differ from the categorization used for reporting. Broadly the products available on online shopping portals can be categorized as Electronics, Fashion, Books, Home & Kitchen and Groceries. Many portals further split the electronics category into electronic devices, electronic appliances and electronic accessories. The fashion category mainly consists of apparels and accessories for both men and women. Home & Kitchen category mainly comprises of products like furniture, furnishings, décor, storage items and so on.

The present study opts for a refined categorization based on a mix of merchandising on online shopping portals and research reports. The present study considers Electronics product category which comprises of electronic accessories and electronic devices & appliances

1.4.7 Electronics Category

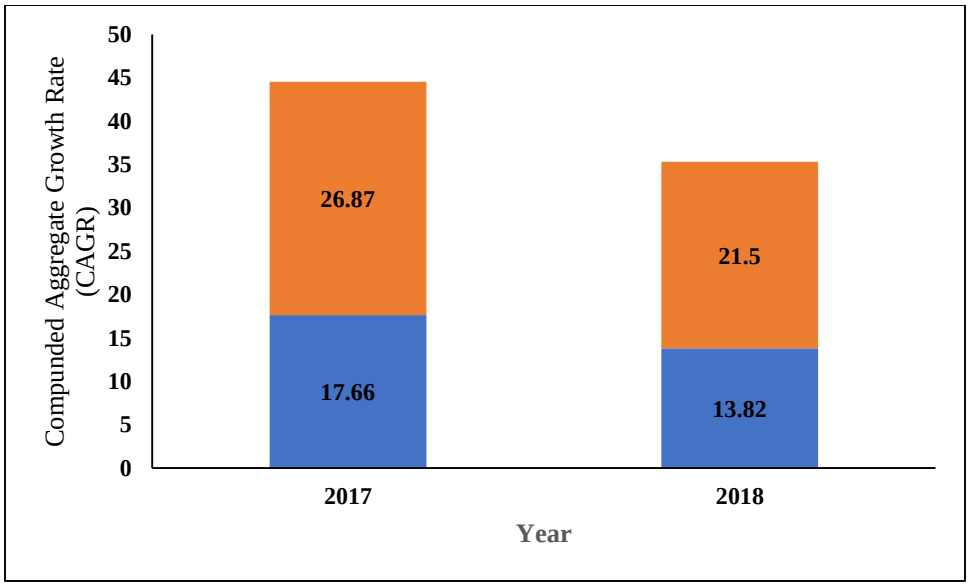
The electronics category was consistently dominating the retail e-commerce sector in India, with 68 percent of the total sales coming from the electronics product category in the year 2017 (RedSeer, 2017), 49 percent of the market value in 2018 (KPMG & CII Institute of Logistics, 2018), and 48 percent in the year 2019 (IBEF, 2020). The online consumer electronics market was valued at 99,000 crores in 2019 (Businesswire, 2019). Steady growth is noticed in the electronics market in India; the market is expected to grow at 5.91 percent CAGR (Compounded Aggregated Growth Rate) between the 2017-30 forecast period (Goldstein Market Intelligence, 2020). Figure 1.7 gives the category-wise contribution to GMV (Gross Merchandising Value).



Source: IBEF, 2020

Figure 1.7: Category Share of Gross Merchandise Value in the E-tailing Market

The electronics product category is synonymous with consumer electronics in offline retail. It mainly comprises different electronic equipment (devices & appliances) and accessories used by consumers in their daily lives instead of business use (Statista, 2022). Electronic equipment consists of both brown goods (televisions, mobiles, personal computers, cameras), and white goods (air conditioners, microwave ovens, washing machines, refrigerators, sewing machines). According to the digital commerce report published by the Internet and Mobile Association of India (IAMAI) and Indian Market Research Bureau Kantar (IMRB) (2016) mobiles were the top-selling products within the category of Electronics. Figure 1.8 shows the proportion of sales contribution of mobiles. Mobiles, not just contribute to a very high percentage of sales, but they also contribute to customer acquisitions, i.e., the mobiles category brings in about 20 percent of the customers (Bansal, 2018).



Source: IBEF (2021)

Figure 1.8: Sales Contribution of Smartphones and Other Electronic Appliances

The sales of mobiles through online channels were at an all-time high in the year 2020. Forty-five percent of the total mobile sales came from the online channel. A significant spike was noticed in the sale of laptops, tablets in the year 2020 (Ganjoo, 2021). Other electronic appliances that are popular are microwave ovens, cleaning equipment.

Electronic appliances and devices are considered high-involvement purchases due to the higher price and long-term association with the products. Consumers generally require more time and information while making a purchase decision in the consumer electronics category. Usually, it is a collective decision if the product is a refrigerator, laptop, or television set. Consumers often go to offline retail outlets, check the product physically, compare the prices and buy it online if it is cheaper. While shopping online for an electronic product, consumers face many uncertainties in terms of product installation, warranties, and condition of the product. Unlike other product categories, consumer electronics is a higher-priced category, which forms a subcategory, even though lower-priced require

informed decision making. The electronic devices and appliances majorly constitute branded products. As a majority of the products sold in this category are higher priced, one can safely assume that this is synonymous with essential purchase decisions, which is the most common scenario for eliciting cognitive dissonance.

Electronic accessories majorly constitute non-branded, private label products. Electronic accessories sales are often fueled by the growth in electronic devices like mobiles, laptops, cameras, etc. Significant growth in the sale of mobile accessories was seen in many of the emerging economies like India, China, Brazil owing to the increasing demand for smartphones (Credence Research, 2018). Some of the most popular electronic accessories sold in 2020 as per the E-tailing behemoths Flipkart and Amazon are power banks, storage devices, Fire TV sticks, headphones, and headsets (Akolawala, 2020). Electronic accessories are considered low involvement purchases as the time, money, and effort required to purchase these products are much less.

The pandemic has led to a new normal of working and learning from home, which has triggered an increase in demand for consumer electronic products (PTI, 2021). Post pandemic lockdowns triggered work from home, which led to many professionals returning to their hometowns in tier 2 and tier 3 cities. Schools across the country opted for online learning mode, which resulted in customer acquisition in large volumes from tier 2 and tier 3 cities. Udaan, a B2B platform, reported a massive surge in demand for electronic products. It sold almost 50 million electronic products in the unlock phase in 2020, mainly comprised of audio and mobile accessories (19 percent) and power accessories (16 percent). The other products included mobile handsets (9 percent), computers and IT accessories (7 percent), and other electronic appliances (6 percent) (Abrar, 2021). The pandemic has further accelerated the sale of accessories like headphones, enablers for online learning (PTI, 2021).

The electronics product category is the most significant in terms of revenue contribution and customer acquisition for E-tailers. Research discerning consumer behavior in this category is sparse. A better understanding of cognitive dissonance in the online shopping

of electronic products will help E-tailers reduce their losses and attract more consumers. In specific instances, researchers have identified cognitive dissonance can occur in low involvement purchases as well (Gbadamosi, 2009; Nordvall, 2014). The electronics product category consists of both high involvement and low involvement products. Hence it is imperative to understand cognitive dissonance in online shopping of electronic products as it provides a deeper insight if cognitive dissonance is prevalent in both the sub-categories. A better understanding of cognitive dissonance in the electronic products category can help E-tailers in mitigating the same; which in turn can increase consumer footfalls.

1.5 COGNITIVE DISSONANCE

Cognitive dissonance is a psychologically uncomfortable state that arises because of inconsistency between two cognitive elements (Festinger, 1957). Cognitive dissonance could be more applicable to online shopping than traditional offline retail stores (Soutar & Sweeney, 2003). The increasing popularity of online shopping has resulted in many product categories and products being listed on online shopping portals. Due to which online shopping portals selling identical/similar products has increased. Consumers are now exposed to a plethora of choices. Choosing out of a massive catalogue of products can be daunting for the consumers, as with the increase of choice, the decision-making also becomes complex. There is always a pre-decision conflict while choosing alternatives and post-purchase anxiety if the correct alternative has been chosen. Anxiety during an online purchase can increase as the product is immediately not handed over to the customer. Eventually, this anxiety and pre-decision conflict may lead to cognitive dissonance. Cognitive dissonance is a very complex and elusive construct; it is under-researched in the online shopping context.

There could be many factors that influence cognitive dissonance like product involvement, trust, value, reliance on Word-of-Mouth (WOM), information exposure (Balakrishnan et al., 2020; Sharifi & Esfidani, 2014; Park et al., 2015; Kim, 2011). Cognitive dissonance is said to negatively impact post-purchase constructs like satisfaction, repurchase intention,

WOM, product returns, etc. (Kim, 2011; Sharifi & Esfidani, 2014; Park et al., 2015; Powers & Jack, 2015; Wilkins et al., 2017; Balakrishnan et al., 2020; Marikyan et al., 2020). All of these post-purchase constructs are extremely important for the profitability of E-tailing firms.

A subset of factors that influence cognitive dissonance has been studied by researchers in online shopping, indicating that cognitive dissonance is heavily under-researched in online shopping. Only a few researchers examined the relationship between cognitive dissonance and post-purchase constructs in the context of online shopping (Park et al., 2015; Balakrishnan et al., 2020). This leaves vast scope for researchers to better analyze these relationships.

1.6 NEED FOR THE STUDY

The growing acceptance of online shopping due to changing demographics and lifestyles is seen across the globe. Consumer behavior in online shopping will differ from traditional offline shopping. Online shopping is gaining significant traction in India owing to increasing internet penetration. E-tailers are facing a huge problem of customer churn as switching costs are very low in online shopping as compared to traditional retail stores. Customer loyalty is critical to driving growth. Customer satisfaction impacts the components of loyalty like repurchase intention and positive e-WOM. Satisfaction can be affected by a multitude of factors; cognitive dissonance is one of them. Cognitive dissonance is extremely relevant to the online shopping context due to the higher uncertainty involved and the risk thereof (Sweeney et al., 2003; Phelps et al., 2000; Yap and Gaur, 2014). Hence to understand how E-tailers can create a loyal customer base, it is important to study cognitive dissonance (Balakrishnan et al., 2020).

Literature on factors influencing cognitive dissonance exists in different contexts like the choice of university (Mao & Oppewal, 2010), service performance (Park et al., 2015), deceptive packaging (Wilkins et al., 2016), and usage of online retail coupons (Balakrishnan et al., 2020). The majority of the studies on cognitive dissonance are based on developed economies (Kim et al., 2011; Park et al., 2015; Wilkins et al., 2016).

Researchers asserted that the cognitive abilities of consumers may differ in a culturally diverse country like India (Gehrt et al., 2012). India being an emerging economy, differs from developed economies in terms of ethno-socio-economic and regulatory aspects (Tandon, 2020). Hence E-tailers need to understand cognitive dissonance in online shopping in the context of emerging market like India. E-tailers can mitigate the impact of cognitive dissonance if they can identify the factors that cause cognitive dissonance. A better understanding of cognitive dissonance can aid in creating strategies to positively reinforce a consumer's purchase decision.

1.7 PROBLEM STATEMENT

A significant concern across many e-tailing companies in India is their inability to curb losses and achieve profitability. Consumers do not directly interface with the E-tailers. It can lead to several anxieties like product quality, delivery time, comprehensive product choice, intangibility, etc., leading to cognitive dissonance. As a result, cognitive dissonance is more relevant in online shopping than traditional offline channels. Factors influencing cognitive dissonance could differ in varying contexts. Hence it is essential to identify relevant factors that influence cognitive dissonance in online shopping.

Cognitive dissonance, if not mitigated, acts as a hindrance to customer satisfaction. Satisfaction is a key performance indicator for many online shopping portals. It directly or indirectly contributes to the profitability of the firm. Even though there are studies that have explored this relationship, they differ in terms of conceptualization of cognitive dissonance as many of these studies included only the emotional dimension and the wisdom of purchase dimension. They did not include the concern over the deal dimension. Hence the present study aims at understanding the relationship between cognitive dissonance and satisfaction in detail.

Generally satisfied customers tend to either repurchase a product on the same online shopping portal or disseminate positive WOM. The relationship between satisfaction, repurchase intention, and e-WOM has been studied by researchers in the context service encounter performances in online shopping and online delivery of services and so on. The

few studies that explored the relationships between cognitive dissonance, satisfaction, repurchase intention and e-WOM were in the context of services. None of the studies explored this relationship in online shopping within the framework of cognitive dissonance. The electronics product category is the highest contributor of sales to online shopping portals in India and significantly contributes to customer acquisition. Hence it is important to understand the relationship between cognitive dissonance and post-purchase constructs of satisfaction, repurchase intention, and e-WOM in online shopping.

Cognitive dissonance is considered to generally occur in purchases of high involvement. However, a few researchers have highlighted that low involvement purchases can also be accompanied by cognitive dissonance. The electronics product category consists of subcategories that reflect high involvement and low involvement purchases. The present study addresses this gap and attempts to identify if cognitive dissonance differs in both contexts. Hence the problem identified for the study is "*cognitive dissonance in online shopping with reference to select product categories*".

1.8 RESEARCH QUESTIONS

The following research questions were framed to find solutions to the issues emerging in the research gap.

1. What are the factors influencing cognitive dissonance in the context of online shopping?
2. How does cognitive dissonance impact satisfaction in the context of online shopping?
3. How does satisfaction impact repurchase intention and e-WOM in online shopping, relevant to understanding loyalty?
4. How does cognitive dissonance vary across product categories of different levels of involvement?

1.9 RESEARCH OBJECTIVES

The following research objectives were formulated to systematically answer the research questions.

1: To identify the relevant factors influencing cognitive dissonance in online shopping

2: To identify the impact of cognitive dissonance on satisfaction in online shopping.

3: To analyze the effect of satisfaction on repurchase intention in online shopping.

4: To find the impact of satisfaction on e-WOM in the context of online shopping

5: To compare cognitive dissonance experienced in an online setting concerning product categories of different levels of involvement.

1.10 SIGNIFICANCE OF THE STUDY

The research study contributes to cognitive dissonance theory by identifying and analyzing the relevant factors that impact cognitive dissonance. It is one of the first studies that contribute to understanding the impact of dimensions of cognitive dissonance on satisfaction in online shopping in an emerging E-tailing market. There is sparse literature that focuses on cognitive dissonance in online shopping, most of the studies on cognitive dissonance differ in context. The majority of the empirical studies related to cognitive dissonance in online shopping are conducted in developed economies that significantly differ from developing economies like India in terms of demographics, infrastructure, government regulations, policies, etc., and hence cannot be generalized.

The proposed framework is of immense value to the E-tailers as it delves into assessing the impact of the cognitive dissonance on satisfaction, as satisfaction in consumers is considered one of the key performance indicators for E-tailers. The study further provides a perspective on factors influencing cognitive dissonance which can help E-tailers in taking decisions related to merchandising. The study also provides valuable inputs on the relationship between satisfaction, e-WOM, and repurchase intention

which are of prime importance to E-tailers as all of these outcome variables impact the profitability of the firm to a great extent.

1.11 SCOPE OF THE STUDY

The present study focuses on understanding cognitive dissonance in online shopping, and hence the population of the study comprises online shoppers. The study was conducted in the metros as the number of orders from metro cities was higher due to better infrastructure, delivery, and higher disposable income of consumers.

The study covered a select set of product categories. The study was based on the electronics category as its contribution was the highest to total online sales. The electronics category comprises electronic devices & appliances such as mobiles, laptops, computers, cameras, smart home automation, and home entertainment smart wearable tech, large appliances like televisions, washing machines, air conditioners, and refrigerators. These products are considered to be high-involvement purchases. Electronic accessories are low involvement products such as mobile accessories, laptop accessories, computer peripherals, gaming and accessories, computer accessories, computer peripherals, network components, camera accessories, home entertainment, car & vehicle electronics, etc.

1.12 BRIEF OUTLINE OF THESIS

The thesis is presented in five chapters:

Chapter One is comprised of the introduction of the research study, which includes the background of the study, a detailed description of the global and Indian online shopping industry. It provides a snapshot of the key drivers and challenges faced in Online Shopping from the perspective of consumers and online retailers. The chapter also highlights new trends in the online shopping industry and the key players in the Indian online retailing sector. The chapter describes the need for the study, statement of the problem, research questions, research objectives, significance, and scope of the study. The chapter concludes with a brief outline of the thesis.

Chapter Two provides an extensive literature review that supports the present study strongly. An exhaustive literature review covering most of the critical studies relevant to the study topic was done to understand the study constructs. The various relevant theoretical models and background of such studies have been comprehensively discussed. The chapter provides strong literature support for the research gaps identified. The chapter comprises the 1) conceptual framework, 2) operational definition of the constructs, 3) research hypotheses formulated and their alignment with research objectives.

Chapter Three consists of the research methodology used for the study explained in detail. The research methodology encompasses the approach, methods and design for the research and it's sources of data. The chapter throws light on the research instrument, a structured questionnaire; sources used in constructing the research instrument are also highlighted. The sampling method is explained in detail in this chapter. The chapter also includes a thorough explanation of the pilot study as to how it was conducted and its results. The chapter provides a snapshot of the statistical tools that deployed for analysis and interpretation.

Chapter Four comprises data analysis, including descriptive statistics, reliability and validity analysis, Correlation and regression, multivariate statistics, and structural equation modelling. The data analysis results are interpreted thoroughly to provide an answer to the research questions.

Chapter Five discusses the findings and conclusions of the study in detail. This chapter provides an in-depth understanding of the results and compares the findings with the past studies. The chapter highlights the study implications from a theoretical as well as a practical perspective. The chapter further sheds light on limitations and proposes future research recommendations.

CHAPTER 2

REVIEW OF LITERATURE

CHAPTER 2

REVIEW OF LITERATURE

2.1 CHAPTER OVERVIEW

The first chapter provided a detailed introduction to the study. In the second chapter an in-depth literature review is presented. This provides a deeper understanding of the concepts and development of cognitive dissonance theory and the factors influencing cognitive dissonance. Section 2.2 discusses consumer behavior in online shopping. Section 2.3 provides an overview of the consumer decision-making process and various models like Simon's model, Keeney's four-stage decision model and many more are discussed. The role of cognitive dissonance in the consumer decision process based on previous research is discussed. A detailed introduction to cognitive dissonance and the various research paradigms in cognitive dissonance is mentioned in section 2.4. Cognitive dissonance theory evolved over a period of time, which is briefly described in section 2.5. Section 2.6 elaborates on cognitive dissonance and its dimensions. It also provides an overview of various research paradigms in cognitive dissonance and cognitive dissonance in online shopping. The application and relevance of cognitive dissonance in marketing is discussed in section 2.7. Online shopping and various factors influencing online shopping in consumers are discussed in section 2.8. A detailed literature review of cognitive dissonance in online shopping is explained in section 2.9. It provides an overview of the different studies that analyzed cognitive dissonance in online shopping. The relevant factors influencing cognitive dissonance in online shopping are discussed in detail in section 2.10. Section 2.11 sheds light on post-purchase outcomes. The impact of cognitive dissonance on satisfaction is discussed. The relationship between satisfaction and repurchase intention, satisfaction and e-WOM are discussed. The electronics product category and its bifurcation are described in section 2.12. Section 2.13 comprehensively explains the research gaps. The conceptual framework is provided in section 2.14. Section 2.15 presents the

formulation of the conceptual framework based on rigorous literature review. Section 2.16 provides operational definition of the variables. The chapter is concluded with section 2.17, which provides the chapter summary.

2.2 CONSUMER BEHAVIOR IN ONLINE SHOPPING

Research in marketing has evolved over the years. There is tremendous interest in understanding the complex nature of consumer behavior which results in different outcomes. Understanding consumer behavior is a boon for marketers as they can influence a consumer's decision in their favor. Studies on consumer behavior shed light on how consumers think, feel, and why they chose a specific product out of the vast number of alternatives. The behavior consumer's exhibit while discovering, buying, consuming, experiencing and discarding of products, services & ideas is called as consumer behavior (Schiffman & Kanuk, 2007). Consumer behavior varies significantly based on the product purchased. A consumer may show higher involvement and may expend more time on a service purchase than a purchase of a regular grocery item. The decision-making process might also undergo change based on the product purchased. The number of steps involved in making a purchase decision might be significantly reduced while purchasing a toothbrush, whereas the decision process might be more elaborate in the purchase of a laptop. A deeper understanding of consumer behavior will help marketers in attracting consumers and increase the sale of their products.

With the advent of the internet and online shopping, the study of E-consumer behavior is gaining traction (Dennis, et al., 2009). The consumer decision-making process underwent a significant change in online shopping owing to the convenience and information-rich interface. The consumer decision process in online shopping is influenced by website design, the assortment of products, ease of use, and convenience. Unlike the brick-and-mortar world of shopping, online shopping is rich in data. Data on cart abandonments, browse history and search history can provide valuable insights on the flow of purchase of a product. However, not many researchers have been able to access and interpret the voluminous data. Hence, researchers, by employing large-scale surveys and experiments,

are trying to decode E-consumer behavior. An in-depth analysis of E-consumer behavior will serve a very useful purpose to the E-tailers in providing a better consumer experience.

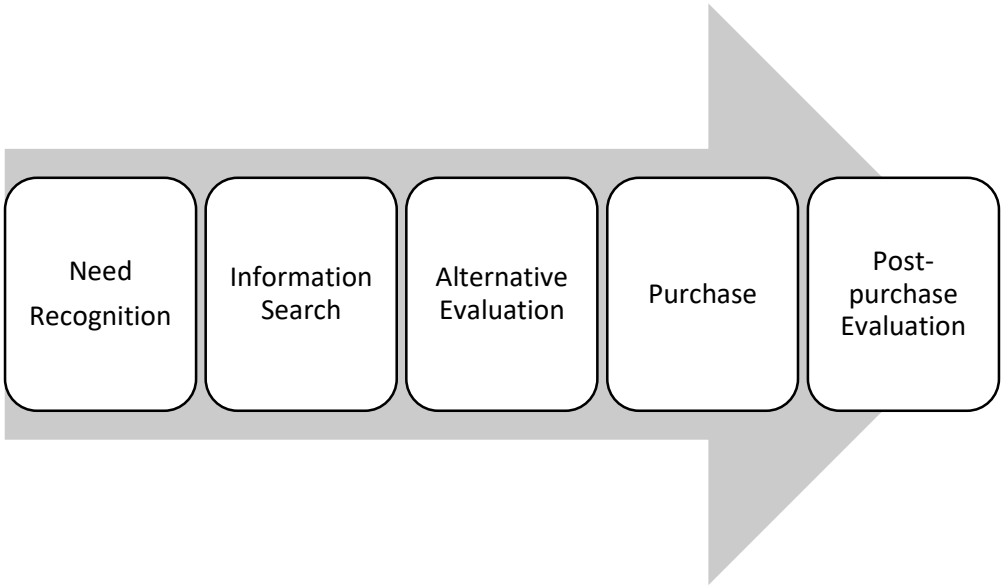
2.3 CONSUMER DECISION-MAKING PROCESS

In the mid-to-late 1960s, research on consumer behavior was in the nascent stage. Consumer behavior was based on ideas that were developed in other scientific fields like psychology, sociology, anthropology, and the like to form the basis of understanding consumer behavior. Within consumer behavior, researchers were intrigued by the decision-making process of the consumer that is a significant area of the interest for the marketer. Consumer decision-making can be identified as a function of cross-disciplines like economics (time costs) and psychology (decision strategies) (Punj, 2012). Consumer decision-making has evolved in the past few years. With the advent of the internet, consumers are more informed and follow different heuristics for decision-making. Marketers need to understand the dynamics behind consumer decision-making for the growth of the organization.

2.3.1 Consumer Decision-Making in Traditional Retail Settings

The consumer buying decision process provides a detailed description of the fundamental stages that a customer experiences during the purchase process. Consumer decision-making models have evolved over a period of time, with researchers adding more elements to it. One of the earliest consumer decision-making models is the five-stage model proposed by Dewey in the year 1910. Figure 2.1 illustrates the five-stage model of consumer decision-making proposed by John Dewey. This model served as a foundation for many other consumer decision-making models. The following are the different stages of Dewey's model.

- A consumer recognizes a problem or a need, due to which he tries to find a product. This product is expected to directly solve the consumer's problem.



Source: Kotler&Keller (2012)

Figure 2.1: Five Stage Consumer Decision-Making Model

- To find the most appropriate product, a consumer searches for information either from internal or external sources.
- Based on the information search consumer finalizes a set of alternatives. The consumer then evaluates the alternatives based on a specific criterion.
- The fourth stage involves the purchase decision where the actual purchase takes place. This decision is based on the evaluation of alternatives.
- The fifth stage is the post-purchase stage, which decides if the consumer is satisfied or dissatisfied with the product.

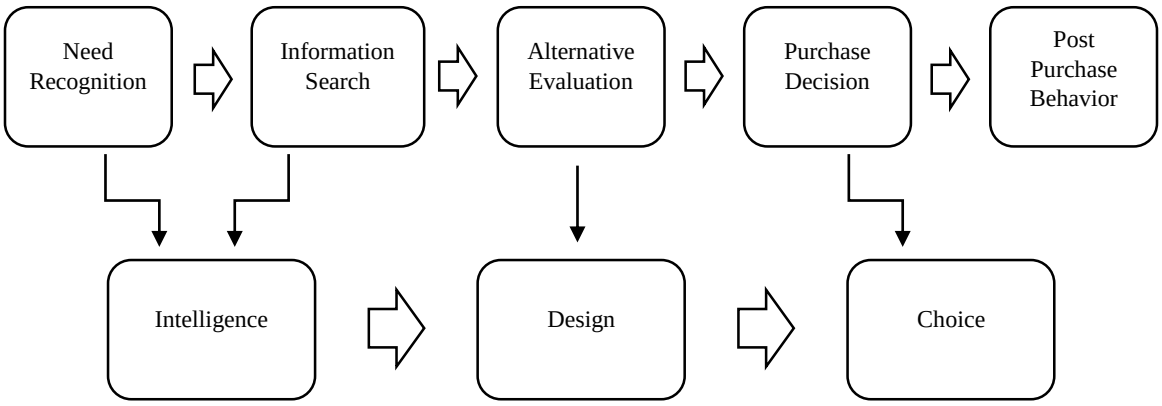
  Based on evidence from the majority of consumer behavior textbooks it is clear that these five stages of consumer decision-making are most widely accepted (Blackwell et al.,2005; Hawkins et al, 2003; Kotler & Keller, 2012).

The consumer decision process changes when a consumer is making a repeat purchase decision or the product is of low involvement. In such a scenario consumers make a quick decision (Hoyer, 1984). Consumers might follow heuristics and skip a few steps in the consumer decision process.

A few of the relevant consumer decision-making models in traditional offline settings are

Simon Model of Consumer Decision-Making (1947)

Simon's model (1960) is considered a ground-breaking decision-making model in the area of decision science. The model elaborated on three stages of decision-making i.e., intelligence, design, and choice. The different stages are pictorially represented in figure 2.2. The problem's classification and the gathering and processing of information make up the intelligence phase. Consumers consider a set of alternatives, which they evaluate in the second stage of design activity. Finally, a product is chosen in the last stage. When compared to the classical model, Simon's model is an amalgamation of various phases of the classical model. The initial two stages – need recognition and information search – combine in the intelligence phase. The choice phase corresponds with the stage of purchasing decision, whereas the design phase is the third step of alternative appraisal.



Source: Voramontri & Klieb, (2019)

Figure 2.2: Simon's Model of Decision-Making

Engel Kollat and Blackwell Model (EKB Model, 1968)

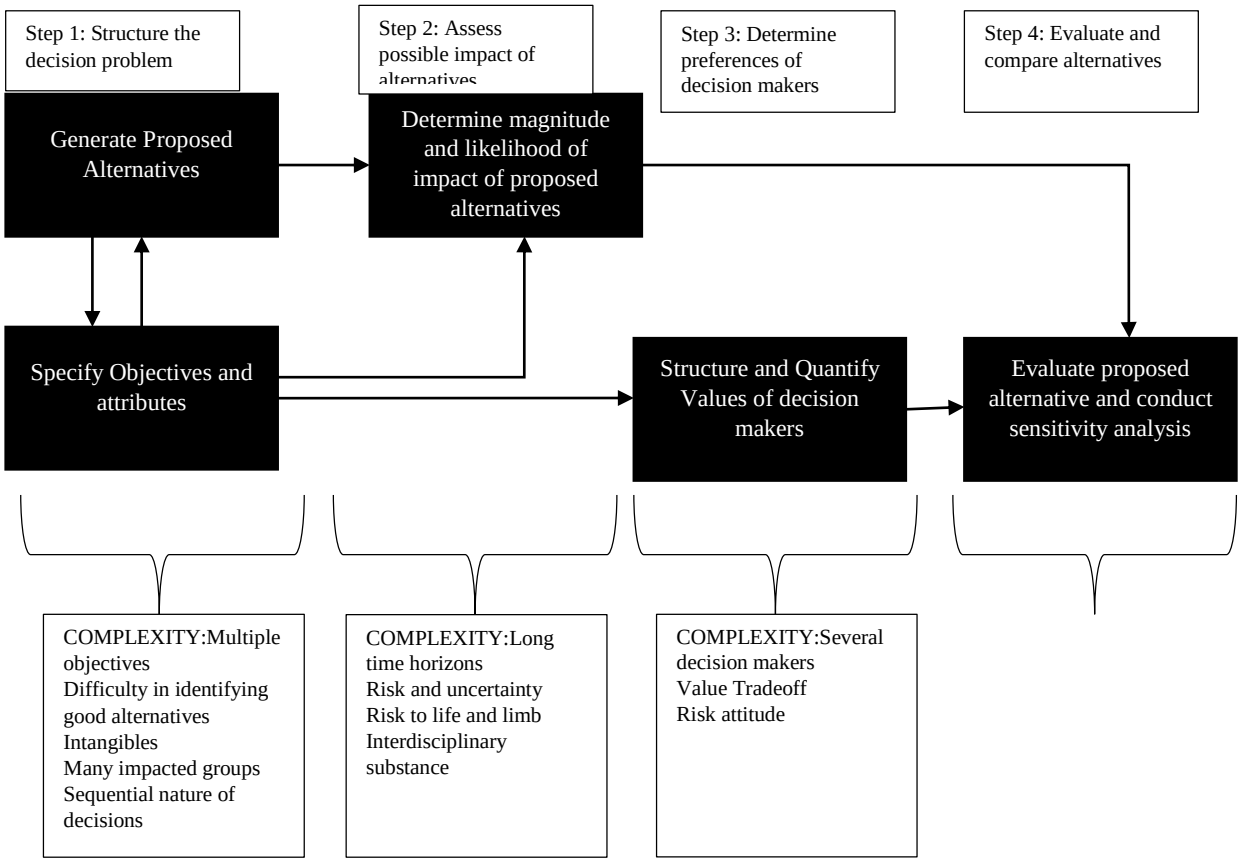
The EKB model put forward by Engel, Kollat and Blackwell (1968) is an amalgamation of the stages in traditional consumer decisions of problem recognition, search, alternative evaluation, choice, and outcomes with other input phases. The other phases of input,

information processing, decision process variables and external influences feed into the decision process stages. Engel et al., (1968) in the late 1960s modified Nicosia's model. The biggest differentiator was the inclusion of feedback and a search loop of incremental iterative partial decisions. For instance, a consumer might move beyond the inputs to reach the requisite problem recognition stage, do an external information search, and then, for whatever reason, decide not to complete the decision- making process. Even after the decision-making process is initiated, consumer might not yearn to buy, therefore the process may be stopped or put off at any time, giving pointers that can act as inputs for subsequent needs. The cliché of "window shopping" or browsers in internet shopping is an illustration of this.

The EKB model presupposes that marketers are eager to entice potential customers to buy their products and services. The EKB model assumes that a consumer can choose whether or not to purchase. The EKB model was one of the first models to incorporate post-purchase outcomes like satisfaction and cognitive dissonance as a possible result of the choice. The EKB model identifies "information and experience" as a significant phase that undergirds several of the decision process stages of problem recognition, search, alternative evaluation, and choice.

Keeney's Four-Stage Decision-Making Model (1982)

One of the important decision-making models is the four-stage model of Keeney (1982). Figure 2.3 depicts the different stages in the model. The first stage is structuring the decision problem which includes the generation of alternatives and the specification of objectives. The second stage involves assessing the probable effects of each alternative followed by determining the preferences of decision-makers. The final stage is to evaluate and compare the alternatives. The model is more detailed as it depicts the anticipated complexities at each stage.



Source: Keeney (1982)

Figure 2.3: Keeney's Four Stage Decision Model

This model focuses on the complexities of decision-making. It discusses the difficulty in identifying the good alternatives, risks and uncertainty associated. The current research study also tries to quantify choice difficulty which arises out of the complexity of decision-making out of numerous choices.

Consumers' thought processes can be ridden by complex emotions throughout and after the decision-making process. Few early models (Engel et al., 1968; Howard & Sheth, 1969) have incorporated post-purchase outcomes in the decision-making model which indicates their significance. A better understanding of how a consumer makes a choice out of the huge number of alternatives and what is the post-consumption outcome can help organizations to tailor more customer-friendly strategies. The decision-making process

differs and becomes further complex in online environments. Most of these decision-making models did not focus on the post-purchase outcomes which eventually act as input for decision-making in the upcoming purchases. Even if they mentioned post-purchase outcomes, these models did not provide a detailed overview of what could be the influencing factors of the said post-purchase outcomes.

As the present study is based on online shopping, consumer decision-making models in the online environment are also reviewed.

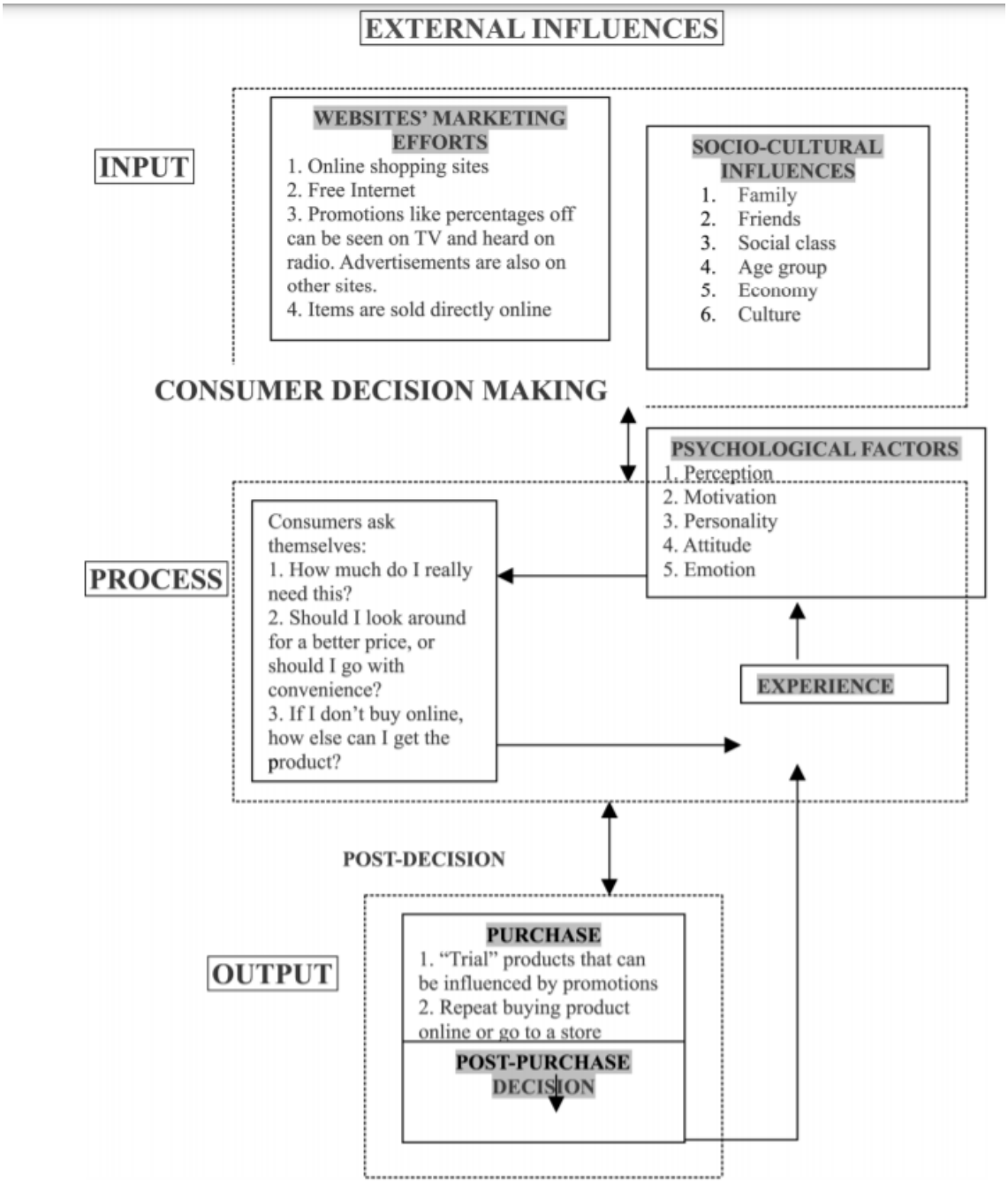
2.3.2 Consumer Decision-Making Models in the Online Settings

There is an urgency to analyze an online consumer's decision-making process from an all-inclusive stand point due to the increasing pervasiveness of online shopping. It can provide an understanding of complex and dynamic phenomena. The Decision-making process in the online environment is influenced by several factors like website design and recommendations provided by the online shopping portal. In case a consumer relies on the recommendations, they would use an other-based decision-making process (Olshavsky and Rosen, 1985). A final decision coming from a recommendation source is called the other-based decision-making process. In certain situations, consumers consult product recommendations, not necessarily following the recommendations leading to a hybrid decision-making process. Punj, (2012) proposed and tested different online decision-making processes by adding more variables and making them more elaborate. Dewey's (1910) five-stage problem-solving process was expanded upon and applied to consumer behavior in the Engel-Kollat-Blackwell (EKB). Compared to traditional retail, consumer decision-making quality improved in online settings owing to lesser search efforts (H¨aubl&Murray, 2006; H¨aubl&Trifts, 2000).

Smith and Rupp's Model of Online Consumer Decision- Making (2003)

A modified model of online consumer decision-making was proposed by Smith and Rupp (2003) which was based on the consumer decision-making model proposed by Kanuk and

Schiffman & Kanuk (2007) and Mowen (Sujan, 2001). Figure 2.4 depicts the model proposed by Smith and Rupp (2003).



Source: Smith & Rupp (2003)

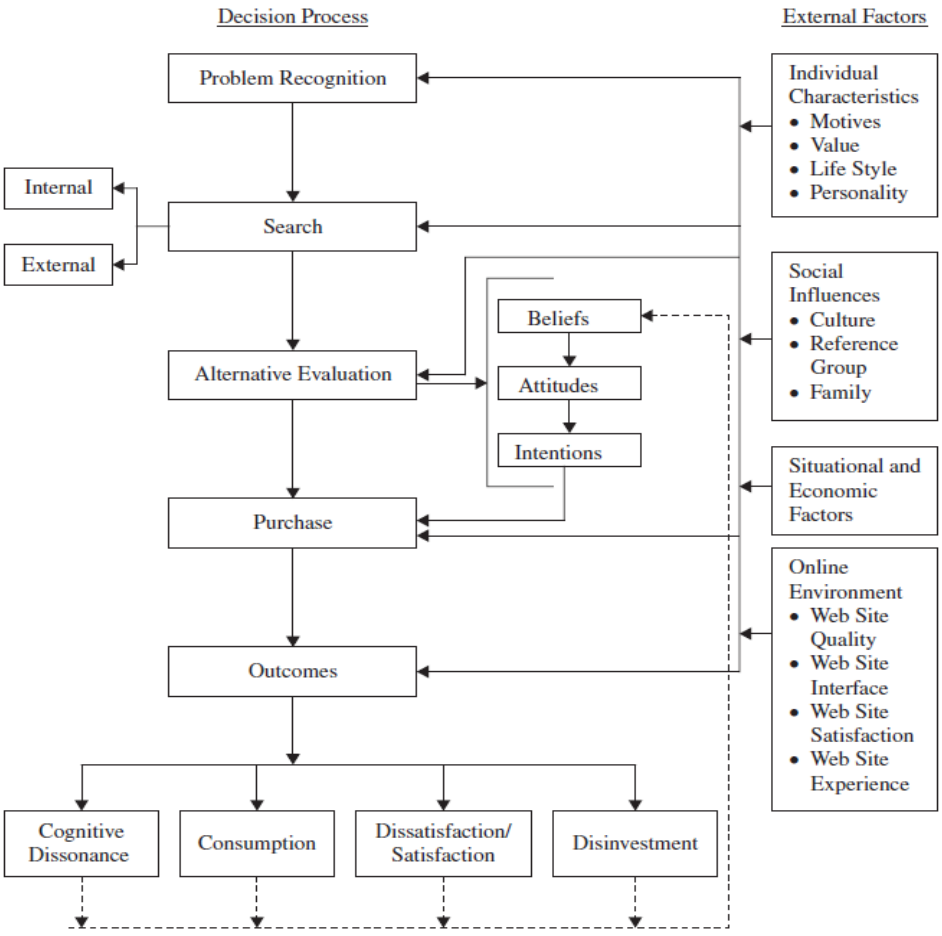
Figure 2.4:Smith and Rupp's Online Consumer Decision-Making Model

The decision-making process can be divided into three distinct but interconnected stages: operational input, process, and output. The input stage is defined by the consumer's recognition of a product. A consumer can identify the product through different sources of information like website marketing efforts and sociocultural influence. The process stage of the model indicates how consumers make decisions. This stage is influenced by inherent psychological factors like motivation, perception, personality, attitudes, and emotion. These psychological factors impact the external inputs in the first stage which in turn influences the consumer's recognition of a need, pre-purchase research and comparison of alternatives. The output stage is characterized by post-purchase outcomes.

The purchase behavior would vary based on the cost of the product. For an economical, short-life product, the consumer may be influenced by a coupon and maybe use it for a trial purchase. Only in case, the consumer is satisfied with the trial, will he make a repeat purchase. The trial is the investigative stage of purchasing behaviour during which the consumer uses and evaluates the product. A repeat purchase usually indicates product acceptance. The purchase of a more durable products, like electronic appliances, is a better indicator of adoption (Schiffman & Kanuk, 2007). Following post-decision behaviour, the consumer's experience influences psychological factors, which in turn influence the questions consumers ask themselves.

Darley's Modified Model of Online Consumer Behavior and Decision-Making (2010)

Based on the EKB model, Darley et al., (2010) proposed a modified decision-making model for online shopping. Figure 2.5 represents the model proposed by Darley et al., (2010). The five stage decision-making model recognized the moderators, interactions, and consequences of the decision-making process. Human need satisfaction was given higher importance over technology in this model. The most significant addition to this model was the external factors of the online environment like quality of the website, interface of the website, website satisfaction and experience on using the website.



Source: Darley et al.,(2010)

Figure 2.5: A Modified Model of Online Consumer Behavior and Decision-Making

Both the models discussed in online consumer decision-making focused on concepts of cognitive dissonance, satisfaction, and involvement. This indicates the relevance and significance of these concepts in understanding consumer behavior in online shopping. The interactions with and moderators of online decision-making and not deeply researched (Darley, et al., 2010). However, there are not many studies that have analyzed these relationships in an emerging and growing E-tailing market like India. The online environment is more complex than traditional offline retailing, and several facets of the online environment need clarification. With constantly evolving technology, the design of websites is also undergoing a huge change. New features are being added, and customer

experience is given the utmost importance. Researchers are lagging in understanding the latest technological advancements and their impact on consumer behavior. Psychological, socio-cultural, and environmental factors should all be investigated to fully comprehend the complex interactions. Participation, product type, personality type, information search, information processing, and belief systems may all be important arbitrators in understanding consumer behavior.

The EKB model and Darley's modified model identified the importance of cognitive dissonance and incorporated it into the decision-making model. Consumer decision-making can undergo a drastic change for a dissonant customer. A dissonant customer post-purchase can either return the product, might not buy again from the same consumer website, or might give negative recommendations about the product. The loop of customer feedback changes if cognitive dissonance is considered. Hence it is important to understand this psychological construct better.

To conclude offline consumer decision-making models like Simon's model view consumer decision-making as a simple process devoid of any dynamic complexities. Even though there was mention of post-purchase outcomes in the model, these outcomes were not explained in detail. Whereas Keeney's model attempts to include the complexity that arises while evaluating and choosing alternatives, it also tries to focus on the potential perceived risks a consumer can have. But these offline models did not stress the post-purchase outcomes.

Even though cognitive dissonance was identified as a post-purchase outcome in both the online models i.e. EKB and Darley's model, these models failed to provide the factors that can influence the complex and elusive construct of cognitive dissonance. Further, Darley's model represents cognitive dissonance and satisfaction as two separate outcomes, however, cognitive dissonance could eventually lead to dissatisfaction. The present study tries to identify factors that influence cognitive dissonance in online shopping and also assess the impact of the cognitive dissonance on satisfaction. The findings of all the models are summarized in table 2.1

Table 2.1: Summary of Decision-Making Models

Name of the model	Authors, Year	Short Description
Simon model	Simon, 1960	Simon's model conceptualizes decision-making as sequential activities of cognitive process. The sequential activities are intelligence activity, design activity, and choice activity
Engel, Kollat & Blackwell model	Engel, Kollat, and Blackwell ,1968	This model improvises on the five-stage decision model given by John Dewey and adds the components of input, information processing, decision process, and variables that influence the decision process.
Keeney's four-stage decision-making model	Keeney, 1982	Keeney's model adopts a staged approach which depicts the anticipated complexities at each stage
Consumer decision-making model for online shopping behavior by Smith and Rupp	Smith & Rupp, 2003	The decision-making process can be viewed as three dissimilar but intertwining stages: the operational input stage, the process stage, and the output stage
Darley's modified model of online consumer behavior and decision making	Darley, 2010	The modified model along with the five stages of decision-making recognized the moderators, interactions, and consequences of decision-making process.

Source:Review of Literature

2.3.3 Cognitive Dissonance in Consumer Decision-Making

Researchers have argued that cognitive dissonance could be prevalent throughout the decision-making process. Cognitive dissonance is not just a post-purchase phenomenon; it can occur whenever customers are exposed to information that contradicts their beliefs during a service interaction (Kim, 2011). Soutar and Sweeney (2003) contend that to better

understand the process of dissonance development, psychological responses at each stage of the decision-making should be examined.

Oliver (1997) suggested that in the pre-decision stage conflict may arise from the choice that exists between equally attractive comparable alternatives. Even though the customer has not made any commitment in this stage, and is free to select any product. Decisions are made by choosing one alternative over the other.

According to Costanzo (2013), problem recognition in certain shopping scenarios can be synonymous with cognitive dissonance. Marketers generally use advertisements to induce pre-decisional cognitive dissonance, which encourages consumers to buy their products. Cognitive dissonance can also be induced by marketers by advertising negatively about the competitor's products. In the former case, consumers, to resolve the cognitive dissonance, end up purchasing the product.

Consumers deal with anticipated regret in the 'beta' stage, which occurs immediately after the purchase decision, as they consider the foregone alternatives that are left behind. (Oliver, 1997). Hence consumers often have to deal with the attractiveness of rejected alternatives, leading to cognitive dissonance. The significance of the decision and the comparative attractiveness of the forgone alternatives determines the magnitude of cognitive dissonance (Oshikawa, 1969). That is to say, the higher (lower) the importance of consumer decision and the more (less) the similarity with the substitutes rejected, the greater (lesser) will be the dissonance.

The stage that follows the purchase stage but precedes the usage stage is called the gamma stage. This is the stage when reality of the purchase hits the consumer. This stage is characterized by a possible concern on the product's performance against expectations now that the usage of rejected alternatives is no longer possible (Oliver 1997). Cognitive dissonance generally is considered to occur in the post-purchase phase. Oliver (1997) argues that dissonance is most relevant in the gamma stage. When the consumer realizes the attractiveness of the foregone alternatives or identifies the flaws in the purchased product

In the post-purchase phase, cognitive dissonance can occur when a consumer reads negative reviews about the purchased product; the product does not perform as expected, and views other products being sold at much lower prices. Cognitive dissonance in the post-purchase phase can lead to negative outcomes like dissatisfaction, negative repurchase intention, brand switching, and so on.

2.4 COGNITIVE DISSONANCE

Festinger (1957) devised a theory of cognitive dissonance, which states that if a person holds two incongruent cognitions dissonance is likely to be experience and the person will make efforts to reduce it. Cognitions are bits of information that people have about their own behavior, attitudes, and surroundings. According to Festinger's theory, cognitions can be related or unrelated. Further, related cognitions can be consonant or dissonant. Consonance occurs when one cognition is aligned with the other cognition, whereas dissonance occurs when one cognition does not complement the other cognition and follows from the opposite cognition (Festinger, 1957). The theory's primary context is individual and social psychology; however, management and marketing researchers have previously adopted the theory.

For almost 60 years, many academic disciplines have applied the concept of cognitive dissonance. Dissonance includes both cognitive and emotional aspects (Sweeney et al., 2000), which closely intertwine. Post-purchase dissonance arises from hypothetically exploring the outcomes of alternate purchase decision that have been rejected (Harmon-Jones et al., 2008). As a result, the consumer's cognitive elements clash. Because dissonance causes discomfort, it serves as a powerful motivator to end the unpleasant condition (Harmon-Jones, et al., 2008). As a result, cognitive dissonance theory predicts a primarily attitudinal but also behavioural changes aimed at achieving a more consonant system of cognitions. Typically, attitudes are modified to better fit the purchase decision. For example, the consumer may rate the chosen alternative more positively than before or downplay the positive aspects of the rejected alternative. Pei (2013) established that consumer optimism renders cognitive dissonance less effective on them.

As per Cummings & Venkatesan (1978) and Oliver (1997), the three well-known conditions for cognitive dissonance to arise are a) the decision needs to be important; b) it has to be an irrevocable decision; c) the decision should be voluntary. These conditions, according to Menasco and Hawkins (1978) and Oliver (1997), are a matter of degree and are most visible in long-term problem-solving decisions, such as when purchasing major durables or appliances, which vary in terms of features across price and brand. Pei (2013) stated that the degree of cognitive dissonance lies heavily on the importance of the decision, the attractiveness and the number of available alternatives, and also the inter-similarities between the alternatives. Irrevocable decisions are irreversible decisions; the consumer must not retract from a decision once made (Sweeney et al., 2000)**.** According to researchers (Korgaonkar & Moschis, 1982; Oliver, 1997), major purchase decisions with long-term consequences are going to create dissonance conditions. Previous research indicates that actions , attitudes, thoughts, political philosophy, religious values, emotions, norms, culture can all contribute to cognitive dissonance situations (Festinger, 1957; Gregory-Smith et al., 2013; Tanford & Montgomery, 2014). These factors can vary based on the context. Most often cited research in marketing identifies product involvement, difficult decisions, exorbitant prices, perceived risks, e-WOM, and trust as influencing factors in the formation of cognitive dissonance.

2.4.1 Research Paradigms in Cognitive Dissonance Research

Based on the varying contexts, researchers suggested different paradigms for cognitive dissonance. Cognitive dissonance can occur on exposure of an individual to information inconsistent with his prior belief. When an individual expends huge effort or when an individual acts in ways that are discrepant with their attitudes and beliefs. A few of the important research paradigms associated with cognitive dissonance are briefly explained.

The Free-Choice Paradigm

The notion of harder decisions stimulating greater cognitive dissonance forms the crux of the free-choice paradigm (Brehm, 1956). To reduce the cognitive dissonance experienced, individuals inflate the desirability of selected alternative as more desirable, and undermine

the desirability of the rejected ones. They look for positives in the selected alternative and negatives in the rejected alternative. This effect is known as alternative spreading, and the experimental paradigm is known as the free-choice paradigm (Brehm, 1956). The free-choice paradigm is still used to gain understanding of dissonance processes (Harmon-Jones et al., 2008; Shultz & Lepper, 1996).

The Belief-Disconfirmation Paradigm

According to the belief-disconfirmation paradigm (Festinger et al., 1956), dissonance occurs when people are exposed to evidence that disproves their beliefs. Generally, individuals try to change their previously held beliefs to reduce dissonance. In situations of individuals not resolving dissonance can lead to any of the following situations. 1) Misconstruing information, 2) denying the information, 3) seeking validation from similar beliefs of the like-minded, and 4) advocating adoption of their own belief. Cognitive dissonance can be reduced by seeking consonant information either from other people or other sources. Adams (1961) successfully experimented to prove these.

The Effort-Justification Paradigm

When an individual performs an unpleasant or disagreeable activity to achieve some desirable outcome, it can lead to cognitive dissonance. The greater the unpleasant effort required to achieve the result, the greater the cognitive dissonance experienced. Dissonance can be reduced by overstating the outcome's desirability, which intensifies consonant cognitions. This pattern is named the effort-justification paradigm. The first experiment designed to test the effort-justification paradigm was conducted by Aronson and Mills (1959).

The Induced-Compliance Paradigm

Dissonance occurs when an individual does or says something that counters an earlier belief or attitude. An individual would not engage in behavior contrary to one’s prior belief or attitude, however, when an individual is forced into such behavior it can lead to cognitive dissonance. An individual can be enticed into such behavior by either rewards or threats.

This can lead to cognitions that are consonant with the behavior. The dissonance aroused is inversely related to the number and importance of the cognitions justifying the behavior. This paradigm is now known as the induced-compliance paradigm, rather than Festinger's original term, forced compliance. Festinger and Carlsmith's (1959) seminal study was the first to use the induced-compliance paradigm.

The paradigms explain the arousal of cognitive dissonance in various situations. The most relevant cognitive dissonance research paradigms for online shopping would be free choice paradigm and the belief disconfirmation paradigm. In situations of making a purchase decision from a significant number of alternatives, consumers often try to view the selected alternative as superior to the rejected alternatives to reduce cognitive dissonance. This is synonymous with the free-choice paradigm. Many a time, post purchasing a product online, customers may end up reading negative reviews of the product or come across a person speaking negatively about the product. This might lead to a cognitive dissonance stemming out of information inconsistent with their beliefs and is synonymous with the belief-disconfirmation paradigm.

2.5 EVOLUTION OF COGNITIVE DISSONANCE THEORY

Despite agreement among several researchers about the behavioral observation of the theory; controversies are surrounding the motivation of dissonance effects**.** As a result of which, the theory was refined iteratively to produce subsequent alternative theories (Stone and Cooper, 2001). While the theoretical concept itself has remained unaltered over the years, cognitive dissonance has been linked to various other constructs and theories. Among which the most significant are the Self-Concept theory (Aronson, 1968), the New look at Cognitive Dissonance Theory (Cooper & Fazio, 1984), Self-Affirmation theory (Steele, 1988), Self-perception theory (Bem, 1972), Impression -Management theory (Tedeschi et al. 1971), Self-standards model (Stone & Cooper, 2001).

2.5.1 Self-Concept Theory

(Aronson, 1968), proposes that dissonance is prompted by a conflict between people's "self-concept" (a way they perceive themselves) and their actions, a modification to the cognitive dissonance theory. People attempt to maintain a positive self-image as capable, consistent, and ethical, according to Aronson (1968).

2.5.2 New Look at Cognitive Dissonance Theory

According to Cooper and Fazio (1984), dissonance is caused by an unwanted consequence rather than inconsistency between cognitions. This new version, dubbed "the new look," proposes that people feel responsible when their actions lead to negative consequences, and that causes dissonance (Harmon-Jones & Mills, 1999). According to this interpretation, if an action does has intended consequences, inconsistency between cognitions is inconsequential and may not cause dissonance (Stone & Cooper, 2001).

2.5.3 Self-Affirmation Theory

A suggestion in the contrary was made by Steele (1988), who claimed that dissonance is caused by actions contradicting one's sense of moral integrity. This revision, known as the "self-affirmation theory", stated that cognitive inconsistency, self-inconsistency, or feeling responsible for unfavourable consequences do not cause dissonance (Harmon-Jones & Mills, 2019).

2.5.4 Self-Standards Model

"Self-standards model" proposed by Stone and Cooper (2001) is a critical evaluation of the role of self-concept in cognitive dissonance from three dimensions -i.e., self-affirmation, self-consistency, and the new look. According to this theory, the inequity between the result of an action and the expected standard that it is compared to provokes cognitive dissonance. The nature of such self-standards determines the individual's motivation to mitigate dissonance. (Stone & Cooper, 2001)**.**

2.5.5 Action-Based Model

The action-based model was proposed by Harmon-Jones & Mills (2019). When one decides to take a specific action, any information that contradicts that decision can cause cognitive dissonance and thus prevent the occurrence of action. To ensure the effective execution of the chosen action, the individual selectively augments the value of the chosen course of action and diminishes the value of the unchosen course of action.

These revisions to cognitive dissonance theory have offered useful information and perspectives. These revisions have recognized cognitions that significantly impact cognitive dissonance and have also identified different ways to reduce cognitive dissonance. (Harmon-Jones et al., 2015). For instance, in the self-affirmation theory, focus on self-related cognitions reduces the dissonance experienced by an individual irrespective of the causes of dissonance.

Apart from these revisions to Festinger's theory, certain alternative theories were also developed.

2.5.6 Self-Perception Theory

Self-perception theory, developed by Bem (1972) states that individuals objectively observe and analyze their own behavior, actions and the context they occur within to become aware of cause of their attitudes, when they are unsure of what they feel.

2.5.7 Impression Management Theory

Another alternative theory, "impression-management theory" put forward by Tedeschi et al., (1971), stated that people change their attitudes. The main reason to change their attitude was to increase consistency with their behavior (Harmon -Jones & Mills, 1999).

2.6 DIMENSIONS OF COGNITIVE DISSONANCE

Cognitive Dissonance is considered to be an elusive construct. Several researchers (Elliot & Devine, 1994; Menasco & Hawkins, (1978) have used indicators to measure cognitive dissonance or items that represent a related but different construct, such as anxiety (Hunt,

1970). Montgomery and Barnes (1993) developed a short cognitive dissonance scale, which mainly represent the feelings, attitude and emotions consumer's exhibit on experiencing cognitive dissonance, as well as the situations and conditions in which dissonance has occurred." They attempted to capture the domain of cognitive dissonance through these concomitant psychological experiences. Aside from correlational evidence from previous studies, there was no framework or basis for assuming that such feelings represented dissonance. The attempt to create a scale was considered a meritorious attempt, however, there were several flaws in the scale. Due to several issues questioning the authenticity of the measurement of cognitive dissonance, Oliver (1997) argued that there is a need to develop a sound cognitive dissonance scale that can be used in consumer research. This gap was addressed by Sweeney et al., (2000), who constructed a multi-dimensional scale. With the help of this scale, researchers can apprehend questions like whether all consumers experience cognitive dissonance and do the cognitive dissonance experience vary across consumers. More realistic settings were used by Soutar & Sweeney (2003) to measure cognitive dissonance and identify different cognitive dissonance segments. Experimental studies were considered to be one of the popular methods to study the physiological reactions, and attitude change following cognitive dissonance arousal (Sweeney et al., 2000). Sweeney et al., (2000) followed Churchill's (1979) procedure to create the scale. According to Sweeney et al., (2000), as cognitive dissonance has both cognitive as well as emotional aspects, the measurement should reflect both of these aspects. Sweeney et al., (2000) came up with a 22 item scale along three dimensions

1) Emotional dimension – this represents the psychological discomfort post-purchase (Sweeney et al., 2000).
2) Wisdom of Purchase Dimension – As per Sweeney et al., (2000), this represents the cognitional uneasiness concerning the need of the purchase and the correctness of the choice.
3) Concern over the deal – As the setting was an offline environment, this dimension represented the cognitional uneasiness stemming from the suspicion of sales associate's effect on influencing purchase decision (Sweeney et al., 2000). The final

dimension is more relevant to the offline store setting where the cognitive inconsistency flows from the influence of a salesperson (Soutar and Sweeney, 2003).

As is evident , the scale developed by Sweeney et al., (2000), includes an emotional dimension and two cognitive dimensions i.e., "wisdom of purchase" and "concern over the deal". The emotional dimension considered is the customer's psychological discomfort following the purchase; this reflects the anxiety related to the purchase, as mentioned earlier by Festinger (1957) and Mowen (1995).

In the present study, concern over the deal dimension is considered even though the context is online shopping. Only those measurement items relevant to the study are considered. The intent of including this dimension is, online portals tend to run aggressive sale campaigns with deep discounts and offers; they create a sense of urgency and scarcity with content labels like "only a few left in stock". This is the pull strategy that they often use to acquire customers. In such instances, consumers are persuaded against one's own will as they fear they might lose a good offer. Consumers are pursued through a variety of digital marketing strategies like email campaigns, push notifications, pop-up ads, etc. Even though there is no personal interface, these are repetitive, and consumers end up buying products. Post the purchase, they might be concerned if the deal was genuine. Hence "concern over the deal" dimension was used for the present study.

2.7 APPLICATION OF COGNITIVE DISSONANCE THEORY IN MARKETING

Since the introduction of cognitive dissonance theory into marketing research, there has been a fluctuating interest among researchers. During the 1960s, several researchers (Auster, 1965; Engel, 1963; Kaish, 1967; Oshikawa, 1969) were intrigued by the topic, and it received tremendous attention. In the 1970s, the interest continued with researchers (Cummings & Venkatesan, 1976; Hunt, 1970; Menasco & Hawkins, 1972; Oshikawa, 1972) further studying the topic to gain a better understanding of consumer behavior. In the 80's, interest in the concept of dissonance waned temporarily until it was revived

toward the end of the 1990s and remained steadily ever since (Hausknecht et al., 1998; Sweeney, et al., 2000; Brownstein, 2003; Soutar & Sweeney, 2003; Koller & Salzberger, 2007; Dickinson & Oxoby, 2011). A similar pattern was observed in psychology (Aronson, 1992).

The most important application of cognitive dissonance in marketing was to understand consumer behavior and its causal factors. Ehrlich et al., (1957) and Engel (1963) studied post-purchase dissonance and efforts to reduce it through post-purchase interest in advertisements**.** An interesting application of cognitive dissonance theory by Kaish (1967) was in redefining three categories of consumer goods - convenience goods, shopping goods, and specialty goods**.** Despite Kaish's efforts (1967)**,** Oshikawa (1969) questions the pertinence of the theory of cognitive dissonance in consumer behavior research on the basis of lack of evidence to prove the influence of dissonance on consumers' post-purchase intent.

Eventually, the usefulness of cognitive dissonance theory from a marketing research perspective was vetted by researchers (Hunt, 1970; Cummings & Venkatesan, 1976). Since then, cognitive dissonance theory has been considered one of the most reliable theories for understanding consumer behavior.

The interest in cognitive dissonance, which reduced significantly in the 80s, was revived by Montgomery & Barnes (1993), Sweeney et al., (2000), and Koller and Salzberger (2007). Researchers like Sweeney et al., (1996) and Oliver (1997) firmly established cognitive dissonance as an antecedent for customer satisfaction, customer retention, complaining behavior, and other loyalty strategies. Initially, researchers found it difficult to measure cognitive dissonance, however significant progress has been seen concerning the same. Attempts to measure cognitive dissonance in a "real consumption setting" (Sweeney, et al., 2000; Soutar and Sweeney, 2003; Salzberger and Koller, 2005; Koller and Salzberger, 2007) have led to improved understanding of content, construct and external validity.

The research on cognitive dissonance in marketing focusses on post-purchase dissonance and its relationship with people's perceptions of post-purchase advertisement, service quality and consequent brand loyalty and attitudinal changes. Cognitive dissonance is a phenomenon that occurs in the post-purchase stage of consumer behaviour. After the purchase, consumers experience the actual performance of the product and evaluate it based on prior expectations, resulting in a duality or mental discomfort (Lake, 2009; Telci et al., 2011). In many cases, consumers may rely on utterly irrational thoughts and actions or cognitive biases to alleviate the discomfort caused by cognitive dissonance (Lake, 2009; Cappelletti et al., 2011), which can contribute in buyer's remorse (Lake, 2009). As a result, when consumers experience cognitive dissonance and cannot find anything to rationalize their decision, they may unintentionally fall back on the fundamental attribution error (Robbins and Judge, 2009) and hold company offering the product at fault. In many cases, consumers may rely on irrational thoughts and actions or heuristics to assuage the discomfort caused by cognitive dissonance (Lake, 2009; Cappelletti et al., 2011), which can result in buyer's remorse (Lake, 2009).

The present study is based on cognitive dissonance theory. It tries to incorporate factors influencing cognitive dissonance in online shopping. Many studies revealed that cognitive dissonance could better explain satisfaction. Satisfaction acts as a significant determinant of loyalty behaviour. Researchers have strongly suggested that cognitive dissonance is of more relevance to the online shopping context. Hence cognitive dissonance theory was considered the theoretical base for the study.

2.8 ONLINE SHOPPING

Online shopping was invented by an English entrepreneur Micheal Aldrich (Aldrich, 2011). Online shopping, also known as online purchasing, refers to the act by which customers satisfy shopping demand through the internet (Jeffrey & Hodge, 2007). Several studies (Donthu & Garcia, 1999; Bellman et al., 1999; Childers et al., 2001) differentiating online and offline retail buying behavior have been conducted. These studies focused on identifying the factors influencing online purchase intention and on post-purchase behavior

like satisfaction, loyalty, and repurchase intention in the context of online shopping. The increasing popularity of online shopping has become one of the most researched areas in both academic research and managerial practice (Bilgihan et al., 2016). Research in online shopping is increasing significantly due to the huge growth expected in the next few years. Discoverability of the Web site/app, usability of the app, perceived benefit, extent of personalization, hedonic and utilitarian features, community features, and multi-device compatibility are the factors influencing online customer experience (Bilgihan et al., 2016). In the Indian context, COD payment mode, perceived risks, and website functionality acted as drivers for the adoption of online shopping (Tandon et al., 2018). The key drivers can vary based on geographical locations. The key drivers in an emerging economy may significantly differ from the key drivers in a developed economy.

A few of the important challenges faced by online retailers are enhancing and differentiating the consumer experience (Cao et al., 2018), reducing perceived risks (Flanagin et al., 2014), lessening product returns (Oghazi, 2018), and cart abandonment (Rubin et al., 2020). As the number of E-tailing firms increases, differentiating the services becomes difficult. E-tailers will have to focus on creating new differentiating strategies to engage customers. Perceived risks can be harmful to E-tailers as they can increase cart abandonment as well as product returns. Product returns can be caused by faulty products, mismatches in products, or damaged products. Literature suggests cognitive dissonance and disconfirmation of expectations can act as key motivators for product returns (Powers & Jack, 2015). Cart abandonment can be caused by technical glitches, the non-availability of substitute methods of payment, excessive security checks, and apprehensions regarding privacy or security (Rajamma et al., 2009; Xu & Huang, 2015). Failure of an online retailer in terms of meeting consumer expectations can cause customer dissatisfaction and negative word of mouth. (Barari et al., 2020; Melović et al., 2021).

The present study focused on online shopping portals that catered to almost all product categories. The online shopping portals considered for the present study were Amazon India, Flipkart, Paytm, and Snapdeal. These shopping portals are not just online retailers

but also marketplaces that provide a platform for local retailers and vendors to list their products.

2.9 COGNITIVE DISSONANCE IN ONLINE SHOPPING

While the surge in internet adoption and the growth of online commerce have created enormous business opportunities, they have also exposed the consumers to risks of privacy and security (Phelps et al., 2000). This dichotomy of impact caused and increased prospect of consumer dissonance in cyberspace. Consumers may experience higher cognitive dissonance in the purchase of services than in the purchase of goods (Bawa & Kansal, 2008; Soutar & Sweeney, 2003). Due to the unique characteristics of intangibility, heterogeneity, inseparability, perishability, and lack of ownership. As online settings may provoke greater cognitive dissonance, it was suggested by Soutar & Sweeney (2003) to study cognitive dissonance in online retail settings. One of the first to identify antecedents of cognitive dissonance in online consumers was Sweeney and Mukhopadhyay (2004); they identified price, purchase irreversibility, unfamiliarity with brand, involvement, and perceived security risk as the factors leading to cognitive dissonance.

Kwon and Lennon (2009) investigated the experience of cognitive dissonance in consumers when confronted with poor online performance by a vendor for whom they have previously held favourable offline brand beliefs and attitudes. Clark and Das (2009) explored the implementation of e-CRM elements and effective web design as potential strategies for organizations to reduce the level of post-purchase dissonance through. In the study conducted by Koller et al., (2008), it was noticed that cognitive dissonance is strongly related to satisfaction in an online setting, providing evidence that it is more important in the online setting. Abe and Yamaguchi (2016) identified the antecedents to cognitive dissonance in e-commerce settings as difficult purchase decisions, higher-priced products, products on sale, and emotional purchases associated with sensory attributes. According to Lin et al., (2018) who studied cognitive dissonance in the purchase of apparel in online shopping, cognitive dissonance negatively influences satisfaction.

Studies based on cognitive dissonance in online shopping differed significantly from the present study. Balakrishnan et al., (2020) assessed the impact of online coupon usage and its role in reducing cognitive dissonance. The usage of online coupons significantly reduced cognitive dissonance and increased repurchase intention. Pre-service and post-service expectations can also cause cognitive dissonance among consumers. This can mainly occur due to the varying qualities of service performance (Park et al., 2015).

2.10 FACTORS INFLUENCING COGNITIVE DISSONANCE IN ONLINE SHOPPING

Based on the context the factors influencing cognitive dissonance can vary. As cognitive dissonance is a complex psychological construct, it is extremely difficult to explain or identify all the factors that can influence cognitive dissonance. In the present study, based on a rigorous literature review the following factors i.e., trust, product involvement, choice difficulty and perceived risks were identified as relevant factors influencing cognitive dissonance in the online shopping of electronic products.

2.10.1 Trust in Online Shopping

Consumer trust is very critical for E-tailers, as lack of consumer trust can act as the biggest barrier to realizing the potential of online shopping. Trust is considered to influence online shopping continuance (Al-Hattami, 2020) positively. According to Rousseau et al. (1998), trust is a psychological state characterized by the intention to accept vulnerability based on positive expectations of the intentions or behaviours of another. Trust implicitly implies a party's inclination to accept susceptibility with an exception or confidence in the other party (Moorman et al., 1992; Morgan & Hunt, 1994). It was further described as a person's feeling or belief in security of the transaction environment.

According to Bart et al., (2005), online trust differs from offline trust, as there is no personal interaction, online trust will have more variability as compared to offline trust. E-tailers have to gain the trust of online shoppers to succeed (Balasubramanian et al., 2003; Koufaris & Hampton-Sosa, 2004) and maintain enduring consumer relationships (Reichheld and

Schefter, 2000; Gefen et al., 2003). Trust in online setting is a consumer's subjective belief that the vendor or entity will accomplish its transactional commitments as the consumer understands them (Kim et al., 2008). In the context of online shopping, trust has been defined as behavioral intentions under pinned on belief in online retailers (Gefen, 2000), and their attributes including dependability, integrity, capability, and generosity (Jarvenpaa & Tractinsky 1999; Jarvenpaa et al., 1998).

A few of the factors that would influence both trusting beliefs and trusting intentions are information security, such as privacy, veracity, availability, identification, authentication, authorization, accountability, functionality, assurance, privacy, and non-repudiation (Vance et al., 2008). Trust is considered to be an implicit component of many websites' quality studies Vance et al., (2008). E-tailer can nurture trust by providing a website that provides intangible cues on competence, integrity, and benevolence (Chang & Chen, 2008). A website can provide detailed information on the product, vendor source, warranty details, and so on; by providing these details, the E-tailer is indicating that the brand is trustworthy and safe (Hashim & Murphie, 2007; Rasty et al., 2020). Credible information product information, product warranties, customer feedback channels and certification of the websites are factors impacting the confidence among Indian consumers to shop online (Kiran et al., 2008). There is a direct relationship between transaction frequency and trust in internet buying behavior, which is a clear indication that trust can have a direct influence on cognitive dissonance, and hence it is important to study trust.

2.10.2 Product Involvement

Involvement is regarded as a complex mental and long-lasting dominant construct that stands between the consumer and his behaviour, influencing his purchase decision process (Bauer et al., 2006). Product involvement has contributed significantly to understanding consumer choice and the decision-making process (Bian & Moutinho, 2011; Strubel & Petrie, 2016). According to Day (1970), involvement is "the general level of interest in the object or the centrality of the object to the person's ego structure". One of the commonly used definitions of product involvement is "it is a consumer's enduring perceptions of the

importance of the product category based on the consumer's inherent needs, values and interests" (Wulf et al., 2001; Mittal, 1995). Several other researchers like Tyebjee (1979), and Lastovicka (1979), suggested that involvement occurs when a product is related to important values or self-concept, and there is a difference in the levels of involvement depending on the product class. Product involvement is an indication of the magnitude of a customer's interest in buying a particular product or brand (Nguyen & Nguyen, 2020).

Current research reveals that consumers have the propensity to spend higher time and effort in information search and alternative evaluation processes in high-involvement situations, which lengthens the decision-making process (Celsi and Olson, 1988). Personal relevance or importance results in a high level of involvement (Greenwald and Leavitt, 1984); the main reason for drawing this parallel is the rigorous, logical list of activities that are a part of decision-making in high-involvement products. The time spent on purchasing a high-involvement product is much higher as the consequences of an incorrect purchase decision can have huge financial implications (Gu et al., 2012). Some of the most common examples of high-involvement purchases are automobiles (Laurent & Kapferer, 1985), and consumer electronics like laptops, cell phones, digital music players, cameras, etc. (Laurent & Kapferer, 1985; Sharifi & Esfidani, 2014). In a study conducted by Liao et al., (2017), a set of eight products were ranked the highest in terms of involvement, out of which four of the items were from the electronics category and four from the fashion category. The items from the electronics category were ranked higher than items from the fashion category in terms of involvement.

According to Chung and Zhao (2003), in a low-involvement situation, consumers do not try or can exert a substantial amount of effort to process information. Consumers are passive when making a low-involvement product purchase, and hence the advertisements targeted at low-involvement products focus more on exposure rather than providing information (Dahlén et al., 2000). The general assumption is that low-involvement products are bought with little or no planning, with low associated benefits and a low risk of making a wrong choice (Gbadamosi, 2009). Products of low involvement can be mobile

charging cards, stationeries, groceries & food staples which are habitual purchases (Han & Kim, 2017).

2.10.3 Perceived Risks in Online Shopping

Extant literature on perceived risks has been available since the 1960s. Bauer (1960) defined perceived risk as an amalgamation of uncertainty and the gravity of the outcome. Peter & Ryan (1976), suggested that perceived risk acts as an inhibitor to purchase behavior and have defined it as the expectation of losses associated with a purchase. Perceived risk is not only associated with the product or service acquired; it is associated with the entire process of how and where they are acquired (Hisrich et al., 1972).

According to Jacoby & Kaplan (1972), there are six components of perceived risk: financial, product performance, psychological, time/convenience, social, and physical risk. Financial risk is the potential net loss of money to a customer (Sweeney et al., 2000), and includes customer insecurity on misuse of online credit card usage (Maignan & Lukas, 1997). The loss sustained when a brand or product does not perform as expected is referred to as product performance risk (Horton, 1976). Psychological risk reflects a sense of powerlessness over the access others may have to personal information. Many consumers avoid providing information to web providers in return for access to information available on the internet due to psychological risks. (Jacoby & Kaplan 1997; Hoffman et al., 1999). Time/convenience risk entails the loss of time and disruption caused by challenges in maneuvering and/or submitting the order, discovering appropriate websites, or receiving products on time (GVU, 1998). According to researchers (Lee et al., 2001), perceived risk is one of the most important factors in understanding online shopping behaviors because it impacts other consumer perceptions, including perceived ease of use and perceived usefulness. Perceived risks are more in e-commerce than in brick-and-mortar retail due to multiple factors like payment security, product return difficulty, intangibility are preventing the consumers from purchasing online (Bellman et al., 1999). The risks perceived by online shoppers concerning the product returns and refunds as well as the security of internet transactions can dissuade online shopping at the last stage (Levin et al.,

2005). According to a study conducted by GVUs 10th user survey (1998), financial risk, product risk, psychological, and time/convenience risk were considered to be the most relevant. Researchers like, Bhatnagar & Ghose (2004), and Bhatnagar et al., (2000) have identified product performance and financial risk to be most relevant to the online setting. Chang et al., (2005) identified product risk, credit card fault risk, and security risk as significant to online shopping. Forsythe et al., (2006) summarized financial risk, product risk, and psychological and convenience risk as more important in online shopping. However, the prominence of these perceived risks fluctuates depending on whether the economy is developed or developing. In the Indian scenario, perceived performance risk, perceived financial risk, and perceived time loss risk affects the final purchase decision to a larger extent (Guru et al., 2020).

E-tailers must comprehend the perceived risks as consumers tend to switch between E-tailers due to the higher perceived risks in online shopping (Lee, 2009). Thus, consumers purchase products from E-tailers or web vendors that offer high quality and low risk. Therefore, E-tailers' marketing strategies are focused on mitigating product and web vendor risks (Chiu et al., 2011)**.**

2.10.4 Choice Difficulty in Online Shopping

In the context of a retail setting, choice entails buying from a particular retailer after conducting some research and evaluating alternative stores (Spiggle & Sewal, 1987). A consumer confronted with large sets of products has to put in more cognitive effort often to process the presented information and compare the alternatives. As the number of products increases, the similarities between the products also increase, making it difficult to identify which option is better. A decision made in such a context becomes harder to justify (Fasolo et al., 2009). This increased cognitive effort leads to choice difficulty (Willemsen et al., 2016). According to Anderson et al., (1966), with an increase in the number of alternatives, the pressure to evaluate the chosen and rejected alternatives will also increase. The subjective feeling of loss may seem to increase when the number of unchosen alternatives increases from one to two (Carmon et al. 2003). Choice difficulty,

in most the cases, is represented by the number of products/things from which a customer/respondent has to make a choice; the higher the number of products to choose, the greater the difficulty (Reutskaja & Hogarth, 2005).

The greatest advantage of online shopping is the abundance of options. It can provide a product catalogue containing millions of items. This, however, can be overwhelming for customers and can be a disadvantage given their limited processing capability (Haubl & Murray, 2003). Consumers, when bombarded with too many choices, may postpone their decisions, make suboptimal choices, or feel unhappy about their choices (Haubl & Trifts, 2000; Iyengar & Lepper, 2000; Schwartz, et al., 2002). High-variety recommendations are an integral part of online shopping. According to Xiao & Benbasat, 2014, variety increases choice difficulty. An average Indian browses 10 product pages and more than 15 mobiles before adding anything to the cart (Sheth et al., 2021); this is an indication to the E-tailers to curate their product list and try to ease choice difficulty to improve conversions.

Choice overload is a consequence of increase in the number of online shopping portals, making it difficult for buyers to select appropriate sites for making purchases (Afuah & Tucci, 2000). Choice difficulty in online shopping, according to Chen and Yang (2020), is related to the size of the choice set, consumers' product cognition level, the difficulty of the selection task, and the feasibility trade-off.

In spite of the ubiquitous variety in e-commerce assortments, choice difficulty is sparsely researched (Hastie, 2001). Hence the present study considers choice difficulty to be a relevant factor in better understanding consumer behavior in online shopping.

2.10.5 Demographic Characteristics of Online Shoppers

Demographic characteristics like gender, age, education level, personal income, and household income is said to have a significant impact on the buying decision. In the case of online shoppers, gender, nuptial status, location of residence, age, education, and household income were considered to be predictors of internet purchasing (Fram & Grady, 1997).

Researchers exhibit varying views on the impact of gender on online consumer buying behavior. Some researchers stressed the importance of gender in conditioning a consumer's overall web-based purchase decision (Wu et al., 2017; Lin et al., 2019). Few other researchers (Lian and Yen, 2014; Beldad et al., 2016) did not find the relationship to be significant. Tendency to purchase from the internet was seen more in men than women (Korgaonkar & Wolin,1999; Garbarino & Strahilevitz, 2004).

With the dissipation of the internet, more customers are falling into the profile of a wired lifestyle, internet shoppers were considered to be younger, and have a more wired lifestyle (Bellman et al., 1999; Hou, 2020). In the case of elders, individuals who are more educated, skilled, and cognizant of technology, as well as those who have a positive attitude toward online shopping, are more interested in it. (Eastman et al., 2014).

In terms of education and income, online customers tend to be more educated (Bellman et al., 1999; Swinyard & Smith, 2003; Hou, 2020) and earn higher income (Bellman et al., 1999; Donthu & Garcia, 1999; Swinyard & Smith, 2003; Hou, 2020). Koller et al., (2008) highlighted the fact that personality characteristics, demographics and attitudinal predispositions related to the purchased product may also have an impact on the relevancy of cognitive dissonance. E-tailers are now sitting on a huge amount of data, and accessing demographic information is relatively easier than decrypting perceptual surveys (Phang et al., 2010). An understanding of the demographics can provide valuable insights to E-tailers.

2.11 POST-PURCHASE CONSTRUCTS

A significant portion of the research studies on cognitive dissonance in marketing focused on the post-purchase stage. Often the dissonance experienced in this phase is referred to as post-purchase dissonance. Cognitive dissonance can bring a change in consumers' attitudes and impact their purchase tendencies (Beck & Cri´e, 2018; Tanford & Montgomery, 2014). Cognitive dissonance impacts satisfaction, post-decision product evaluation, and repurchase intention (Cohen & Goldberg, 1970; Davvetas & Diamantopoulos, 2017; Lin et al., 2018). It also impacts their search for selective information (Cummings &

Venkatesan, 1976; Winter et al., 2016). However, the present study focuses only on the impact of cognitive dissonance on satisfaction, repurchase intention, and e-WOM.

2.11.1 Satisfaction in Online Shopping

Consumer satisfaction is one of the key performance indicators for many E-tailers; it not only contributes to profitability but also to the long-term growth of online stores (Chen & Cheng, 2012). A consumer, when satisfied with a certain product or service, tends to form a continuous and affective commitment towards the product and services (Park et al., 2017; Shang & Bao, 2020)

Among the several definitions of consumer satisfaction, the most accepted definition was provided by Day (1984). According to Day (1984), satisfaction is a post-purchase evaluative judgment concerning a specific purchase selection. The most often considered evaluation is the consumer's pre-purchase expectation set, which when compared to the level of perceived product performance, yields disconfirmation beliefs. In the case of consumers' perceived performance exceeding expectations, consumers tend to be satisfied (Oliver, 1980). There have been several studies (Oliver, 1997; Szymanski and Henard, 2001; Yi, 1990) to identify the antecedents of consumer satisfaction. Satisfaction in the context of online shopping is the outcome of consumer perceptions of online shopping convenience, merchandising, site design and financial security (Szymanski & Hise, 2000). Attempts have been made (Ballantine, 2005) to identify the antecedents to satisfaction in online shopping. The factors that could act as determinants to consumer satisfaction in the online shopping context are a) Technology factors – security, usability, site design, and privacy; b) Shopping factors like – convenience, trustworthiness, and delivery; c) Product factors -merchandising, product value, and product customization (Ballantine, 2005).

The most commonly used method of measuring satisfaction is evaluating a customer's level of satisfaction on completion of a purchase either online or offline (Oliver, 1980); in certain contexts, satisfaction is evaluated at service encounters which becomes very specific. However, for the present study, satisfaction is being measured at an overall level.

2.11.2 Repurchase Intention in Online Shopping

According to Hellier et al., (2003), repurchase intention is defined as an individual's decision to purchase a particular service from the same company again, based on his or her current situation and likely circumstances. The subjective likelihood that a consumer will purchase products from the online shopping portal in the future is defined as repurchase intention within the online shopping context (Chiu et al., 2009; Tandon et al., 2020).

The profitability of an online shopping portal depends on the loyalty and repurchase intentions of consumers (Chiu et al, 2009). Online stores find it more difficult to become profitable than traditional retail stores; according to a study conducted by Baveja, et al., (2000) with Bain & Company, for an online store to become profitable, an existing customer should shop at least four times from the same store. According to Gupta and Kim (2007), only one percent of existing customers tend to go in for a repeat purchase. According to Liao et al., (2017), regret negatively influences repurchase intention. Since new customer acquisition is expensive and more time-consuming, E-tailers must gain and sustain customer loyalty so that they repurchase from the same E-tailer (Sullivan & Kim, 2018).

A retailer's post-purchase policies, such as exchanges and return refunds, positively affect a customer's loyalty and retention level (Minnema et al., 2018). Apart from the same good delivery service quality also impacts customers' repurchase intention positively (Javed & Wu, 2020). Repurchase intention is considered to be volitional (Khalifa and Liu, 2007) i.e., a person can decide with will to either perform or non-perform. In certain situations, consumers try to reduce their cognitive dissonance by trying to be consistent with their repurchase intentions (Khalifa and Liu, 2007).

2.11.3 e-WOM (ELECTRONIC-WORD OF MOUTH)

WOM (Word-of-mouth) in the context of marketing has been defined as "informal communications directed at other consumers about the ownership, usage, or characteristics of particular goods and services and/or their sellers" (Westbrook, 1987). There are a variety of sources of WOM like face-to-face, verbal recommendations from friends and

acquaintances, seller-generated content, and so on. The traditional WOM can be distinguished from e-WOM by the absence of face-to-face interaction in e-WOM (Park & Kim, 2008) as most of the opinions and views of the customer are posted via the internet (Sen & Lerman, 2007). Hennig-Thurau et al., (2004) defined e-WOM as any favourable or unfavourable statement made by a prospective, existing, or erstwhile customer about a product or a company, available to a multitude of people and institutions via the internet. Online Word-of-mouth generally includes various online consumer-generated content, such as product reviews, ratings, and chats (Liu, 2006). Compared to traditional WOM, e-WOM has an extensive reach of spreading information. A large volume of information can be instantly received or sent; anonymity can be maintained in the context of e-WOM (Hennig-Thurau et al., 2004). The few advantages of e-WOM are it can be communicated through rich multimedia messages (photos, videos, ratings, etc) and it is not by time, location and physical reach (Pourfakhimi et al., 2020).

e-WOM guides and facilitates consumers in evaluating the selection of products or services (Atmojo et al., 2019). Online reviews of products that are a part of e-WOM make decision-making easier for consumers (Kudeshia & Kumar, 2017). Companies must prioritize the generation of positive e-WOM because it not only strengthens the relationship between consumers' emotional trust and purchase intent, but it also enhances consumers' perceived integrity and attitude (Cheung et al., 2009).

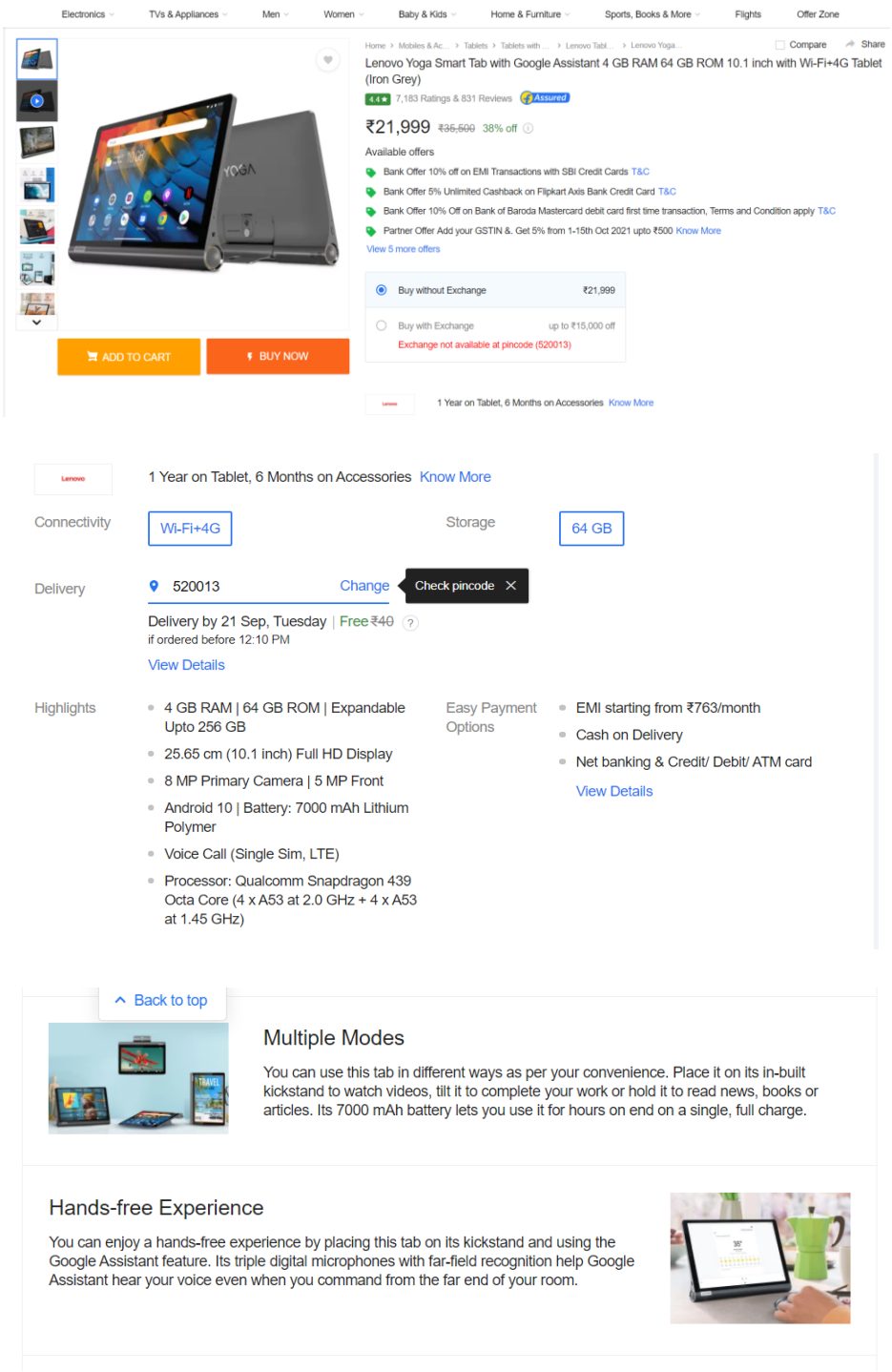
Researchers have identified (Bone, 1995; Mizerski, 1982) negative WOM to be more influential than positive WOM. If measures are not taken to reduce negative Word-of-mouth, it can further lead to negative brand recommendations (Koller & Salzberger, 2009), loss of loyal consumers (Nadeem, 2007; Solvang, 2007), consumer complaints, declining referrals (Olsen, 2008), reduced brand equity (Nadeem, 2007; Solvang, 2007). Hence E-tailers need to understand why, when, and how consumers disseminate e-WOM so that they can influence the consumers to disseminate more positive e-WOM.In the present study, positive e-WOM is measured in terms of intensity and valence.

2.12 ELECTRONICS PRODUCT CATEGORY

As discussed in the introduction, the electronics product category is the biggest contributor to online sales in terms of GMV. The category has helped in attracting new consumers to online stores owing to the steep discounts provided by E-tailers. Consumer electronics are generally categorized as high-involvement products due to the high costs and complexity of the product involved. Consumers want to examine not only the product's appearance but also some of its functions. These functions are difficult to depict on screen, and standard product descriptors (found on websites) are frequently insufficient for product evaluation. 77 percent of consumers, research consumer electronics online before making a purchase. Consumers often perform cross-channel comparisons (Flavián et al., 2020), by showrooming (i.e., offline trial before online purchase) or webrooming (i.e., online research before offline purchase) (Jing, 2018). The electronics product category can be broadly divided into two sub-categories, Electronic devices & Appliances, and Electronic Accessories.

2.12.1 High Involvement Electronic Products

Electronic devices are priced higher, require more time and information processing in order to make a purchase decision and are not frequently purchased. These characteristics are a part of the high-involvement purchase (Seo et al., 2001) Based on the effort, time and capital associated with the purchase of an electronic device one can liken it to a high-involvement purchase. As seen in figure 2.6, the product page includes multiple images, videos, and payment options with bank offers that provide easy payment options to consumers. Exchange offers which is very important, as most of the electronic devices are expensive and exchange offers ease the final price of the product. Apart from these, product specifications and warranty details are also provided. A consumer will definitely require more time to process the information available on the web page. A high-involvement purchase takes the central route of persuasion, with the deep elaboration of every relevant argument related to the involvement object (San Martin et al., 2011).

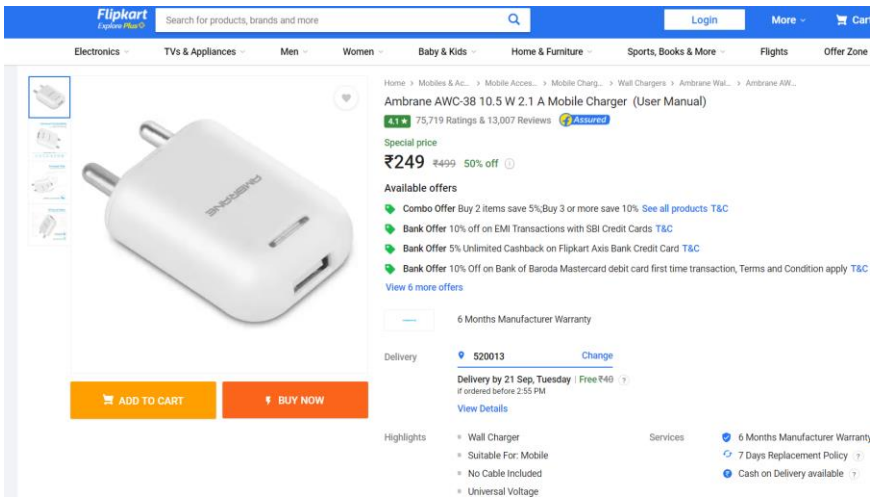


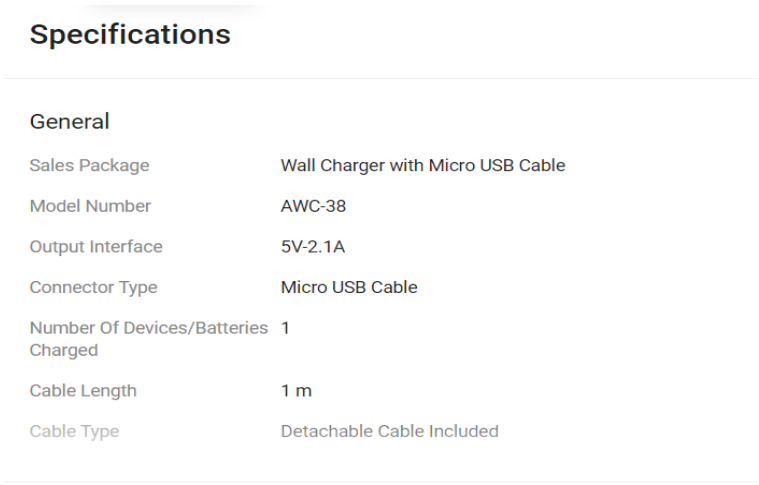
Source: Flipkart (2021)

Figure 2.6: Product Page of an Electronic Device from Flipkart

2.12.2 Low Involvement Electronic Products

As seen in figure 2.8, an electronic accessories page is not information heavy. There are only a few images, and no videos and the specifications are also limited. The price of the products is in the lower range indicating these products are low-involvement products. A low-involvement product purchase takes the peripheral route of persuasion, where the persuasion occurs by simple inferences of the validity of the message in the given situation (San Martin et al., 2011).





Source: Flipkart

Figure 2.7: Product Page of an Electronic Accessory from Flipkart

Based on observations of online shopping portals and research reports, the modified categorization as shown in table 2.2 is used for the study.

Table 2.2: Sub-Categories of Electronics Product Category

Sub-Categories	Products
Electronic devices & Appliances	Mobiles, laptops, cameras, smart home automation, washing machines, televisions, air conditioners, refrigerators, microwave ovens, mixers, grinders, blenders, vaccum cleaners, water purifiers, and so on .
Electronic accessories	Mobile accessories, laptop accessories, camera accessories, power accessories, storage accessories like pen drives, hard drives, and so on.

Source: Flipkart, Amazon, Snapdeal

The pandemic has led to a huge transformation in the way people live their lives. With the majority of the population working from home and students learning from home, there is a surge in demand for electronic products ranging from laptops to headphones to robotic cleaners. The first wave of the pandemic led to a huge one-time surge in the demand for electronic products; one could call it a one-time surge as these products have a longer replacement cycle unlike groceries (Sheth, et al., 2021). Hence it is necessary to understand consumer behavior in this product category. A better understanding can help E-tailers to maximize their sales and mitigate losses.

2.13 RESEARCH GAPS

Cognitive dissonance is a complex psychological construct that has been researched in different contexts in marketing. There could be several factors influencing cognitive dissonance in each of the varying contexts. An in-depth literature review reveals an

ambiguity in findings and disagreement among researchers among certain relationships. A deeper probe has led to the following research gaps.

2.13.1 Research Gap 1

Cognitive dissonance as a construct is gaining steady importance across marketing literature owing to its impact on many of the post-purchase constructs like satisfaction, loyalty, and WOM. Unlike traditional retail channels where the product is immediately handed over to the consumers, in online shopping a consumer without seeing or feeling or touching the product, orders it online, makes the payment before receiving the product unsure of the condition in which he/she will receive the product, there could be several anxieties experienced by the consumer which will eventually lead to a state of cognitive dissonance. Hence, Sweeney (2003) suggested that cognitive dissonance is of major concern in online shopping than offline and recommended understanding cognitive dissonance in online settings. There is a dearth of research in understanding cognitive dissonance in online shopping (Keng & Liao, 2013; Yap & Gaur, 2014). Certain studies identified the role of product involvement and trust as factors influencing cognitive dissonance however these studies were in different contexts of hotel-motel service and in the offline purchase of mobiles (Kim, 2011; Sharifi & Esfidani, 2014; Tomar, 2020). Due to the differences in the mode of shopping and the higher prevalence of cognitive dissonance in online shopping, it is important to understand the dynamics of product involvement, trust and cognitive dissonance in online shopping of broader categories like cognitive dissonance (Sharifi & Esfidani, 2014; Tomar, 2020). Seminal research (Festinger, 1957; Gerard, 1967; Menasco & Hawkins, 1978) had focused on the relationship between choice difficulty and cognitive dissonance, however, this relationship has hardly been analyzed in the online shopping context. This could be because choice difficulty is difficult to measure in realistic settings. Through this study, an attempt is made to understand this interesting relationship in online shopping which is a haven for choices. A similar situation is noticed regarding the relationship between perceived risks and cognitive dissonance; even though researchers mentioned that perceived risks can act as

antecedents to cognitive dissonance (Oliver, 1997; Sweeney et al,2000), there is a severe dearth of empirical research examining this relationship.

The few research studies (Park et al., 2015; Liao et al.,2017, Lin et al., 2018., Balakrishnan et al., 2020) assessing cognitive dissonance in online shopping, differed in their approach from the current study, and they did not focus on product involvement, trust in online shopping, perceived risks, and choice difficulty. The explanatory power of cognitive dissonance also varied based on context (Kim, 2011; Sharifi & Esfidani, 2014; Lin et al., 2018; Marikyan et al, 2020) and hence researchers have recommended including antecedents like trust, and involvement to better address cognitive dissonance (Yap & Gaur, 2014; - Lin et al., 2018; Li & Chaudhary, 2020; Özyörük, 2021). An attempt is made to address this gap by analyzing cognitive dissonance based on online purchases of customers and identifying its antecedents.

2.13.2 Research Gap 2

Product involvement as an antecedent to cognitive dissonance has been explored by researchers over the past few decades. The majority of the researchers in the past few decades (Cummings & Venkatesan, 1976; Korgaonkar & Moschis, 1982; Mowen, 1995; Oliver, 1997; Sweeney et al., 2003) agreed that cognitive dissonance occurs only in situations of high importance, situations involving a huge amount of money or psychological cost. These conditions are synonymous with high involvement. As high-involvement purchases garner more effort and time, the expectations of product performance would be high (Telci et al., 2011). Low-involvement purchases are generally habitual, and the cost involved is very less. Consumers of a low-involvement purchase often lack commitment or show indifference (Kassarjian, 1981). The general assumption is even if the product does not perform as expected, it will not lead to cognitive dissonance as the effort expended is very less. However, there have been contradicting viewpoints stating that cognitive dissonance can persist even in a low-involvement purchase. Gbadamosi (2009) identified that low-income female consumers also experienced cognitive dissonance in the purchase of groceries. Yap & Gaur (2014), through their

systematic literature review, mentioned that cognitive dissonance can persist in both high and low-involvement purchases. Studies have analyzed the relationship between cognitive dissonance and involvement in the purchase of mobiles (Graff & Kittipong, 2012; Sharifi & Esfidani, 2014). Researchers (Sharifi & Esfidani, 2014) recommended understanding cognitive dissonance in other electronic products of high involvement laptops etc. Literature on the relationship between cognitive dissonance and product involvement is not conclusive on the following questions 1) Is cognitive dissonance associated with both high and low-involvement purchases? 2) Does the magnitude of cognitive dissonance experienced in each of these situations vary? 3) What is the nature of the relationship between cognitive dissonance and product involvement?

Hence based on the identified gaps, the present research tries to assess if cognitive dissonance varies across high involvement (Electronic devices & appliances) and low involvement (Electronic accessories) categories.

2.13.3 Research Gap 3

Cognitive dissonance can impact post-purchase constructs like satisfaction, repurchase intention, and WOM. Studies explored these relationships between cognitive dissonance and satisfaction and how satisfaction or dissatisfaction eventually impacts repurchase intention, complaint behavior, loyalty, etc. (Koller & Salzberger, 2009; Mao & Oppewal, 2010; Park et al.,2012; Wilkins & Butt, 2016; - Lin et al., 2018). The studies which considered the impact of cognitive dissonance on satisfaction and from satisfaction to behavioral loyalty, and attitudinal loyalty (Sharifi & Esfidani, 2014; Lin et al., 2018) are very similar to repurchase intention and WOM as behavioral loyalty is more concerned with the recommendation of the products and attitudinal loyalty is more concerned with repurchasing the product. The majority of these studies were in the offline (Wilkins & Butt, 2016) and services context (Mao & Oppewal, 2010; Koller & Salzberger, 2009). The few studies in the online context either used secondary data (Park et al., 2012; 2015) and cognitive dissonance was measured using single measure items or were based on different theories like regulatory focus perspective theory. The present study addresses the gap of

understanding the impact of cognitive dissonance on repurchase intention and e-WOM (positive), which are operationalized using different scales in the context of online shopping.

To conclude, many of the studies conducted in online settings (Graff (2012); Liao (2017); Balakrishnan et al., (2020)) were either experimental studies or student surveys, which indicates that either the number of respondents is very low in number, responses of the respondents in case of experiments may not be genuine and the sample is homogenous. The present study addresses this gap and uses a large-scale survey to understand cognitive dissonance better.

Most of the studies addressing cognitive dissonance (Koller & Salzberger, (2009); Mao & Oppewal (2010); Park et al.,2012; Sharifi & Esfidani, 2014; Lin et al.,2018) were conducted in developed economies, and there is sparse literature available Analyzing cognitive dissonance within emerging markets like India and that too in the online purchase of electronic products.

2.14 CONCEPTUAL FRAMEWORK

Consumer behavior is a very complex and dynamic research area in marketing. However, organizations are striving harder to decode consumer behavior, which in turn will reap immense benefits for the companies. The transition from offline traditional retailing to online retailing has brought with it a sea change. There are numerous challenges faced by E-tailing organizations as E-tailing is still in the nascent stage. Hence it is important to understand consumer behavior in an E-tailing context. The present study is based on cognitive dissonance theory. It identifies factors that influence cognitive dissonance. It also assesses the impact of cognitive dissonance on satisfaction and the impact of satisfaction on repurchase intention and e-WOM. Based on an extant literature review, the conceptual framework is developed, which can be seen in figure 2.8.

Cognitive dissonance generally occurs in situations of high importance (Cummings & Venkatesan, 1976). The relevance and importance of purchases vary from product to

product. Product involvement helps in identifying the degree of importance of a purchase. Studies (George & Edward, 2009; Gbadamosi, 2009; Kim, 2011; Nordvall, 2014) indicate product involvement influences cognitive dissonance. However, there is ambiguity in the directionality of the relationship. There is sparse literature in understanding this relationship in the context of online shopping. The study analyses the nature of the relationship by considering two sub-categories of varying levels of product involvement.

Cognitive dissonance is generally known to cause undesirable consequences. Hence E-tailers try to look for avenues that can reduce cognitive dissonance. Trust among consumers can reduce cognitive dissonance or any other anxieties pertaining to the purchase of the product. Unlike traditional retailers, where a consumer gets the product immediately, in E-tailing, there is a lag. E-tailers need to gain the trust of consumers. Hence the present study tries to find the effect of trust on cognitive dissonance in online shopping.

Perceived risks are higher in online shopping than in traditional offline retailing. Numerous risks can be perceived by a consumer during or before the purchase of a product. This can hamper consumer decision-making. Researchers have identified that perceived risks occurring in the pre-purchase stage can lead to cognitive dissonance (Soutar & Sweeney, 2003). With the increasing popularity of online shopping, there is an increase in the number of frauds and deception in online shopping. The dearth of research in understanding the relationship between perceived risks and cognitive dissonance has motivated the present study to consider the same.

Ubiquitous choice acts as a big advantage as well as a disadvantage in online shopping. The vast amount of choice can increase the number of footfalls to online shopping portals. However, the choice difficulty a consumer faces can act as a hindrance to the final purchase decision. With increasing competition, E-tailers are providing consumers with a huge variety of products.

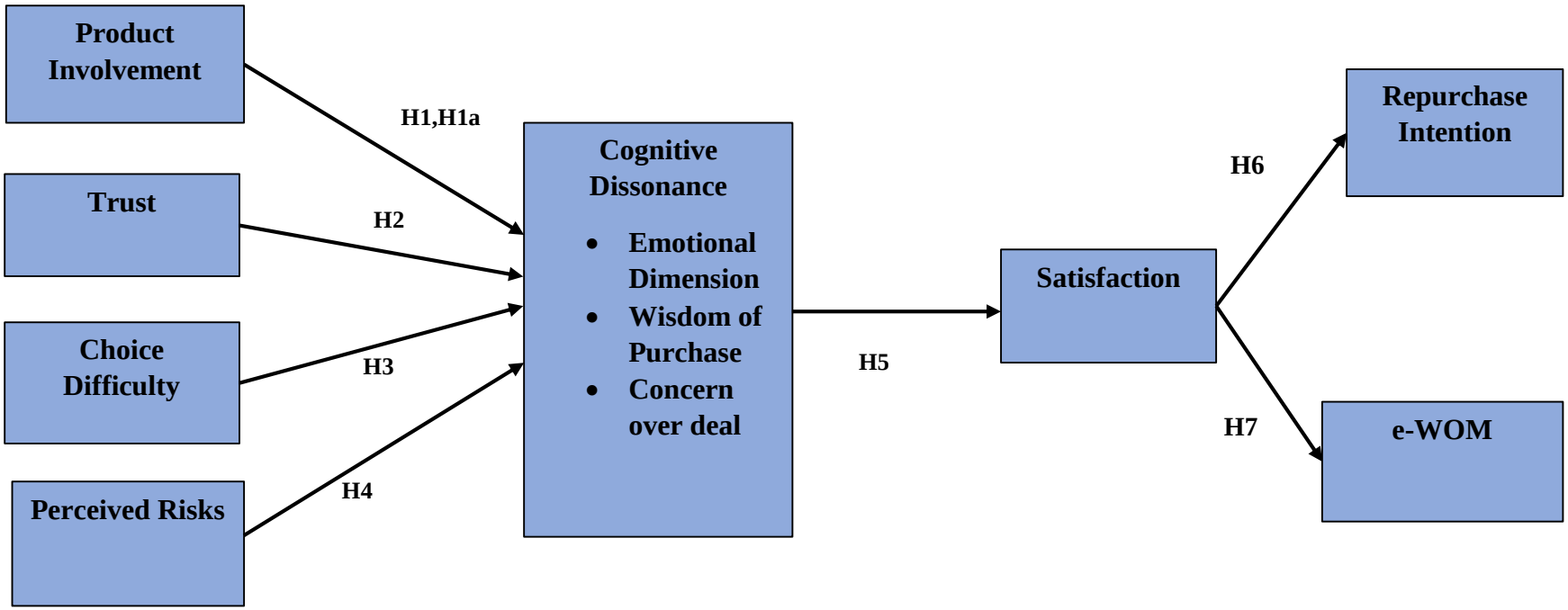


Figure 2.8: Conceptual Framework

Source: Literature Review

Seminal research (Festinger, 1957; Gerard, 1967) has indicated that choice difficulty can lead to cognitive dissonance. However, there is extremely sparse research trying to assess the same in an E-tailing context. Hence the present study aims to understand this relationship in the context of online shopping.

Post-purchase outcomes are game-changers for E-tailers. And cognitive dissonance is said to impact most of the post-purchase outcomes negatively. Studies have consistently proven that cognitive dissonance can lead to dissatisfaction. However, there are hardly any studies that tried to understand the influence of individual dimensions of cognitive dissonance: emotional dimension, wisdom of purchase and concern over the deal on satisfaction. The present study addresses the same. The study further aims to understand the relationship between satisfaction and repurchase intention, satisfaction, and e-WOM. Repurchase intentions are extremely important for E-tailers trying to achieve growth and long-term profitability. Positive e-WOM can increase footfalls and can help in better conversions.

2.15 HYPOTHESES DEVELOPMENT

2.15.1 Product Involvement and Cognitive Dissonance

Korgaonkar & Moschis, (1982) and Kim, (2011) have established that product involvement and cognitive dissonance are positively related. A few researchers (Kim, 2011; Yap & Gaur, 2014) proved that cognitive dissonance is more relevant to high involvement purchases as compared to low involvement purchases. These studies were conducted in the context of purchases of services.

There is a contradicting point of view, which reveals that higher involvement motivates higher information search before the purchase decision. And correspondingly higher supportive information post-purchase can help in reducing the cognitive dissonance being experienced. According to George & Edward (2009) and Pandey & Jamwal (2015), cognitive dissonance experienced by highly involved customers is low. A lack of clarity on the directionality and nature of the relationship motivated to study this relationship further. Based on the literature review it is evident that there is varying point of view on

the nature of the relationship between cognitive dissonance and product involvement and hence the hypothesis will help in identifying the nature of the relationship.

H1: Product involvement influences cognitive dissonance in the context of online shopping.

Contrary to previous findings of Kim et al., (2011), Yap & Gaur, (2014) of the prevalence of cognitive dissonance only in high-involvement situations, Sweeney et al., (2003) Gbadamosi (2009) demonstrated different results. Soutar and Sweeney (2003) observed that cognitive dissonance doesn't vary significantly by products of different price ranges. Gbadamosi (2009) revealed that dissonance theory is phenomenon could apply equally well to low-involvement purchases. Gbadamosi's study examined the prevalence of cognitive dissonance in the consumption of low-involvement grocery products among women with lower income. Cognitive dissonance was noticed in a virtual grocery shopping spree using the rate-choose-rate method (Nordvall, 2014).

According to Koller et al., (2008), in the case of online settings, due to uncertainty involved in the entire purchase process the argument that cognitive dissonance is seen only in high-involvement purchases may not be valid.

As a part of the research, the product categories included are of both high involvement and low involvement. An attempt is made to identify if the level of involvement leads to significant variation in dissonance. Hence hypothesis

H1a: Cognitive dissonance significantly varies across product categories of different levels of involvement.

2.15.2 Trust and Cognitive Dissonance

Marketers try multiple ways to reduce cognitive dissonance; however, if they ensure that customers either trust their product or brand, then the negative impact of cognitive dissonance will automatically be reduced. According to Sharifi & Esfidani (2014) trust has a negative influence on cognitive dissonance among consumers who buy mobile phones. It was observed that trust and cognitive dissonance had a strong negative correlation of -

0.964. Within the Indian context, the relationship between trust and cognitive dissonance was assessed in the purchase of mobiles (Tomar et al., 2020). The findings revealed a negative correlation of -0.39 between trust and cognitive dissonance. Even though both studies (Sharifi & Esfidani (2014); Tomar et al., (2020)) proved that there is a negative relationship between cognitive dissonance and trust, the strength of the relationship varied in both studies. The study conducted by Sharifi & Esfidani (2014) focused on the relationship between brand trust and cognitive dissonance in the offline purchases of mobiles in Tehran. Whereas the study conducted by Tomar et al., (2020) focused on the relationship between trust in E-tailer and cognitive dissonance among mobile phone users. The mobile phone users encompassed consumers who purchased it through both offline and online sources. There is a lack of studies that probed the direct relationship between trust and cognitive dissonance purely in the context of online shopping.

Liao et al.,(2017) explored how the relationship of interpersonal trust moderated the effect of online consumer Social Experiences in post-payment dissonance conditions in the online setting. According to his study, interpersonal trust moderated the effect of online consumer social experiences on consumers, thus reducing cognitive dissonance. Trust acts as a catalyst in reducing the doubts, uncertainties, and anxieties in consumers which the overall cognitive dissonance reduces. The few studies (Tomar et al., 2020; Sharifi & Esfidani, 2014) that analyzed the direct relationship between trust and cognitive dissonance were in the context of the purchase of mobiles from both offline and online stores. These studies did not exclusively focus on online purchases. As the present study focuses purely on online purchases of electronic products, there is an expectation of higher cognitive dissonance, and hence hypothesis H2 is considered for testing.

H2: There is a significant negative relationship between trust and cognitive dissonance in the context of online shopping.

2.15.3 Choice Difficulty and Cognitive Dissonance

Post the purchase decision, contradictory cognitions caused by the unwanted aspects of the selected alternatives and the wanted aspects of the rejected alternatives can cause cognitive dissonance (Festinger, 1957; Montgomery and Barnes, 1993). Brehm and Cohen (1962) were amongst the earliest to study the relationship between cognitive dissonance and choice. It was an experiment based on the free-choice paradigm where women were asked to rate eight different products (toaster, coffeemaker, etc.), and each of them was asked to choose between either two very similar products (difficult decision) or dissimilar (an easy decision). The results indicated that women who made a difficult decision had a higher tendency to change their attitude post-decision, indicating they experienced dissonance. It can be considered that numerous alternatives present can make decision-making difficult, which can lead to anxiety if one has taken the right decision and fear of regret, thereby causing cognitive dissonance (Ivy et al., 1978; Menasco & Hawkins, 1978). It is not just the number of alternatives and attractiveness of the alternatives, but also the inter - similarities between these alternatives that influence the degree of cognitive dissonance along with the importance of the decision (Pei, 2013). Difficult decisions cause more cognitive dissonance than easy decisions because there are more discordant cognitions after a difficult decision than after an easy one (Harmon-Jones, 2019). Generally, decisions involving a difficult choice are highly affected by guilt or the pressure of acting responsible (Hoyer, 1984; Olshavsky & Granbois, 1979). This guilt could lead to cognitive dissonance.

Online shopping, with its ubiquitous choice of more than an average of 20 million products, can either act as a boon or a bane to consumers. Majority of the studies that assessed the relationship between choice difficulty and cognitive dissonance primarily used experiments as a means to understand the relationship. They were based in different contexts like psychology (Harmon-Jones, 2019), offline shopping of appliances (Menasco & Hawkins, 1978) or different product categories (Brehm and Cohen, 1962). There is a complete lack of research in scrutinizing the relationship between cognitive dissonance and choice difficulty in online shopping under realistic settings. The lack of research and

increasing adoption of online shopping is a motivator to test hypothesis H3 for the current study.

H3: Choice difficulty positively influences cognitive dissonance in the context of online shopping.

2.15.4 Perceived Risks and Cognitive Dissonance

The relationship between perceived risks and cognitive dissonance was most commonly examined in medical research on smoking. Heavy smokers who had perceived higher health risks were willing to quit smoking (Eiser et al. 1978). This is a clear indication that higher perceived risk led to greater dissonance, which the smokers were willing to resolve by contemplating quitting smoking. This relationship was studied in different contexts in marketing with varying results. The consumer can evaluate the degree of risk, which is derived from pre-purchase ambiguity about the product, the potential negative effects of the choice made, and, notwithstanding the fact that perceived risk and cognitive dissonance share the same attributes, perceived risk is likely an antecedent to cognitive dissonance. (Oliver 1997; Sweeney et al., 2000). Perceived risk and cognitive dissonance share some contextual factors, such as an insufficient amount of information about the product/service and an unfamiliarity with the product or brand (Soutar and Sweeney, 2003). As a consequence, it was believed that perceived risk could be a predecessor to cognitive dissonance. Perceived risks in the pre-purchase phase lead to cognitive dissonance in the context of holiday bookings (Koller & Salzberger, 2009). In the online context, Li & Choudhary (2020) examined this relationship indirectly. In this study, it was noticed that when consumers are exposed to low-quality website information, a consumer might assume higher perceived risks which in turn can lead to lower expectations and lower cognitive dissonance (Li & Choudhary, 2020). There is a huge dearth of research in analyzing the direct relationship between cognitive dissonance and perceived risks in online shopping, and hence following hypothesis is considered.

H4: Perceived risks positively influences cognitive dissonance in the context of online shopping.

2.15.5 Cognitive Dissonance & Satisfaction

The relationship between cognitive dissonance and satisfaction has been explored by researchers like; Montgomery & Barnes, (1993); Oliver, (1997); Sweeney et al. (2000); Salzberger & Koller (2010); Mao & Oppewal (2010); Wilkins et al., (2016) in the services sector as well as traditional offline shopping. These studies revealed that cognitive dissonance negatively impacts satisfaction. If adequate attempts are not made to reduce cognitive dissonance, then it can lead to consumer dissatisfaction (Nadeem, 2007; Koller & Salzberger, 2007). High cognitive dissonance can cause dissatisfaction (Graff & Kittipong, 2012; Wilkins et al., 2017), and reducing cognitive dissonance can prevent dissatisfaction and encourage satisfaction**.**

There are very few studies (Park et al., 2012; 2015; Lin et al., 2018) in the online shopping context which explored the relationship between satisfaction and cognitive dissonance. Park et al., (2012;2015) probed the relationship between cognitive dissonance and satisfaction across two different stages of service encounters i.e., before (pre-service performance) and after (post-service performance) availing the services of online shopping portal. The results of the study demonstrated that cognitive dissonance negatively impacted satisfaction. Lin et al., 2018 analyzed the relationship between cognitive dissonance and satisfaction in the context of impulse purchase in online shopping from a regulatory focus theory perspective. The results of the study revealed that cognitive dissonance negatively impacted satisfaction (Lin et al., 2018). The few studies (Park et al., 2012;2015) in the online settings conceptualized cognitive dissonance using a single item scale unlike the present study which used a multi-item scale.

The strength of relationship between cognitive dissonance and satisfaction varied in different contexts the value of β was -0.79 in the context of purchase of mobiles (Sharifi & Esfidani, 2014) to -0.223 in the context of impulse purchase in online shopping of apparels (Lin et al., 2018) to -0.28 in the context of ride sharing apps (Mousavi et al., 2020).The β value varied across different product and service categories and there was a dearth of research in assessing the strength of the relationship in one of the most important product

category like electronics. This variation in the β values motivated to assess the strength of the relationship in online shopping and hence the hypothesis.

H5: Cognitive dissonance negatively impacts satisfaction in the context of online shopping.

2.15.6 Satisfaction & Repurchase Intention

It is expected that a satisfied customer comes back to the same store to purchase products as most of his expectations are met. A satisfied customer is less price sensitive, less likely to search for additional information and less interested in competitor's products (Park et al., 2017; Shang & Bao, 2020). E-tailers will save significant costs if customers repurchase on their portal and these costs are much lesser than customer acquisition costs (Jiang & Rosenblom, 2005), which indicates it is very important to understand the relationship within the context of satisfaction and repurchase intention.

The relationship between satisfaction and repurchase intention assessed by researchers in the context of online shopping habits (Lin & Lekhawipat, 2014) and after delivery services (Javed & Wu, 2020) like product returns, refund and exchanges. These studies proved a positive relationship between satisfaction and repurchase intention. Contrary to the popular belief that the relationship between satisfaction and repurchase intention is mostly strong, studies have revealed that the strength of the relationship varied from 0.11 to 0.92 (Szymanski & Henard, 2001).

The relationship between satisfaction and repurchase intention was assessed within the framework of cognitive dissonance theory in the choice of university (Mao & Oppewal, 2010), offline shopping of electronic products (Keng & Liao, 2009) and impulse purchase of online apparels within the regulatory focus perspective theory (Lin et al., 2018). All these studies differed in context and conceptualization of satisfaction and repurchase intention; Mao & Oppewal (2010) used single item measures to measure satisfaction and repurchase intention. There is a dearth of studies in understanding this relationship in the online purchase of electronic products in India within the framework of cognitive dissonance and hence the hypothesis. It would be interesting to assess if satisfaction can

actually lead to repurchase intentions in a low frequency repeat purchase unlike other product categories and hence the hypothesis.

H6: Satisfaction positively impacts repurchase intention in the context of online shopping

2.15.7 Satisfaction & e-WOM

E-tailers need to ensure that consumers engage in positive e-WOM, as positive e-WOM encourages more consumers to purchase their products. Generally, the reliance on e-WOM is high when a consumer plans to purchase a product in an online shopping portal. A satisfied customer is a harbinger of many positive things for a firm. Generally, studies (Koller & Salzberger, 2012; Sharifi & Esfidani, 2014; Lin et al., 2018) have focused on the impact of satisfaction on loyalty which comprises repurchase intention and WOM. These studies indicated there is a significant relationship between satisfaction and WOM/e-WOM, and consumers were willing to recommend the product they have purchased or the service they availed in case of higher satisfaction and lower cognitive dissonance. Satisfaction or dissatisfaction acts as a motivator to disseminate positive or negative WOM/e-WOM (Hu et al., 2013).

Mao & Oppewal (2010) tried to understand the relationship between satisfaction and WOM from a cognitive dissonance perspective within the context of the choice of university. The findings revealed that when exposed to information (choice reinforcing or choice inconsistent), consumers were spreading positive WOM. In the context of the offline purchase of mobiles, this relationship was explored by Sharifi & Esfidani (2014). The findings of the study revealed that there is a strong positive relationship between satisfaction and attitudinal loyalty.

Very few studies analyzed this relationship within the online shopping context. One of the studies in the context of online shopping of apparel Lin et al., (2018) explored this relationship to prove that satisfaction had a strong positive relationship with attitudinal loyalty. However, this study was based on the regulatory focus theory perspective, unlike the present study i.e., purely focused on cognitive dissonance. The present study is one of

its kind that tries to explore the relationship within the framework of cognitive dissonance in online shopping of electronic products and hence the hypothesis.

H7: Satisfaction positively impacts e-WOM in the context of online shopping.

2.16 OPERATIONAL DEFINITION OF THE VARIABLES

Operational definitions provide theoretical definitions as to how a construct can be measured. Table 2.3 provides operational definitions of all the study constructs.

Table 2.3: Operational Definition of the Study Constructs Continued

Study Constructs	Operational Definition	Author
Product Involvement	A variable that quantifies the internal state indicating quantum of interest evoked by a product class	Dholakia (2000)
Trust	Trust is the belief that an online merchant will engage in generally acceptable practices and shall deliver products or services as promised, despite the existence of risk	Lim et al., (2006)
Perceived Risks	The subjectively determined presumption of loss by an online shopper when deliberating a specific online purchase is referred to as perceived risks in online shopping.	Forsythe & Shi (2003)
Choice Difficulty	Choice difficulty is the increased objective and cognitive effort to be exerted in choice of a product from large assortments.	Willemsen et al., (2016)
Cognitive Dissonance	In marketing, cognitive dissonance refers to the discomfort, doubts, uncertainty, anxiety, and/or regret caused by conflicting cognitive elements following a purchase decision or the purchase of a product.	Lee (2015)

Study Constructs	Operational Definition	Author
Satisfaction	Satisfaction is the fulfilment response of the consumer indicating how pleasurable the consumption of a product or service is.	Oliver (1997)
Repurchase Intention	The subjective likelihood that a consumer will again purchase products from the online shopping portal in future is defined as repurchase intention within the online shopping context	Chiu et al., (2009)
e-WOM	Any positive or negative statement made by prospective, existing, or erstwhile customers about a product or company that is made available to consumers using the internet.	Hennig-Thurau et al., 2004

Source: Literature Review

It is important to identify the most relevant operational definition for each of the study constructs. The operational definitions of product involvement, trust, perceived risks, choice difficulty, cognitive dissonance, satisfaction, repurchase intention and e-WOM are mentioned in table 2.3 Independent variables are the variables that impact the dependent variable, in the present study product involvement, trust, perceived risks and choice difficulty are the independent variables. Dependent variables are those variables whose values depend on the changes in the independent variables. In the present study the dependent variables are cognitive dissonance, satisfaction, repurchase intention and e-WOM.

2.17 CHAPTER SUMMARY

A rigorous literature review of peer-reviewed journals, books, articles in periodicals and magazines, research reports has been done to provide a strong theoretical foundation. The chapter elaborates on the different consumer decision-making models in offline and online shopping. It also explores the relevant factors that influence cognitive dissonance in online shopping. It also provides literature support for the relationship between cognitive dissonance and satisfaction. Research gaps are justified on the basis of strong literature

support. The chapter ends with operational definition of the study constructs and development of hypothesis. Chapter 3 elaborates on the research methodology adopted in the study

CHAPTER 3

RESEARCH METHODOLOGY

CHAPTER 3

RESEARCH METHODOLOGY

3.1 CHAPTER OVERVIEW

The current chapter intends to explain in detail the research methodology adopted for the study. The research paradigm and research approach are discussed (in terms of philosophy) in detail in section 3.2. Section 3.3 explains the type of reasoning applied in the present study. Section 3.4 elaborates in detail on the research method utilized in the study. The research design of the study which was descriptive in nature is elaborately discussed in Section 3.5. Section 3.6 provides a detailed overview of the data sources used in the study. Both primary and secondary data sources were used for the study. The data collection strategy for this research is elaborated in Section 3.7. In section 3.8 a brief overview of the period of study is given. Section 3.9 provides a summary of the research process. The details on the development of the research instrument and its sources are explained in Section 3.10. Section 3.11 elaborates on the variables of the study and their level of measurement. The sampling design is explained in detail in section 3.12. Pilot study results are explained in detail in Section 3.13. Section 3.14 conceptually explains the tools used for the statistical analysis and interpretation with subsections dedicated to exploratory factor analysis reliability, Validity analysis and Structural Equation Modelling (SEM). The chapter is summarized in section 3.15.

3.2 RESEARCH PARADIGM AND RESEARCH PHILOSOPHY

The word “Research Paradigm” was first used by Kuhn (1962) meaning a philosophical way of thinking. The term paradigm is used synonymously to describe a researcher’s worldview (Mackenzie & Knipe, 2006). A strong research design is backed by a research paradigm that is compatible with the beliefs of the researcher and the nature of reality

(Mills et al., 2006). The research paradigm guides a researcher to carry out research in a particular direction, it describes the approach or thinking about the research, accomplishing process, and implementation method (Gliner et al., 2016). The three research paradigms are positivist, constructivist and transformative.

The assumption in the positivist approach is reality exists independently of humans (Richards, 2003). A researcher while using positivist philosophy many times uses existing theory to develop hypotheses, however, it is not always necessary to use an existing theory. The positivist paradigm strictly uses scientific methods to generate data and facts which are not influenced or biased (Saunders et al., 2015). The methods used in the positivist approach are quantitative. Unlike the positivist approach, the constructivist approach is heavily dependent on how the researcher and the respondents view the situation indicating that reality is socially constructed (Mertens, 2005). A constructivist heavily relies on qualitative methods or mixed methods research (a combination of qualitative and quantitative) (Mackenzie & Knipe, 2006). The transformative research paradigm came into existence as many researchers felt that issues of social justice and marginalised people were ignored by the constructivist approach (Creswell, 2007). Transformative researchers utilize both qualitative and quantitative methods.

In the current study, the positivist approach is used to analyze cognitive dissonance among online shoppers. The study is structured systematically, data was collected using questionnaires, with zero interference from the researcher. Quantitative methods were used to analyze and interpret the data.

The research paradigms can be described by ontology, epistemology, methodology, and axiology (Lincoln & Guba, 2005). Ontology focuses on the philosophy of reality, whether the reality is objective or subjective. Whereas epistemology is how we acquire knowledge about reality whereas methodology identifies the tools to acquire the same. According to Gall et al., (1996) epistemology comprises of the study of the nature of knowledge and how it can be acquired and communicated to others. In the present study, the knowledge or information was acquired through a structured questionnaire where all the social constructs

were quantified. According to Grix (2004), the methodology provides guidance on how a particular research study has to be conducted by deciding the type of data required for the study, and appropriate data collection techniques. In other words, it is the researcher's strategy, plan of action, process, or design of choice of research methods (Crotty, 2003). The present study adopted a descriptive research method to gather primary data. The data was quantitative in nature and appropriate statistical techniques were used to analyse the data. The present study has adopted a positivist approach to analyzing cognitive dissonance in online shopping of electronic products. The positivist approach is applied as the current study uses a structured research methodology like descriptive research to test the hypotheses.

3.3 TYPE OF REASONING

The type of reasoning used is an indication of how the present data and knowledge is being processed to draw conclusions, make predictions or construct applications. There are three types of reasoning a) Deductive reasoning- which uses a top-down approach, begins with the general and ends with the specific b) Inductive reasoning- which uses a bottoms-up approach, wherein theories are built based on various facts and interconnecting themes c) Abductive reasoning- it is synonymous to scenarios of decision making in case of partial information available. It is most commonly used in medical research.

The present study is based on deductive reasoning as it follows the method of developing hypotheses based on existing theories and designing a research strategy to test the hypotheses.

3.3.1 Deductive Reasoning

Deductive reasoning begins with the general and ends with the specific. The current study used a deductive approach. The current study began with the understanding of cognitive dissonance theory; accordingly, hypotheses were articulated to either support or contradict the data. The current study was initiated based on the extensive literature review on cognitive dissonance theory (Festinger, 1957), cognitive dissonance in offline shopping

(Gbadamosi, 2009; Kim, 2011; Koller & Salzberger,2012; Graff & Kittipong, 2012; Lee, 2015;) cognitive dissonance in online shopping (Liao, 2017; Balakrishnan et al., 2020). The study based on the literature review tried to identify the factors that influence cognitive dissonance in online shopping and subsequently how cognitive dissonance impacts post-purchase constructs. Hypotheses were constructed to either agree or refute the previous understanding of the theory. The structured primary data collected was analyzed using quantitative techniques to test the hypotheses. Researchers using deductive reasoning and quantitative methods believe in a single reality that can be reliably measured and validated using scientific principles (Creswell & Clark, 2017).

3.4 RESEARCH METHODS

Research methods generally define the data collection and analysis process. The two major kinds of research methods are quantitative and qualitative methods, based on this broad classification different techniques can be employed to further collect the data. The present study incorporated quantitative research methods. This decision is based on the objectives of the study, it's urgency, accesibililty of sources of date and the cost of obtaining it(Zikmund et al., 2013). As the objectives in the current study are designed to test a hypothesis based on cognitive dissonance theory and the primary data collected was structured data based on a research survey, quantitative research methods would be the most appropriate for the same.

3.4.1 Quantitative Research Methods

Quantitative research methods involve a numerical or statistical approach, it generally uses techniques of experiments and surveys and collects data based on prevalidated instruments that yield statistical data.

Descriptive research studies are focused on collecting numerical data based on observations. Of the different types of descriptive research methods like experimental research, case study method, observational method, and survey research method. The present study incorporates the survey research method.

The present study seeks to assess the relevant factors of product involvement, trust, perceived risks, and choice difficulty influencing cognitive dissonance in online shopping and the impact of cognitive dissonance on the post-purchase construct of satisfaction. Quantitative methods were used to deduce the same. Data was collected through a self-administered structured questionnaire based on the research objectives. The questionnaire was based on closed-ended questions which is a characteristic of quantitative research. The primary data collected was analysed using statistical techniques.

3.5 RESEARCH DESIGN

3.5.1 Descriptive Research Design

Research designs are the strategic plans to answer the research question and answer the variance (Dulock, 1993). Descriptive research is more often used to describe the characteristics of a population or area of interest, it also aids in assessing the associations or relationships among selected variables. A descriptive study does not manipulate the variables or does not identify the causes or why of the phenomenon The study is considered to be descriptive as it attempts to describe or define the online shopper's behavior by answering questions like what are the factors influencing cognitive dissonance in online shopping and how are these factors influencing cognitive dissonance. In the present study, the population of interest is the online shoppers who purchased electronic products (devices, appliances & accessories). Descriptive research in the present study aids in assessing the relationship between product involvement, trust, perceived risks, choice difficulty, cognitive dissonance, satisfaction, repurchase intention, and e-WOM. Generally the findings of descriptive research act as the basis for further research. The present study adopted a descriptive research design which is cross-sectional in nature. The study is cross-sectional in nature as the data was collected at a single point in time or during one specific time duration. The population characteristics of online shoppers of electronic products concerning cognitive dissonance were assessed. A research survey was used to collect information about the population. The study focused on relationships between influencing factors like trust, product involvement, perceived risks, choice difficulty, and cognitive

dissonance. The study further assessed the relationships between cognitive dissonance and satisfaction by trying to analyze the influence of cognitive dissonance on satisfaction; and the impact of satisfaction on repurchase intention and e-WOM.

3.6 DATA SOURCES

A research study can be based on primary and secondary data sources. In the current study secondary data was referred for building the conceptual framework and finalizing the product category. Primary data was used to test the hypotheses.

3.6.1 Secondary Data

Secondary data refers to the readily available published data. It can be internally or externally sourced. The sources of secondary data for the present study were all external, there were no internal sources of secondary data. Table 3.1 provides an overview of the different sources of data used for the current study.

Table 3.1 Secondary External Sources of Data

Secondary External Sources of Data				
Academic Sources		**Government Sources**	**Industry Sources**	**Internet Sources**
Books, published articles	Journals- indexed in renowned databases like SCOPUS, ABDC, EBSCO etc	The census data from censusindia.gov.in(2011) Government of India's sixth pay commission report (2008)	IBEF, ASSOCHAM, IMRB	Statista, News Websites, Blogs, Flipkart, Amazon, Snapdeal

Source: Literature Review

For the present study majority of the secondary data was referred from peer-reviewed and Scopus-indexed journals. Journals aided in creating the conceptual framework. Apart from the journals, many internet sources like Statista and industry sources like IBEF were referred to capture the latest trends, and growth rates specific to the online shopping sector.

3.6.2 Primary Data

Primary data for the research study was the set of responses from self-administered structured questionnaires. The questionnaire was administered to online shoppers who had recently purchased electronic products from the cities of Mumbai, Delhi, Hyderabad, Chennai, and Kolkatta.

3.7 RESEARCH STRATEGY

A researcher can achieve the research objectives by choosing an appropriate research strategy. The choice of research strategy depends on a researcher's preferred approach (positivist or interpretivist approach) (Baker, 2001). Research strategy is focused on the logic of inquiry and methods of execution of the project (Blaikie & Priest, 2009). The present study incorporated the survey method as a research strategy as it is ideal for deductive reasoning and a positivist research approach. According to Saunders et al.,(2015) research strategy refers to the general plan a researcher adopts to answer the research questions. The research onion process proposed by Saunders et al.,(2015) spells out that research strategies include action research, experimental research, interviews, surveys, case study research, or a systematic literature review. The current study is a cross-sectional descriptive study for which a self-administered questionnaire was the most convenient tool. The questionnaire was administered through a consumer intercept survey and an online survey. A consumer intercept survey was used initially to collect responses, the questionnaires were administered to respondents in residential properties, educational institutions, and malls in the cities of Bengaluru and Hyderabad. The consumer intercept surveys helped in providing immediate responses. The mode of distribution of questionnaires eventually was modified to an internet survey due to the pandemic. The questionnaire was administered through Linkedin and google forms. Online surveys

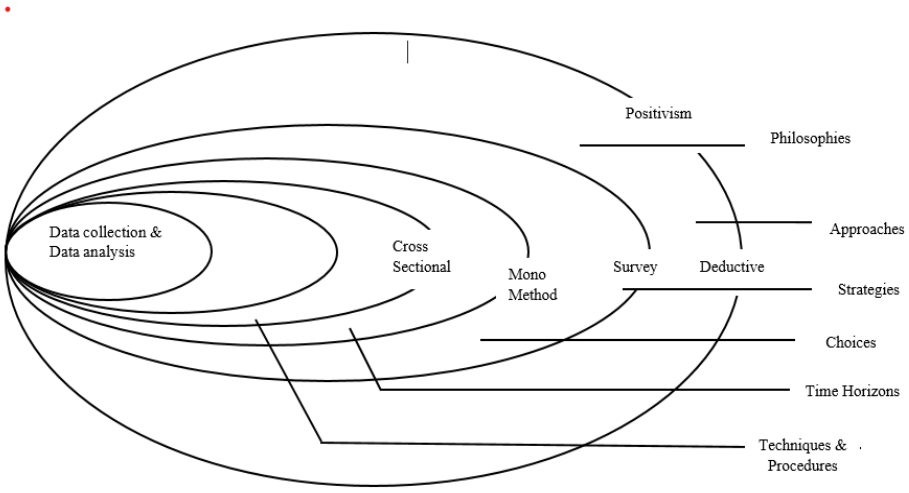
improved the reach however there was a delay in responses (Zikmund et al., 2013). Constant follow-up was required to ensure respondents answer the questions. The survey method was incorporated in studies successfully that tried to assess online shopping behavior (Workman & Lee, 2019; Tandon et al., 2020) .

3.8 PERIOD OF STUDY

The primary collection was carried out during May 2019 – April 2020. The data was collected from individuals from Tier I metropolitan cities. The data was collected through different modes. Structured questionnaires were administered to respondents in malls, and gated communities across the cities of Bengaluru and Hyderabad. Responses from individuals in the cities of Kolkatta, Mumbai, and Delhi were collated using online mode due to the pandemic and restrictions imposed. Google forms were circulated through LinkedIn and other personal and professional networks. A total of 716 responses were received after circulating the questionnaire to about 977 people.

3.9 SUMMARY OF THE RESEARCH PROCESS

The research process onion in figure 3.1 depicts the research philosophies and paradigms used in the study.



Source: Saunders et al., (2015)

Figure 3.1: The Research Process Onion

The research process onion was proposed by Saunders et al.,(2015), it describes the stages through which a researcher passes to achieve the research objectives.

The study followed a positivist philosophy with deductive reasoning. The study adopted descriptive research methods. The research tool used was a structured self-administered questionnaire. Quantitative methods were used to analyse the data to prove the research objectives.

3.10 RESEARCH INSTRUMENT

In the present study, the survey research method was used to collect primary data. The survey research method was used to collect quantitative from a pre-determined pool of respondents. A structured questionnaire with closed-ended questions was used as the research instrument. The self-administered questionnaire was administered through two modes 1) offline method and 2) online mode. The questionnaire was divided into two sections, the first section captured the demographic characteristics of the respondents and the second section measured the various constructs. The first section is mostly comprised of questions that are discrete in nature like gender, educational qualification, marital status, residing city, employment status, purchase frequency, and internet experience. Except for age and salary which were interval scales.

The second section of the questionnaire comprised questions concerning the constructs used for the study. The various constructs used in the study are “perceived risks”, “trust”, “choice difficulty”, “product involvement”, “cognitive dissonance”, “satisfaction”, “repurchase intention” and “e-WOM”. A 5-point Likert agreement scale was used for the measurement of various constructs like perceived risks, trust, choice difficulty, product involvement, cognitive dissonance, satisfaction, repurchase intention, and e-WOM. The scales are generally represented by a scale score, in the case of the Likert scale, the scale score for each case is obtained by adding scores of each of the questions (De Vaus, 2002). The various constructs were derived from previously constructed and validated scales. Table 3.2 highlights the sources from which various measurement items were adopted. Operationalization of trust, perceived risks, choice difficulty, satisfaction, repurchase

intention, and e-WOM are generic and are not category specific. However, product involvement is category-specific, and cognitive dissonance is also category specific. The questionnaire can be viewed in appendix 1 of the report.

Table 3.2: Questionnaire and Sources

Construct	Measurement Items	Source
Perceived Risks	I do not trust online shopping portals	Forsythe et al. (2006)
	I may not get the product/products I ordered from the preferred online shopping portals	
	My personal information may not be kept confidential	
	I might be overcharged for the products I ordered	
	My credit card number may not be secure	
	It is a concern for me that I cannot examine the actual product in online shopping	
	There are chances that the delivery of the product may get delayed	Cases, (2011)
	It is too complicated to place order on the online shopping portal	Forsythe et al. (2006)
	It is difficult to find appropriate online shopping portals	
	It takes too long a time for the online shopping portal to load	
Trust	The information on this web site is plentiful and of sufficient quality	Chen & Barnes (2007),
	The online shopping portal has reliable information	Koufaris & Sosa (2004)

Table 3.2: Questionnaire and Sources Continued

Construct	Measurement Items	Source
Trust	The preferred online shopping portal/portals is/are trustworthy The online shopping portal offers secure personal privacy to make me feel comfortable while using it The infrastructure of this web site is dependable	Grazioli & Jarvenpaa (2000), Gefen (2000) Chen & Barnes (2007),
Product Involvement	I consider Electronics/Electronics accessories to be an important part of my life I am very much interested in online shopping of Electronics /Electronics accessories My level of expertise regarding online shopping for Electronics /Electronics accessories is high I feel involved while purchasing Electronics /Electronics accessories through online shopping portals.	O Cass (2004), Hong, (2015)
Choice Difficulty	I was in doubt while choosing a product from the list of products available on the online shopping portal. The task of making a purchase decision from the available products in the online shopping portal was overwhelming Comparing the products on the preferred online shopping portal took a lot of effort. It is difficult selecting a product through preferred online shopping portal.	Willemsen et al., (2016)

Table 3.2: Questionnaire and Sources continued

Construct	Measurement Items	Source
Cognitive Dissonance	After I bought a product, I felt disappointed atleast once in the past 6 months. After I bought a product, I felt depressed atleast once in the past 6 months. After I bought a product, I was angry atleast once in the past 6 months. After I bought a product, I was annoyed atleast once in the past 6 months. I wonder if I really needed the product for atleast one of the purchases in the past 6 months. I wonder if I should have bought anything at all atleast once in the past 6 months on online shopping portal. I wonder if I have made the right choice atleast once while buying a product on online shopping portal After I bought a product, I wondered if I have been fooled atleast once in the past 6 months. After I bought the product, I wonder if there was something wrong with the offer atleast once in the past 6 months.	Sweeney et al.,(2000).
Repurchase Intention	Except for any unanticipated reasons, I intend to continue using the preferred online shopping portal/portals. If possible, I would like to continue using online shopping as much as possible	Khalifa and Liu (2007) and Zhou et al.,(2009)

Table 3.2: Questionnaire and Sources continued

Construct	Measurement Items	Source
Repurchase Intention	It is likely that I will continue to use the preferred online shopping portal/portals to purchase products in the future The probability of using the most preferred online shopping portal/portals is high	Khalifa and Liu (2007) and Zhou et al.,(2009)
Satisfaction	I would recommend the preferred online shopping portal/portals to others. I am satisfied with my decision to purchase from the preferred online shopping portal/portals. I am satisfied with the online shopping experience across the preferred online shopping portal/portals. I am pleased with the online shopping experience in the most preferred online shopping portal/portals. My choice to purchase from the preferred online shopping portal/portals was a wise one. I have enjoyed purchasing from the preferred online shopping portal/portals.	Pappas et al., (2014)
e-WOM	I spoke of the preferred online shopping portal/portals much more frequently than any other shopping portal. I spoke of the preferred online shopping portal/portals to many individuals. I mostly say positive things about the preferred online shopping portal to others. I have spoken favourably of the preferred online shopping portal to others.	Goyette et al., (2010).

Table 3.2: Questionnaire and Sources continued

Construct	Measurement Items	Source
e-WOM	I strongly recommend people buy products online from this company. I am proud to say to others that I am this company's customer	Goyette et al., (2010).

Source: Literature Review

3.11 MEASUREMENT SCALES

Constructs in a research study were studied by assigning numbers in a reliable or valid way (Zikmund et al., 2013). The study variables were either continuous or discrete. Discrete variables take a finite number of values and most of the socio-demographic information was captured through discrete variables. When values are assigned on a scale corresponding to the intensity of a concept it is known as a continuous measure. All the study constructs like product involvement, perceived risk, trust, choice difficulty, cognitive dissonance, repurchase intention, satisfaction, and e-WOM are continuous measures.

Based on the type of variables, the levels of measurement are finalised. The levels of measurement act as a foundation for analysis. The different types of scales of measurement are nominal, ordinal, interval, and ratio level scales.

Nominal scales are the most basic level of measurement which help in identification or classification. As no quantities are represented they are considered to be qualitative in nature. For demographic variables like product category, occupation, marital status, and so on the level of measurement is nominal.

When certain objects or things are arranged in a specific order or priority or criteria, it is called an ordinal or ranking scale. For the question pertaining to the most preferred online shopping portal, the level of measurement is ordinal. Interval scales are used when the order of the variables as well as the difference between the variables are known. The questions related to the measurement of study constructs like product involvement,

perceived risks, and so on are interval scales. Table 3.3 represents the type of variables in the present study and the corresponding measurement level.

Table 3.3: Measurement levels of Study Variables

Sl.No	Variable	Type of Variable	Level of Measurement
1	Age	Continuous	Interval
2	Gender	Discrete	Nominal
3	Highest Educational Qualification	Discrete	Nominal
4	Family Monthly Income	Continuous	Interval
5	Marital Status	Discrete	Nominal
6	Employment Status	Discrete	Nominal
7	Employment Status of Spouse	Discrete	Nominal
8	Internet experience	Discrete	Nominal
9	Online Purchase	Discrete	Nominal
10	Product Category	Discrete	Nominal
11	Frequency of Purchase	Discrete	Nominal
12	Online shopping portals ranking	Discrete	Ordinal
13	Product Involvement	Continuous	Interval
14	Trust	Continuous	Interval
15	Perceived Risks	Continuous	Interval
16	Choice Difficulty	Continuous	Interval
17	Cognitive Dissonance	Continuous	Interval
18	Satisfaction	Continuous	Interval
19	Repurchase intention	Continuous	Interval
20	e-WOM	Continuous	Interval

Source: Literature Review

All the study constructs were captured through a 5-point Likert scale.The scales for each construct were adopted from pre-validated measurement scales based on a rigorous literature review.

As mentioned in table 3.3, product involvement was adopted from the scales of O' Cass (2004); Hong, (2015), the scale was modified to suit the current study. A total of 6 items were considered for the study.

The scale for perceived risks was adopted from Forsythe et al., (2006); Cases (2011). The scale was modified to suit online shopping in the Indian context (Bhatnagar & Ghose (2004); Guru et al. (2020)) which revealed that financial risk, product risk, and time/convenience risk were most relevant to the online setting. A total of 9 items were considered for the study.

The scale for choice difficulty was adopted from Willemsen et al., (2016). A total of 4 items were considered for the study.

The measurement scale for cognitive dissonance was adopted from Sweeney et al., (2000). In the present study all three dimensions were included, even though initially when the scale was introduced, the concern over the deal dimension was considered to be relevant for offline settings. In the present study, the dimension of concern over the deal is included as online shopping portals in the pursuit of customers are extensively using several methods and constantly reminding consumers of the new offers. There is a continuous deluge of information in the form of notifications, e-mailers, pop-up ads, reminder emails, and so on to convince the customer to make a purchase. Customer purchase decisions made due to this can cause concern on the customer's end, regarding the decision they have made. Hence, it was considered relevant to retain this dimension. A total of 9 items were considered for the study.

The scale for satisfaction was derived from Pappas et al., (2014). A total of 6 items were considered for the study.

The scale for repurchase intention was adopted from Khalifa and Liu (2007) and Zhou et al., (2009). A total of 4 items were considered for the study.

The measurement scale for e-WOM was derived from Goyette et al., (2010). A total of 6 items were considered for the study.

3.12 SAMPLING DESIGN

The sampling design is a critical and distinct phase of the research design. The sample is a subset of a larger population that aims at drawing conclusions based on measurements of a portion of the population (Zikmund et al., 2013). Sampling for the study involved the selection of stimuli and the selection of respondents. A mixed sampling approach was used for the selection of stimuli and respondents as the population of online shoppers is very large and there is no reference sampling frame for online shoppers in India. Identifying the population and narrowing it down to the sample requires meticulous planning and execution.

The selection of participants was based on a screening question/filter question if they had made an online purchase in the past 6 months. Filter questions aid in screening out the participants for whom the study is not relevant (Saunders et al., 2019), in the present study the questionnaire is not relevant to respondents who did not purchase electronic products. It was noticed that the number of participants who had responded negatively to the screening question was low; however, such responses were excluded from the analysis. The study comprised a selection of stimuli and a selection of respondents.

3.12.1 Selection of Stimuli

The respondent's behavior is significantly impacted by the stimuli to which they are responding or providing their opinion. The sampling frame for the selection of the stimuli comprises all the broad product categories that are available on online shopping portals. The sampling frame for the stimulus was the product categories of electronics, fashion, home & kitchen, toys, and books. Table 3.4 provides the details of the product categories and the subcategories involved.

Table 3.4: Classification of Product Categories

Product Categories	Product Sub Categories
Electronics	Cameras & photography, car & vehicle electronics, computers & accessories, Global Positioning System (GPS) & accessories, headphones, home audio, home theatre, television & video, mobiles & accessories, portable media players, tablets, warranties, wearable technology, general-purpose batteries & battery chargers, power accessories, smart home automation, gaming, kitchen appliances like microwave oven, refrigerator, mixers, and grinders. Home appliances like televisions, air conditioners, water purifiers, vacuum cleaners, irons, etc.
Fashion	Women's wear and men's wear which includes western wear, ethnic wear, lingerie & nightwear. Women accessories like handbags and clutches, different types of jewellery, shoes. Men's accessories like wallets, belts, hats shoes. Kids Clothing & Accessories
Home Furniture & Décor	Furniture like sofas, beds, tables, mattresses, wardrobes, shoe racks, television units, etc. Home furnishing like bed linens, blankets, curtains, bath linen, cushions & pillows. Décor items like showpieces, clocks, paintings, posters, etc.
Food & Grocery	Staples or cooking essentials, snacks & beverages, dairy & eggs, fruits & vegetables, household care, etc.
Others	Toys, stationery, sports & fitness, beauty & health care, books, etc.

Source: Amazon.in, Flipkart.com, Snapdeal.com, Shopclues.com,croma.com, IBEF (2021)

In the present study, the electronics product category is considered as the stimuli as it contributes the maximum percentage of online sales and is a good representative of online shoppers. Electronics is the highest contributor to sales across the top online shopping portals with approximately 40 percent of the total GMV contribution (IBEF, 2021). Hence the study adopted judgment sampling for the selection of stimuli. Judgment sampling is a

deliberate attempt at selecting units (people, events, objects, etc.) that enables the researcher to answer his research questions (Frey, 2018). Judgment sampling is considered to be more suitable for small sample sizes as the errors of judgment are considered to be less likely than random errors in probability sampling (Saunders et al., 2015). The criteria for the selection of the product categories for the study was the sales contribution of each product category to the total online sales. Based on inputs from various research reports (IBEF, 2020; Statista, 2021) electronics product category was chosen as the stimulus as it contributed to the maximum sales. The responses would have been skewed and non-representative and might not have been relevant to understand cognitive dissonance if judgment sampling was not used. The study aims to find if product involvement has a significant influence on cognitive dissonance, this led to the identification of a few categories which are of high involvement as well as low involvement. The electronics product category meets the criteria of inclusion of subcategories of products that are of both high and low product involvement. Mobile phones, TV, and laptops were all categorized under high-involvement products (Holmes et al., 2014; Dens & DePelsmacker, 2010). Going by the assumptions that low-involvement products are inexpensive and pose a low risk to the consumer, electronic accessories can be considered as examples for the same due to low price points, low risk involved in the purchase.

3.12.2 Sampling of Online Shoppers

The population for the study is online shoppers residing in India. A significant proportion of online shoppers are from Tier I metro cities. More than 60 percent of the online shopping demand is generated from Tier I metro cities (KPMG & CII Institute of Logistics, 2018). The higher contribution of Tier I metro cities to total online sales was validated by research reports like IBEF (2020), and IBEF (2021). Hence online shoppers from Tier I metro cities were considered for the present study.

The sampling process of online shoppers was a two-stage process. The first stage comprised of a selection of cities that contributed to a high proportion of online sales i.e. Tier I metro cities and the second stage comprised of a selection of online shoppers from

those cities. As a part of the study, only those consumers who have made an online purchase six months prior to the collection of data from the specified categories of electronics were considered.

In the first stage, cities were identified on the basis of probability sampling as sampling frame was available. A list of the Tier I metro cities obtained from the Government of India's sixth pay commission report (2008) formed the sampling frame. To validate if there are no changes in the top cities, a research report from IBEF (2021) was referred which reiterated the fact that metro cities like Bengaluru, Mumbai, and Delhi are the top contributors. Despite a lot of people migrating back to their hometowns owing to the pandemic, and a significant share of E-tailing sales coming from smaller cities, the metros still continue to contribute robustly to online sales. During the pandemic, at least one in 3 people shopped online at least once across the top metro cities last year (Sheth, et al., 2021). Table 3.5 provides the said sampling frame.

Table 3.5 Tier I Metro Cities: Sampling Frame

Sl. No	City
1	Delhi –NCR
2	Mumbai
3	Bengaluru
4	Hyderabad
5	Chennai
6	Kolkata
7	Pune
8	Surat
9	Ahmedabad

Source: Government of India 6th Pay Commission Report (2008)

Random sampling was used to select the final list of cities from the sampling frame. A lottery method was implemented to select five Tier I metro cities from the sampling frame. Random numbers were assigned to each of the cities in the sampling frame. The names of

these cities were written on small paper chits of the same shape, size, and color. They were folded and mixed up in a box. Five cities were chosen based on blindfold selection. The selected sample constituted 55 percent of the sampling frame.

Table 3.6 provides the details of the cities selected through random sampling without replacement.

Table 3.6 Sample of Tier I Metro Cities

Sl. No	City
1	Delhi –NCR
2	Mumbai
3	Bengaluru
6	Kolkata
9	Hyderabad

Source: Government of India 6th Pay Commission Report (2008)

The second stage involved the selection of online shoppers from the sample of Tier I metro cities mentioned in table 3.6. Non-probability sampling was used to select the respondents due to the absence of a sampling frame. Convenience sampling was the non-probabilistic sampling method used for the selection of respondents. Convenience sampling is used when it is practically impossible to reach all the members of the target population (Chiang & Dholakia, 2003). This approach is in line with a recommendation from researchers in the online domain (Goldsmith & Horowitz, 2006; Amaro & Duarte, 2015; Alhaimer, 2021) who used convenience sampling for studying consumer behavior in online shoppers. According to Peterson & Merunka (2014) convincing empirical evidence showing the negative consequences of using convenience samples for theory testing is hard to find.

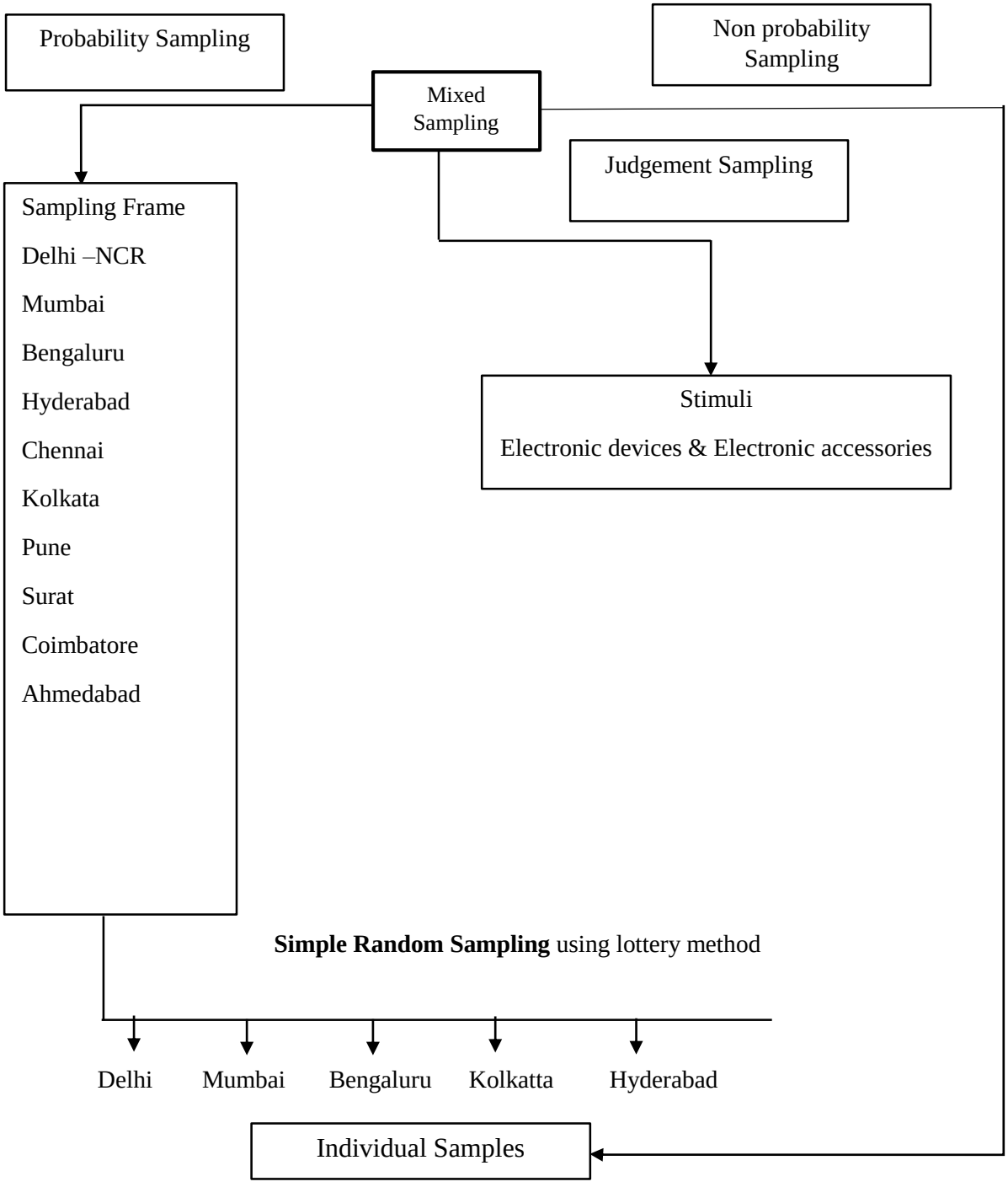


Figure 3.2: Sampling Design

The study incorporated both probability and non-probability sampling techniques. The probability sampling technique was used for selecting Tier-I metro cities and the non-probability sampling technique was used for the selection of stimuli and online shoppers.

3.12.3 Sample Size Estimation

The population of online shoppers is very large, in such situations, a sample that is representative of the larger population is considered. It is essential to have an optimum sample size to generate accurate and statistically significant study results. In the present study, the sample size was estimated based on the following criteria.

According to a report by Bain and Flipkart, (2020), online shopping penetration was equivalent to 3.4% in India. Based on the online shopping penetration, the target population was derived for the randomly sampled cities. The total population was multiplied by the online penetration rate to arrive at the values in table 3.7. Applying this penetration ratio across the cities. Sample size using Slovin's formula can be determined by the following equation $n = N / (1 + Ne^2)$, where n = Number of samples, N = Total population, and e = Error tolerance level. Based on a confidence level of 96 percent, the error tolerance level considered is 0.04 percent.

Table 3.7 Target Population for the Selected Cities

Name of the city	Target Population
Delhi	375174.87
Mumbai	423040.68
Bengaluru	287084.95
Hyderabad	228880.86
Kolkata	152887.59
Total	1467068.95

Source: censusindia.gov.in (2011)

On applying the formula to the current study, where N = 1467068.95, e= ± 0.04

$$n = \frac{1467068.95}{(1 + 1467068.95(0.04^2))} = 625$$

The calculated sample size is 625. However, as a part of the analysis Structural Equation Modelling (SEM) is considered in order to test the model. According to Bentler and Chou (1987), the bottom-line ratio for the usage of structural equation modeling is 5:1 in the case of a normal and elliptical theory where 5 is the sample size and 1 is the independent parameter. In the case of arbitrary distributions, this ratio becomes 10:1. The generally acceptable thumb rule for obtaining the minimum sample size is the higher of either 10 times the number of items for the most complex construct or the largest number of independent variables affecting a dependent variable (Chin, 1998; Gefen et al., 2003). In the above case, perceived risks are the most complex construct with 9 items measuring the same. This implies if we consider a sample size of 625 it is well above the acceptable value of 10 times the number of items for the most complex scale.

Another frequently accepted rule of thumb among the researchers is 10 observations per indicator variable (Nunnally, 1967). The current study has 8 constructs which are being measured by 61 variables, which makes the sample size 590. As the sample size derived from Slovin's formula is greater than 590, we can consider the greater sample size for the study which is 625. The sample was distributed among the cities selected based on their online retail penetration rate and population. The distribution of samples across the cities is displayed in table 3.8.

Table 3.8: Sample Distribution across the Selected Cities

Name of the city	Sample Distribution in Percentage for a Total Sample Size of 625
Mumbai	29
Delhi	25
Bengaluru	20
Hyderabad	16
Kolkata	10
Total	100

Source: Literature review

3.13 PILOT STUDY

The pilot study is considered a small-scale preliminary study often called a feasibility study. The intent of pilot studies is not to answer the research questions but to prohibit researchers from initiating a large-scale study without adequate knowledge of the methods proposed (Polit & Beck, 2017). The pilot study provides certain cues on the time taken by the respondents to answer the questionnaire, clarity of the instructions and questions, if any respondent felt uncomfortable answering the questions if any important topic related to the study was missing, etc. can be identified (Bell, 2005).

A pilot study was conducted in Bengaluru as it is one of the major metropolitan cities which contributes to a significant percentage of online sales and forms a good representative sample for the study. The questionnaire was self-administered to 80 respondents. The response rate was 95 percent, with 76 successful responses being acquired from 80 respondents. While there was absolutely no response from three respondents and one respondent answered negatively to the screening question.

3.13.1 Results of Pilot study

The pilot study helped in gauging the validity and reliability of the data (Sekaran & Bougie, 2016; Saunders et al., 2019). Reliability indicates to what extent the data collection

techniques and analysis procedures yield consistent results (Saunders et al., 2019). SPSS version 20 and Microsoft excel were the software tools used for the analysis of data.

3.13.2 Reliability Statistics and Factor Analysis

The reliability statistics are provided in table 3.9. Cronbach's alpha for all the constructs is above the acceptable level of 0.70 (Nunnally, 1978) which indicates all the items have good internal consistency. Among all the constructs the internal consistency of choice difficulty (0.947) and cognitive dissonance (0.935) is the highest.

Principal Component Analysis (PCA) was implemented with varimax rotation in order to identify the latent factors across the 61 items. The factor loadings for all the items were above the acceptable value of 0.5 (Hair, et al., 2010).

The Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy and Bartlett's test of sphericity was used to assess if the data was suitable for factor analysis. The KMO test is also conducted in order to measure the construct validity and to demonstrate the existence of latent factors.

Table 3.9: Reliability Statistics of the Study Constructs for Pilot Study

Construct	Cronbach's alpha	KMO (Measure of Sampling Adequacy)
Trust	0.773	0.592
Product Involvement	0.826	0.783
Choice Difficulty	0.935	0.848
Perceived Risks	0.786	0.704
Cognitive Dissonance	0.935	0.848
Repurchase intention	0.84	0.755
Satisfaction	0.854	0.81
e-WOM	0.803	0.700

Source: Pilot study results

The KMO measure of sampling adequacy values for all the factors ranged from 0.7 to 0.9, which clearly indicates the suitability of the data for factor analysis (Hutcheson, 1999). Bartlett's test of sphericity was significant with $p<0.05$ across all the constructs which indicated the suitability of factor analysis (Hair et al. 1998).

As all the factor loadings were above the acceptable threshold all the items of the questionnaire were retained as earlier.

3.14 DATA ANALYSIS

The data analysis comprised two stages. The first stage was a summary of the sample characteristics based on measures like mean, median, frequency, and standard deviation. SPSS 23 was used for the same. The socio-demographic characteristics like age, gender, education, income, and so on were assessed for the given sample. Further, the descriptive statistics aided in understanding the measures of the central tendency of the study constructs. The second stage of analysis comprised inferential statistics and testing of hypotheses which aims at generalizing the findings from a sample to a population of interest (Allua & Thompson, 2009). Inferential statistics are intended to test the study hypothesis. Data can be analyzed using either parametric or nonparametric tests. In the present study, all the tests were parametric. ANOVA and Structural Equation Modeling (SEM) were used to test the hypotheses.

3.14.1 Exploratory Factor Analysis (EFA)

According to Bandalos (2016), factor analysis is used to identify the factor structure or model for a set of variables. Exploratory factor analysis (EFA) is generally accompanied by the generation of theory. In the present study, EFA was used for being used to refine measures, however, it can be used to evaluate construct validity and at times test hypotheses (Conway & Huffcutt, 2003). PCA (Principal Component Analysis) was implemented with varimax rotation in order to identify the latent factors across the 61 items. The threshold value of 0.5 was considered, all factor loadings below this value were not considered (Hair, et al., 2016). The Kaiser-Meyer-Olkin (Measure) of sampling

adequacy and Bartlett's test of sphericity were conducted to measure sampling adequacy and suitability of data for factor analysis. To go ahead with the analysis of the data collected, the expected sampling adequacy has to be 0.5 (Hutcheson, 1999).

3.14.2 Reliability Analysis

According to Easterby-Smith et al., (2002), reliability is the extent to which data collection procedures or analysis procedures give consistent findings. In this study, the internal consistency or reliability were measured using Cronbach's alpha and Composite reliability. The reliability of multi-item scales is generally measured using Cronbach's alpha (DeVellis, 2005). In the current study, the reliability was assessed by comparing the amount of shared variance among the items that are a part of an instrument to the amount of overall variance. The critical value considered for Cronbach's alpha was 0.7 (Nunnally, 1978; Hair et al, 2016). Any construct having a value below the same will be considered only after making suitable amendments.

Composite Reliability (CR) was calculated as a part of SEM. It is equal to the total amount of true score variance relative to the total score variance (Brunner & Martin SÜβ, 2005). For an instrument to have acceptable reliability, Fornell & Larcker (1981) recommended CR scores to be above 0.7.

3.14.3 Validity Analysis

The question, are we measuring accurately what we are supposed to measure is answered by validity. Validity is the accuracy of the measure or the extent to which a score truthfully represents a concept (Zikmund, et al., 2013). There are different ways of measuring construct validity. The first step a researcher takes toward assessing validity is through content validity. Generally, content validity indicates if there is adequate coverage of investigative questions. In the present study, content validity was established by a rigorous literature review and considering scales or measurement items that are already pre-validated. Validity was further measured through convergent and discriminant validity. The extent to which each measurement item was related to its theoretical construct was

assessed using convergent validity. A scale is said to possess convergent validity if more than 50 percent of its variance is explained by its underlying construct i.e., the mean of the squared multiple correlations should be at least 0.50 (Fornell & Larcker,1981).

Discriminant validity indicated the extent to which the items of a construct are different from those of other constructs. In the present study cross loading indicator method and Fornell & Larcker criterion were used to measure discriminant validity. In the cross-loading method, factor loadings of the indicators on the assigned construct have to be higher than the loadings on other constructs. For an instrument to possess discriminant validity, each indicator loading should be greater than all of its cross-loadings (Barclay, et al., 1995; Chin, 1998). The factor loadings of the items of the assigned construct should be higher than 0.7 (Hair et al., 2016).

3.14.4 Structural Equation Modeling (SEM)

In the present study, SEM was used to analyze the data and test the study hypotheses. SEM was preferred mainly because it can evaluate complex measurement models and structural models. Structural equation modeling is a multivariate analytical approach applied for concurrent testing and appraising complex causal relationships among variables, even when the relationships are hypothetical (Vandenberg et al., 2009). Concurrently combining linear regression and factory analysis, SEM directly measure the observable indicator variables and statistically evaluates their interactions with theoretical latent variables (Hair et al., 2014). There are two major approaches to SEM -Co-variance-based SEM (CB-SEM) and Variance-based SEM (PLS-SEM). The biggest difference between CB-SEM and PLS-SEM is, the focus of the former is on accurately estimating the observed covariance matrix, whereas the latter is focusing on explaining the variance in the endogenous constructs (Hair et al., 2014). CB-SEM follows a maximum likelihood (ML) estimation procedure with the intention of reproducing the covariance matrix (minimizing the difference between the observed and estimated covariance matrix) without concentrating on explained variance (Hair et al., 2011).

SEM is composed of two sub-models which are the measurement model and the structural model (Byrne, 2010). A measurement model is mainly used to assess the construct's validity and reliability, whereas the structural model is used to check the hypothesized relationships (Byrne, 2010). A measurement model also describes the links between the latent variables and observed measures. In the current study, the measurement model aided in the analysis of the intercorrelation within the study constructs namely product involvement, trust, choice difficulty, perceived risks, cognitive dissonance, satisfaction, repurchase intention, and e-WOM. Analysis of Moment Structures 23 (AMOS 23) was used to perform structural Equation Modeling. The structural model was used to test the relationship between independent variables (product involvement, trust, perceived risks, and choice difficulty) and dependent variables (cognitive dissonance, satisfaction, repurchase intention, and e-WOM). The most commonly used model fit measures used to assess the model's overall goodness of fit are: the ratio of χ^2 to degrees-of-freedom (d.f.), comparative fit index (CFI), goodness-of-fit index (GFI), normalized fit index (NFI) and root mean square error of approximation (RMSEA). The study resulted in developing a single model that provides the influence of independent variables namely product involvement, trust, choice difficulty, and perceived risks on cognitive dissonance. The model also predicted the influence of cognitive dissonance on satisfaction and subsequently the influence of satisfaction on repurchase intention and e-WOM.

3.15 CHAPTER SUMMARY

Chapter 3 provided detailed insights into the various aspects of research methodology encompassed of the philosophy, paradigm, approach, methods and design of research and data sources involved. The research instrument development along with the sources was extensively discussed. The sampling methodology and justification for the same were discussed in detail. Pilot study and its findings have been highlighted. A small snapshot of various statistical tools used for analysis was discussed in the chapter.

CHAPTER 4

DATA ANALYSIS AND INTERPRETATIONS

CHAPTER 4

DATA ANALYSIS AND INTERPRETATIONS

4.1 CHAPTER OVERVIEW

Data analysis and interpretation of results are presented in chapter 4. Section 4.2 explains data preparation for analysis through data editing, coding, and screening. Socio-demographic information is compiled and analyzed in detail in section 4.3. Consumer preferences based on online shopping are covered in section 4.4. Descriptive statistics of the primary data collected are provided in section 4.5. A detailed overview of inferential statistics is provided in section 4.6. Analysis of Variance (ANOVA) between demographics and study constructs is provided in section 4.6. The factor analysis along with the reliability measures are explained in section 4.7. The different tests of validity are explained in section 4.8. The measurement model for the study is portrayed in section 4.9 through Confirmatory Factor Analysis (CFA) along with validity measures. In section 4.10 the hypotheses of the conceptual framework are tested using the structural model. Various fit indices are discussed to test the model fit. Section 4.11 provides information on the squared multiple correlations. A chapter summary is provided in section 4.12.

4.2 DATA PREPARATION FOR ANALYSIS

To analyze the data accurately, a few steps in data preparation were required. Data preparation is typically an iterative process of converting unorganized data into a more organized format. The data collected was a bit unorganized, and missing data issues were noticed. There could be some amount of missing data either because the respondent did not understand the question, or missed the question by mistake (De Vaus, 2002). Instances of missing data were handled by the listwise deletion method. According to this method, all the instances of missing data were deleted. This method is ideal for large sample sizes (Hair et al., 2010).

A total of 977 questionnaires were distributed, of which 724 responded to the questionnaire. However, after a diligent check, 8 responses were excluded due to missing data. Out of the 8, 4 respondents did not buy anything from the electronics product category. The remaining 4 failed to respond to several questions, owing to which 716 responses were considered.

4.2.1 Data Coding for SPSS

The data coding was initiated in the variable view of SPSS by appropriately choosing if the variable was categorical or quantitative. Based on the same, the variables were tagged if they are string or numeric. For the socio-demographic information, the options for multiple-choice questions were coded using numbers 1-5. Similarly, the constructs which were measured using the Likert scale were coded from 1 to 5.

4.3 SOCIO-DEMOGRAPHIC PROFILE OF ONLINE CONSUMERS

Socio-demographics involves the study of the population by analyzing characteristics like gender, age, education, household employment, income, marital status, and so on. The socio-demographic information is captured in table 4.2.

The majority of the online shoppers were in the age group of 25-34 years, with 43.2 percent of the total respondents coming from this age group followed by 23.6 percent of 18-24 year olds. Respondents from the age group of 55-64 years were only 3.5 percent followed by the least contribution of the age group of 65 years and above with just 2.4 percent. The female respondents were higher in number with 53.8 percent and the male respondents were 46.2 percent. Post-graduates formed major chunk of the respondents with 55 percent followed by graduates at 29.3 percent. The profile of the respondents indicates that a considerable number of respondents are well educated, that is, graduates and postgraduates. 41 percent of the online shoppers had a monthly income of 1,20,000 ₹, followed by 20.4 of the respondents who earned 30,001-60,000 ₹ a month. 14.4 percent of the respondents were in the income bracket of 60,001-90,000 ₹, followed by 12.8 percent of the respondents who earned 90,001-1,20,000 ₹.

Table 4.1: Socio- Demographic Profile of Online Shoppers

Demographic characteristics	Level	Frequency	Percent
Age Groups	18-24 years	169	23.6
	25-34 years	309	43.2
	35-44 years	148	20.7
	45-54 years	48	6.7
	55-64 years	25	3.5
	65 years and above	17	2.4
Gender	Male	331	46.2
	Female	385	53.8
Educational Qualification	Xth pass	1	0.1
	XIIth pass	61	8.5
	Graduate	210	29.3
	Post Graduate	394	55.0
	Doctoral	50	7.0
Family Monthly Income In Rs	Less than 30,000	79	11.0
	30,001-60,000	146	20.4
	60,001- 90,000	103	14.4
	90,001-1,20,000	92	12.8
	Above 1,20,000	296	41.3
Marital Status	Married	424	59.2
	Unmarried	289	40.4
	Others	3	0.4
Employment Status	Self-employment	125	17.5
	Salaried	450	62.8
	Unemployed	141	19.6
Type of salaried employment (If salaried employee)	Government employee	48	10.7
	Private employee	402	89.3
Type of Self employment	Business	45	36.0
	Freelancer	30	24.0
	Consultant	6	4.8
	Others	44	35.2
Employment status of the spouse	Employed	322	75.9
	Unemployed	102	24.1
Residing city	Delhi	182	25.4
	Mumbai	205	28.6
	Bengaluru	140	19.6
	Hyderabad	115	16.1
	Kolkata	74	10.3

Source: Research Survey

Salaried employees were the highest in number and accounted for 62.8 percent of the respondents and 17.5 percent of the respondents were self-employed. Significant percentage of 89.3 percent of the salaried employees worked in private firms. Majority of the self-employed respondents i.e., 36 percent ran their own businesses.

The majority of the respondents i.e., 59.2 percent were married. Within the married respondents majority i.e., 75.9 percent of the spouses were also employed.

Based on the socio-demographic information table 4.1, it is evident that the majority of the respondents were in the age group of 18-34 years, well-educated, and with higher income levels. This has been a common characteristic among online shoppers across different studies (Allred, et al., 2006; Tandon & Sakshi, 2020).

4.4 ONLINE SHOPPING PREFERENCES

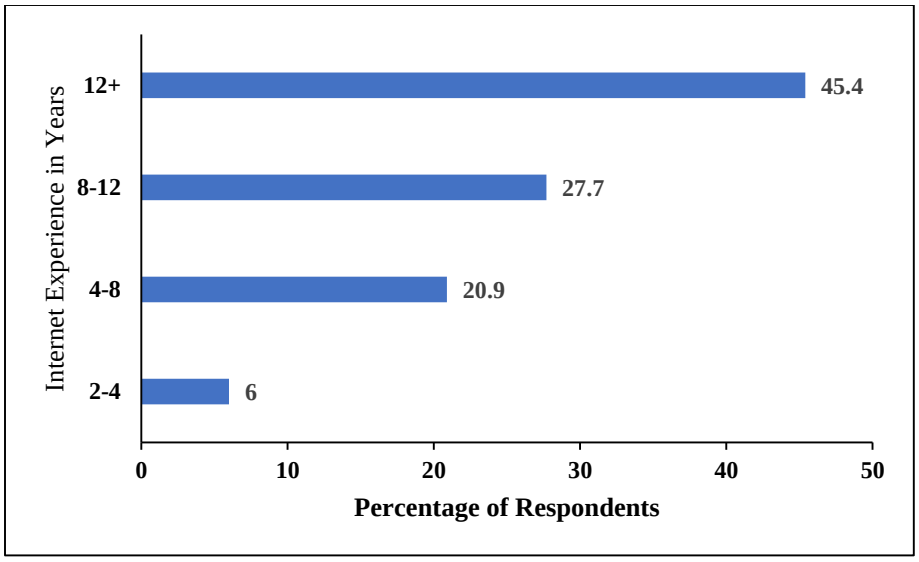
The present study has captured online shopping preferences based on the product category of Electronics.

4.4.1 Internet Experience of Online Shoppers

A consumer who is acquainted with using the internet can shop online. Online shoppers were categorized on the basis of longevity of internet usage and data was collected accordingly. The data indicated that 45.40 percent of the respondents were having an internet usage experience of more than 12 years.

The users with 8-12 years of internet experience were the second highest in number with 27.7 percent. Users with 4-8 years of experience formed 20.9 percent. The users with 2-4 years of internet experience were the least with only 6 percent. This indicates that the majority of online shoppers are well versed in using internet technology and hence might

be aware of the nuances and technicalities of online shopping. Figure 4.1 indicates the distribution of respondents in terms of internet experience

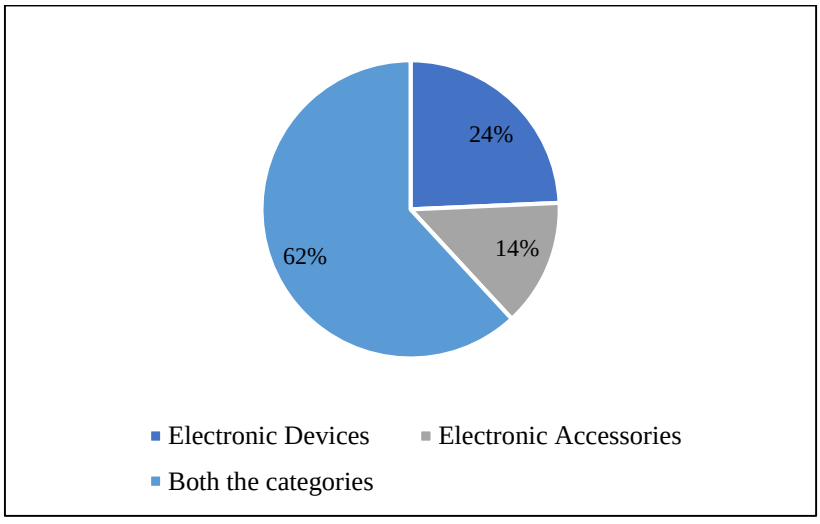


Source: Research Survey

Figure 4.1: Consumer Internet Experience

4.4.2 Product Sub-Categories

Figure 4.2, indicates the share of the sub-categories purchased by the respondents.



Source: Research Survey

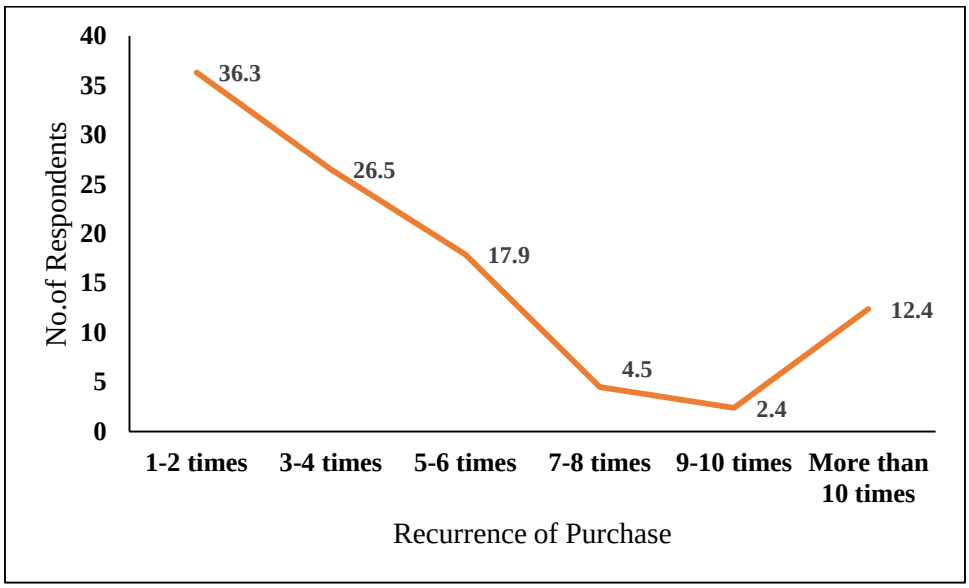
Figure 4.2: Preferred Product Sub-Category

62 percent of online shoppers purchased both the sub-categories of electronic devices and electronic accessories. Respondents who purchased only electronic devices formed 24

percent of the total share. Respondents purchasing only electronic accessories was just 14 percent. This could be an indication that many online shoppers may prefer purchasing electronic accessories along with the electronic devices.

4.4.3 Recurrence of Online Purchase of Electronic products

It is observed that 36 percent had a purchase frequency in the lower range of 1-2 times (Figure 4.3). This was followed by a frequency of purchase of 3-4 times with 26.5% of respondents purchasing electronics products 3-4 times in the timeframe of 6 months. The percentage of respondents buying these products 9-10 times was a meager 2.4 percent.



Source: Research Survey

Figure 4.3: Frequency of Purchase of Respondents

One of the reasons that can be attributed to the low frequency can be the product category, unlike product categories like groceries where there is habitual buying and frequency of purchase is much higher, the electronics product category is a low repeat purchase category. The electronics product category by nature has lesser repeat purchases or frequency as it is generally a higher-priced, durable product. Purchase behavior similar to electronic devices can be noticed even with electronic accessories. As electronic accessories are generally purchased for various electronic devices and appliances, a lower

frequency of purchase of electronic products can lead to a lower frequency of purchase of electronic accessories.

4.4.4 Preferred Online Shopping Portal

From table 4.2 it is evident that most respondents prefer Amazon India, followed by Flipkart, Paytm, and Snapdeal for the online purchase of electronic products. These findings are in line with the IBEF (2021) and Al-Hattami, 2020.

Table 4.2: Garett's Ranking for Preferred Online Shopping Portal

Online Shopping Portals	Garrets Mean Score	Rank
Amazon India	67.74	1
Flipkart	59.3	2
Paytm	47.9	3
Snapdeal	41.4	4
Others	34.69	5

Source: Research Survey

Garett's Ranking technique was used to analyze the ranks given by the respondents. It is a scoring procedure proposed by Henry Garett in 1969. In this method, the order of merit given by the respondents for each E-tailer was converted to scores. The portal with the highest score was ranked first followed by other shopping portals in descending order.

4.5 DESCRIPTIVE STATISTICS

Descriptive statistics were used to summarize the data using measures of central tendency i.e., mean, median and mode. Mean is also called a measure of central tendency as it describes a dataset by identifying the central position within that set of data. Standard deviation indicates the spread of data. Generally, the mean and standard deviation are used in conjunction to summarize continuous data.

The descriptive statistics of the mean and standard deviation of the study constructs of product involvement, trust, perceived risks, choice difficulty, and cognitive dissonance, repurchase intention, satisfaction and e-WOM are given in table 4.3.

Table 4.3: Descriptive Statistics of the Study Constructs

Sl. No	Construct	Mean	Median	Standard Deviation
1	Trust	4.02	4.00	0.63
2	Product Involvement	3.77	3.83	0.70
3	Cognitive Dissonance	2.83	2.89	0.97
4	Perceived Risks	2.53	2.56	0.72
5	Choice Difficulty	2.56	2.50	0.88
6	Satisfaction	3.29	3.50	1.10
7	Repurchase Intention	3.33	3.67	1.07
8	e-WOM	3.34	3.20	0.76

Source: Research Survey

Trust and product involvement have the highest mean values with 4.02 and 3.85. This could be an indicator that most online shoppers trust their preferred online shopping portal for the purchase of electronic products (Both electronic accessories and electronic devices & appliances). A high product involvement indicates that this product category garners significant attention, time, and information processing before a purchase decision is made. The means were lowest for perceived risks (2.53) and choice difficulty (2.56) indicating that the consumers do not perceive high risk nor experience high choice difficulty in the online shopping of electronic products (Both electronic accessories and electronic devices & appliances). The standard deviation for repurchase intention (σ =1.10), and satisfaction (σ =1.07) is on the higher side, indicating a higher spread of the values. One of the reasons for the spread could be that there are different variety of products in this category and

consumer's repurchase intentions and satisfaction may be varying based on these subcategories.

4.6 INFERENTIAL STATISTICS

To assess relationships that may not directly contribute to the study but may produce valuable insights, a one-way Analysis of Variance (ANOVA) was used between the demographic variables of frequency of purchase, age, internet experience, educational qualification, and occupation and study constructs of trust, product involvement, perceived risks, choice difficulty, cognitive dissonance, satisfaction, repurchase intention and e-WOM. These findings may contribute to further strengthening the arguments in the present study by identifying the underlying factors that rendered a relationship insignificant.

ANOVA was used to determine if the means of two or more groups were statistically different from each other. The F-statistic or the F-ratio indicated if the study constructs vary based on the different socio-demographic characteristics. An F-ratio closer to 1 is an indication of no difference in the study construct across the varying socio-demographic group. In the present study whenever the F-test was significant with a $p<0.001$, a Post hoc Scheffe test was conducted to further assess how groups differ significantly. It was used to make all possible contrasts between group means. The comparisons in Scheffe's test were unplanned which means that a comparison made within a data set after an ANOVA test has been run, was not built into the ANOVA experiment.

4.6.1 Trust and Internet Experience

The ANOVA results in table 4.4 ($F=1.783$ at $p=0.149$) showed no significant difference in trust in online shopping among online shoppers with varying internet experiences. This indicates that there is no difference between trust among respondents with different years of internet experience.

Table 4.4: ANOVA between Trust and Internet Experience

Dependent Variable		Sum of Squares	Df	Mean Square	F	Sig Value
Trust	Between groups	2.115	3	.705	1.783	.149
	Within groups	281.612	712	.396		
	Total	283.727	715			

Source: Research Survey

One of the possible reasons for the insignificant test results could be that even though respondents have varying years of internet experience, not all of this internet experience might be converted into a shopping experience. Hence, there might not be a significant difference in means in trust across consumers with 2-4 years of internet experience and 4-of 8 years internet experience.

4.6.2 Trust and Recurrence of Purchase

The results in the ANOVA table 4.5 ($F=3.814$ at $p<0.05$) indicate that there was a statistically significant difference in trust in online shopping among respondents of different purchase frequencies.

Table 4.5: ANOVA between Trust and Recurrence of Purchase

Dependent Variable		Sum of Squares	df	Mean Square	F	Sig Value
Trust	Between groups	4.487	3	1.496	3.814	.010
	Within groups	279.240	712	.392		
	Total	283.727	715			

Source: Research Survey

To further analyze which of these groups the mean difference was significant, a post hoc Scheffe test was conducted.Post hoc tests revealed that the mean differences are significant between respondents who have purchased 1-2 times and > 6 times. There was no statistically significant difference in trust among online shoppers who purchased 1-2 times, 3-4 times and 5-6 times. Table 4.6 indicates the results of the post hoc Scheffe test.

This is an indication that the trust in online shopping differed mainly between respondents who purchased the least (1-2 times) and who purchased the highest number of times (>6 times). Online shoppers with low recurrence of purchase may lack the experience to assess if the e-tailer is trustworthy.

With increase in recurrence of purchase a consumer may acquire knowledge regarding purchase, product delivery, post-purchase services and communication with customer service and hence may find the e-tailer to be more trustworthy. This is an indication that higher purchase frequency can help in building trust.

Table 4.6: Post-Hoc Scheffe Test- Comparison of Trust between different Frequency of Purchases

Dependent Variable	(I) Frequency of Purchase	(J) Frequency of Purchase	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
						Lower Bound	Upper Bound
Trust	1-2 times	3-4 times	-.0804	.0597	.613	-.2479	.0871
		5-6 times	-.1646	.0676	.116	-.3541	.0249
		> 6 times	-.1994*	.0659	.028	-.3842	-.0146
	3-4 times	5-6 times	-.0842	.0716	.710	-.2849	.1165
		> 6 times	-.1189	.0700	.410	-.3153	.0773
		1-2 times	.1646	.0676	.116	-.0249	.3541
	5-6 times	3-4 times	.0842	.0716	.710	-.1165	.2849

Dependent Variable	(I) Frequency of Purchase	(J) Frequency of Purchase	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
						Lower Bound	Upper Bound
Trust							
		> 6 times	-.0347	.0768	.977	-.2501	.1806
		1-2 times	.1994*	.0659	.028	.0146	.3842
	> 6 times	1-2 times	.1994*	.0659	.028	.0146	.3842
		3-4 times	.1189	.0700	.410	-.0773	.3153
		5-6 times	.0347	.0768	.977	-.1806	.2501

**. The mean difference is significant at the 0.05 level. Source: Research Survey*

4.6.3 Perceived Risks and Age

The results in ANOVA table in 4.7 (F=2.150 at p=0.093) indicates that there was no statistically significant difference in risks perceived by online shoppers among respondents of different age groups. This could be an indication online shoppers from all age groups perceive similar risks of same magnitude.

Table 4.7: ANOVA between Perceived Risks and Age

Dependent Variable		Sum of Squares	Df	Mean Square	F	Sig Value
Perceived Risks	Between groups	3.340	3	1.113	2.150	.093
	Within groups	368.690	712	.518		
	Total	372.030	715			

Source: Research Survey

One of the reasons for the same could be that majority (87%) of the online shoppers are in the age range of 18-44 and might have gained good experience in online shopping in the past few years.

4.6.4 Perceived Risks and Consumer Internet Experience

The results in the ANOVA table in 4.8 ($F=5.159$ at $p<0.01$) indicate that there was a statistically significant difference in the perceived risks in online shopping among respondents of varying years of internet experience. To further analyze which of these groups the mean difference was significant, a post hoc Scheffe test was conducted.

Table 4.8: ANOVA between Perceived Risks and Internet Experience

Dependent Variable		Sum of Squares	df	Mean Square	F	Sig Value
Perceived Risks	Between groups	7.915	3	2.638	5.159	.002
	Within groups	364.115	712	.511		
	Total	372.030	715			

Source: Research Survey

The Post Hoc Scheffe test results in table 4.9 indicate there was a significant difference in the risks perceived between respondents having internet experience of 4-8 years and internet experience of more than 12 years. The perceived risks significantly differed between respondents with internet experience of 2-4 years and more than 12 years.

Table 4.9: Post-Hoc Scheffe Test- Comparison of Perceived Risks between Different Groups of Internet Experience

Dependent Variable	I) Internet Experience	(J) Internet Experience	Mean Difference (I-J)	Std. Error	Sig	95% Confidence Interval	
						Lower Bound	Upper Bound
Perceived Risks	4-8 years	8-12 years	.0664	.0774	.864	-.150	.283
		2- 4 years	-.1148	.1237	.834	-.461	.231
		More than 12 years	.2145*	.0705	.027	.016	.412
	8-12 years	4-8 years	-.0664	.0774	.864	-.283	.150
		2- 4 years	-.1813	.1203	.518	-.518	.155
		More than 12 years	.1480	.0644	.154	-.032	.328
	2- 4 years	4-8 years	.1148	.1237	.834	-.231	.461
		8-12 years	.1813	.1203	.518	-.155	.518
		More than 12 years	.3294*	.1160	.046	.004	.654
	More than 12 years	4-8 years	-.21453*	.07059	.027	-.412	-.016
		8-12 years	-.14807	.06447	.154	-.328	.032
		2- 4 years	-.32941*	.11605	.046	-.654	-.004

**. The mean difference is significant at the 0.05 level. Source: Research Survey*

This is an indication that with more internet usage experience respondents may not perceive higher risks as compared to respondents with lesser years of internet experience. Indians use internet for varied purposes like accessing news, entertainment, gaming, and online shopping which indicates that a higher internet experience may lead to substantial

knowledge on online shopping and its nuances. Hence the perceived risks of online shoppers with higher internet experience might be lower.

4.6.5 Perceived Risks and Recurrence of Purchase

The results in ANOVA table in 4.10 ($F=10.501$, $p<0.001$) indicates that there was a statistically significant difference in the perceived risks in online shopping among respondents with varying recurrences of purchases. To further analyze which of these groups the mean difference was significant, a post hoc Scheffe test was conducted.

Table 4.10: ANOVA between Perceived Risks and Recurrence of Purchase

Dependent Variable		Sum of Squares	df	Mean Square	F	Sig Value
Perceived Risks	Between groups	15.763	3	5.254	10.501	.000
	Within groups	356.267	712	.500		
	Total	372.030	715			

Source: Research Survey

The Post Hoc Scheffe test results in table 4.11 indicate there was a significant difference in the risks perceived between respondents who purchased 1-2 times and >6 times and 3-4 times and >6 times.

The results clearly indicate that consumers perceive lower risk when they purchase more frequently or the recurrence of purchase is higher. Higher frequency of purchase creates a familiarity between the consumer and the online shopping portal which in turn may reduce the risks perceived by the consumer.

Table 4.11: Post-Hoc Scheffe Test- Comparison of Perceived Risks between different Frequency of Purchases

Dependent Variable	I) Frequency of Purchase	(J) Frequency of Purchase	Mean Difference (I-J)	Std. Error	Sig	95% Confidence Interval	
						Lower Bound	Upper Bound
Perceived Risks	1-2 times	3-4 times	.060	.067	.85	-.1291	.249
		5-6 times	.193	.076	.09	-.0204	.407
		> 6 times	.398*	.074	.00	.1894	.607
	3-4 times	1-2 times	-.060	.067	.85	-.2493	.129
		5-6 times	.133	.080	.43	-.0931	.360
		> 6 times	.338*	.079	.00	.1164	.559
	5-6 times	1-2 times	-.193	.076	.09	-.4077	.020
		3-4 times	-.133	.081	.43	-.3602	.093
		> 6 times	.204	.087	.13	-.0387	.447
	> 6 times	1-2 times	-.398*	.075	.00	-.6070	-.189
		3-4 times	-.338*	.079	.00	-.5598	-.116
		5-6 times	-.204	.086	.13	-.4478	.038

**. The mean difference is significant at the 0.05 level. Source: Research Survey*

4.6.6 Choice Difficulty and Age

The results in the ANOVA table in 4.12 ($F=5.393$, $p<0.001$) indicate that there was a statistically significant difference in the perceived risks in online shopping among respondents of different age groups. To further analyze which of these groups the mean difference was significant, a post hoc Scheffe test was conducted.

Table 4.12: ANOVA between Choice Difficulty and Age

Dependent Variable		Sum of Squares	df	Mean Square	F	Sig Value
Choice Difficulty	Between groups	12.261	3	4.087	5.393	.001
	Within groups	539.584	712	.758		
	Total	551.845	715			

Source: Research Survey

The Post Hoc Scheffe test results in table 4.13 indicate there was a significant difference in the risks perceived between respondents who purchased 1-2 times and >6 times and 3-4 times and >6 times.

The post hoc Scheffe's test in table 4.13 reveals that there is a significant difference in the choice difficulty experienced among the online shoppers of the age groups 25-34 years and 45 years and above. A significant difference was also noticed in the online shoppers of the age group of 35-44 years and 45 and above.

Based on the results one can safely assume that respondents who belong to a higher age bracket have difficulty in choosing products compared to their younger counterparts. This could be due to the fact that most of online shoppers belong to the age bracket of 18-35 years (Allred, et al., 2006; Tandon & Sakshi, 2020) and are most often hooked to their phones throughout the day, they might not be overwhelmed with the vast number of choices.

Table 4.13: Post-Hoc Scheffe Test- Comparison of Choice difficulty between different Age Groups

Dependent Variable	I) Frequency of Purchase	(J) Frequency of Purchase	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
						Lower Bound	Upper Bound
Choice Difficulty	18-24 years	25-34 years	.164	.083	.271	-.068	.398
		35-44 years	.112	.098	.724	-.162	.387
		45 and above	-.235	.113	.232	-.553	.082
	25-34 years	18-24 years	-.164	.083	.271	-.398	.068
		35-44 years	-.052	.087	.948	-.296	.191
		45 and above	-.400*	.104	.002	-.692	-.108
	35-44 years	18-24 years	-.112	.098	.724	-.387	.162
		25-34 years	.052	.087	.948	-.191	.296
		45 and above	-.348*	.116	.031	-.674	-.022
	45 and above	18-24 years	.235	.113	.232	-.082	.553
		25-34 years	.400*	.104	.002	.108	.692
		35-44 years	.348*	.116	.031	.022	.674

Source: Research Survey

4.6.7 Choice Difficulty and Product Category

The ANOVA test results (F=1.576 at p=0.208) in table 4.14 indicate that there is no significant difference in the choice difficulty experienced by online shoppers across different subcategories of electronic devices & appliances and electronic accessories. This indicates that choice difficulty does not vary with product categories of different levels of involvement. The categories in question were electronic devices & appliances and electronic accessories.

Table 4.14: ANOVA between Choice Difficulty and Product Category

Study Constructs		Sum of Squares	df	Mean Square	F	Sig Value
Choice Difficulty	Between groups	2.429	2	1.214	1.576	.208
	Within groups	549.416	713	.771		
	Total	551.845	715			

Source: Research Survey

Electronic accessories are a choice-heavy category; however, the ANOVA test results indicate that consumers do not perceive greater choice difficulty for electronic accessories. This could be owing to the fact that most of the online shoppers are from the age group of 18-35 years with internet experience of >12 years indicating that they might be comfortable navigating huge number of products.

4.6.8 Choice Difficulty and Educational Qualification

The results of the ANOVA test ($F=3.136$ at $p<0.05$) in table 4.15 indicate that choice difficulty experienced by online shoppers differs significantly with varying educational qualifications.

Table 4.15: ANOVA between Choice Difficulty and Educational Qualification

Dependent Variable		Sum of Squares	df	Mean Square	F	Sig Value
Choice Difficulty	Between groups	7.197	3	2.399	3.136	.025
	Within groups	544.648	712	.765		
	Total	551.845	715			

Source: Research Survey

To further analyze which of these groups the mean difference was significant, a post hoc Scheffe test was conducted results of which are tabulated in table 4.16.

Results of the Post hoc Scheffe test indicate that the difference of choice difficulty experienced between XIIth pass and graduates is statistically significant. One interpretation could be that consumers with lower educational qualifications tend to have lower awareness about products and hence an increase in choice would make it difficult for the consumer to choose a product.

Table 4.16: Post-Hoc Scheffe Test- Comparison of Choice Difficulty between respondents of different Educational Qualifications

Dependent Variable	I) Highest Educational Qualification	(J) Highest Educational Qualification	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
						Lower Bound	Upper Bound
Choice Difficulty	XIIth pass	Graduate	.3874*	.126	.025	.033	.741
		Post Graduate	.3036	.119	.092	-.031	.638
		Doctoral	.2888	.166	.389	-.177	.754
	Graduate	XIIth pass	-.3874*	.126	.025	-.741	-.033
		Post Graduate	-.0837	.074	.739	-.293	.125
		Doctoral	-.0985	.137	.916	-.484	.287
	Post Graduate	XIIth pass	-.3036	.119	.092	-.638	.031
		Graduate	.0837	.074	.739	-.125	.293
		Doctoral	-.0148	.131	1.000	-.382	.353
	Doctoral	XIIth pass	-.2888	.166	.389	-.754	.177
		Graduate	.0985	.137	.916	-.287	.484
		Post Graduate	.0148	.131	1.00	-.353	.382

**. The mean difference is significant at the 0.05 level. Source: Research Survey*

The choice difficulty could arise as he/she will have to go through product details, and make comparisons, to reach the final decision and they might not be well equipped with information on the same.

4.6.9 Choice Difficulty and Internet Experience

The results of the ANOVA test ($F=3.136$ at $p<0.05$) in table 4.17 indicate that there is a significant difference in the choice difficulty perceived among online shoppers of varying internet experiences.

Table 4.17: ANOVA between Choice Difficulty and Internet Experience

Dependent Variable		Sum of Squares	df	Mean Square	F	Sig Value
Choice Difficulty	Between groups	20.003	3	6.668	8.926	.000
	Within groups	531.841	712	.747		
	Total	551.845	715			

Source: Research Survey

To further analyze which of these groups the mean difference was significant, a post hoc Scheffe test was conducted.

The Post Hoc Scheffe test results in table 4.18 indicate that there was a significant difference in the choice difficulty experienced among online shoppers with internet experience of 2-4 years and 8-12 years. There was a statistically significant difference in the choice difficulty experienced among the online shoppers with internet experience of 2-4 years and more than 12 years, between online shoppers of 4-8 years and more than 12 years. One can attribute these significant differences in means to the fact that consumers with less internet experience may find it difficult to navigate through the vast catalogues in the online shopping portals.

A consumer can find the relevant products through either search or browse feature, however, a consumer with less experience may not be able to apply the appropriate filters leading to choice difficulty.

Table 4.18: Post-Hoc Scheffe Test- Comparison of Choice Difficulty between different Internet Experience

Dependent Variable	I) Internet Experience	(J) Internet Experience	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
						Lower Bound	Upper Bound
Choice Difficulty	2- 4 years	4-8 years	.407	.149	.061	-.011	.826
		8-12 years	.563*	.145	.002	.156	.970
		More than 12 years	.660*	.140	.000	.267	1.053
	4-8 years	8-12 years	.156	.093	.425	-.105	.418
		2- 4 years	-.407	.149	.061	-.826	.012
		More than 12 years	.253*	.085	.033	.014	.49
	8-12 years	4-8 years	-.156	.093	.425	-.418	.106
		2- 4 years	-.563*	.145	.002	-.970	-.15
		More than 12 years	.096	.07792	.672	-.121	.32
	More than 12 years	4-8 years	-.253*	.085	.033	-.492	-.014
		8-12 years	-.096	.077	.672	-.315	.121
		2- 4 years	-.660*	.140	.000	-1.05	-.267

**. The mean difference is significant at the 0.05 level. Source: Research Survey*

4.6.10 Cognitive Dissonance and Type of Occupation

The results in the ANOVA table in 4.19 ($F=5.864$ at $p<0.01$) indicates that there was a statistically significant difference in the cognitive dissonance experienced among online shoppers of different occupation. To further analyze which of these groups the mean difference was significant, a post hoc Scheffe test was conducted.

Table 4.19: Cognitive Dissonance and Type of Occupation

Study Constructs		Sum of Squares	df	Mean Square	F	Sig Value
Cognitive Dissonance	Between groups	10.795	2	5.398	5.864	.003
	Within groups	656.249	713	.920		
	Total	667.044	715			

Source: Research Survey

To further analyze which group had statistically significant mean differences Post hoc Scheffe test was conducted. Statistically, significant mean differences were also noticed between respondents who were salaried employees and unemployed.

Cognitive dissonance in online shopping varies for consumers who are salaried, self-employed and unemployed. This finding is a significant contribution to understanding cognitive dissonance. Salaried online shoppers may not be as anxious as the self-employed or unemployed online shoppers during their purchases as fixed income might not be a concern for them. The self-employed and unemployed online shoppers owing to the lack of fixed source of income may exhibit anxieties and ambiguities regarding the necessity of the online purchase.

Table 4.20: Post-Hoc Scheffe Test- Comparison of Cognitive Dissonance between Respondents of different Types of Occupation

Dependent Variable	I) Type of Occupation	(J) Type of Occupation	Mean Difference (I-J)	Std. Error	Sig	95% Confidence Interval	
						Lower Bound	Upper Bound
Cognitive Dissonance	Self-Employment	Salaried employees	.278*	.097	.01	.041	.516
		Unemployed	.050	.117	.91	-.238	.339
	Salaried employees	Self-Employment	-.278*	.097	.01	-.517	-.041
		Unemployed	-.228*	.092	.04	-.455	-.001
	Unemployed	Self-Employment	-.050	.117	.91	-.340	.238
		Salaried employees	.228*	.092	.04	.001	.455

Source: Research Survey

4.6.11 Cognitive Dissonance and Product Category

H1e: Cognitive dissonance significantly varies across product categories of different levels of involvement

ANOVA between cognitive dissonance and product category was used to test the hypothesis H1e.

The ANOVA test result (F= 1.750 at p=0.175) in table 4.21 indicates that difference in cognitive dissonance across product categories of different levels of involvement i.e. electronic devices & appliances and electronic accessories is statistically not significant. This leads to the conclusion that hypothesis H1e is rejected.

The results obtained could be attributed to the sample composition which comprises highly educated respondents with high incomes. Many of these respondents might be spending a lot of time purchasing accessories for their devices. Within accessories they might be preferring to purchase branded accessories rather than unbranded products.

Table 4.21: ANOVA between Cognitive Dissonance and Product Category

Study Constructs		Sum of Squares	df	Mean Square	F	Sig Value
Cognitive Dissonance	Between groups	3.258	2	1.629	1.750	.175
	Within groups	663.786	713	.931		
	Total	667.044	715			

Source: Research Survey

The results obtained could be attributed to the sample composition which comprises highly educated respondents with high incomes. Many of these respondents might be spending a lot of time purchasing accessories for their devices. Within accessories they might be preferring to purchase branded accessories rather than unbranded products.

To further validate the results of ANOVA T-test was also conducted to assess the relationship between cognitive dissonance and product category. The T-test is generally used to compare the means of two groups. In the present study, a T-test was used to check if there is a difference in the means of the groups of respondents who purchased electronic devices/appliances and electronic accessories. The test results were not significant with a T value of 0.97 at p= 0.335 indicating cognitive dissonance does not vary among online shoppers who purchase electronic devices and electronic accessories.

This finding is similar to the study conducted by Nordvall (2014), where cognitive dissonance was experienced in low involvement category like groceries as well. In the study conducted by Nordvall (2014) respondents were tested during a virtual shopping spree. A similar finding was seen in the study conducted by Gbadamosi (2009), where the sample predominantly consisted of low-income women who experienced cognitive dissonance during purchase of grocery items. Both the studies used qualitative methods to assess the relationship between cognitive dissonance and product involvement. The current

study could be an indication that many online shoppers tend to give equal importance to both electronic devices and electronic accessories.

4.6.12 Cognitive Dissonance and Internet Experience

The ANOVA test results ($F=4.160$, $p<0.01$) in table 4.22 indicate there is a significant difference in the cognitive dissonance experienced among online shoppers of varying internet experiences.

Table 4.22: ANOVA between Cognitive Dissonance and Internet Experience

Dependent Variable		Sum of Squares	df	Mean Square	F	Sig Value
Cognitive Dissonance	Between groups	11.490	3	3.830	4.160	.006
	Within groups	655.555	712	.921		
	Total	667.044	715			

Source: Research Survey

To further analyze which group had statistically significant mean differences Post hoc Scheffe test was conducted. The results are summarized in table 4.23.

The Post Hoc test results indicate that there was a significant difference in the cognitive dissonance experienced among online shoppers with internet experience of 4-8 years and 8-12 years and 4-8 years and more than 12 years. This indicates that online shoppers with internet experience of 8-12 years and more than 12 years experienced lesser cognitive dissonance as compared to online shoppers with experience of 4-8 years. Online shoppers with more internet usage experience tend to have better knowledge about online shopping and hence may experience lesser cognitive dissonance.

Table 4.23: Post-Hoc Scheffe Test- Comparison of Cognitive Dissonance between different Internet Experience

Dependent Variable	I) Internet Experience	(J) Internet Experience	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
						Lower Bound	Upper Bound
Cognitive Dissonance	4-8 years	8-12 years	.326*	.104	.020	.035	.617
		2-4 years	.222	.166	.616	-.242	.687
		More than 12 years	.304*	.095	.016	.039	.569
	8-12 years	4-8 years	-.326*	.104	.020	-.618	-.036
		2-4 years	-.104	.161	.937	-.557	.348
		More than 12 years	-.022	.086	.995	-.265	.220
	less than 4 years	4-8 years	-.222	.166	.616	-.687	.243
		8-12 years	.104	.161	.937	-.348	.556
		More than 12 years	.082	.156	.964	-.354	.518
	More than 12 years	4-8 years	-.304*	.095	.016	-.569	-.039
		8-12 years	.022	.087	.995	-.220	.265
		2-4 years	-.081	.156	.964	-.518	.354

**. The mean difference is significant at the 0.05 level. Source: Research Survey*

However, statistically, there was no significant difference in cognitive dissonance experienced among online shoppers of 2-4 years and other groups. This indicates the absence of a specific pattern to conclude the results.

4.6.13 Repurchase Intention and Age

The ANOVA test results ($F=3.742$ at $p<0.05$) in table 4.24 indicate that there was a significant difference in the repurchase intention among online shoppers of different age groups.

Table 4.24: ANOVA between Repurchase Intention and Age

Dependent Variable		Sum of Squares	df	Mean Square	F	Sig Value
Repurchase Intention	Between groups	13.492	3	4.497	3.742	.011
	Within groups	855.750	712	1.202		
	Total	869.242	715			

Source: Research Survey

To further analyze which group had statistically significant mean differences Post hoc Scheffe test was conducted. The post hoc Scheffe test in table 4.25 indicates that there was a statistically significant difference in the repurchase intention of online shoppers of the age group of 25-34 years and 45 years and above. This could be an indication that consumers in the age group of 25-34 may have higher disposable income due to the fact that they are newly employed or they might be starting a family and are yet to take over the household responsibilities.

According to reports in Statista (2021) consumers in the age group of 25-34 years are the most active online shoppers across the globe, 55 percent of the online shoppers were from this age group. As this group of online shoppers are used to purchasing online most of the repeat purchases would likely be from this age group.

Table 4.25: Post-Hoc Scheffe Test- Comparison of Repurchase Intention between different Age Groups

Dependent Variable	I) Age	(J) Age	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
						Lower Bound	Upper Bound
Repurchase Intention	18-24 years	25-34 years	-.157	.104	.522	-.451	.136
		35-44 years	-.060	.123	.971	-.406	.285
		45 and above	.274	.143	.298	-.126	.675
	25-34 years	18-24 years	.157	.104	.522	-.136	.451
		35-44 years	.097	.109	.853	-.210	.404
		45 and above	.432*	.131	.013	.064	.800
	35-44 years	18-24 years	.060	.123	.971	-.285	.406
		25-34 years	-.097	.109	.853	-.404	.210
		45 and above	.335	.146	.157	-.075	.745
	45 and above	18-24 years	-.274	.143	.298	-.676	.126
		25-34 years	-.432*	.131	.013	-.800	-.064
		35-44 years	-.335	.146	.157	-.746	.075

Source: Research Survey

4.6.14 Repurchase Intention and Recurrence of Purchase

The ANOVA test results ($F=7.111$ at $p<0.001$) in table 4.26 indicate that there was a significant difference in the repurchase intention among online shoppers with varying recurrence of purchase.

To further analyze which group had statistically significant mean differences Post hoc Scheffe test was conducted.

Table 4.26: ANOVA between Repurchase Intention and Frequency of Purchase

Dependent Variable		Sum of Squares	df	Mean Square	F	Sig Value
Repurchase Intention	Between groups	25.286	3	8.429	7.111	.000
	Within groups	843.956	712	1.185		
	Total	869.242	715			

Source: Research Survey

The results of the Post Hoc Scheffe test was summarized in table 4.27. The Post Hoc Scheffe test results in table 4.27 indicate that there was a significant difference in repurchase intention among online shoppers who purchased 1-2 times and 3-4 times. One of the reasons for the same could be that online shoppers with a lower frequency of purchase might purchase products on a need basis and may be first time buyers. After making more than 2 purchases a consumer can gain confidence in the online shopping portal he/she is purchasing. However, there was no significant difference in repurchase intention among online shoppers with frequencies like 3-4 times, 5-6 times and > 6 times indicating that a specific pattern is not noticed in the results.

Table 4.27: Post-Hoc Scheffe Test- Comparison of Repurchase Intention between different Frequency of Purchases

Dependent Variable	I) Recurrence of Purchase	(J) Recurrence of Purchase	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
						Lower Bound	Upper Bound
Repurchase Intention	1-2 times	3-4 times	-.478*	.103	.00	-.769	-.187
		5-6 times	-.236	.117	.25	-.566	.092
		> 6 times	-.187	.114	.44	-.509	.133
	3-4 times	1-2 times	.478*	.103	.00	.187	.769

Dependent Variable	I) Recurrence of Purchase	(J) Recurrence of Purchase	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
						Lower Bound	Upper Bound
		5-6 times	.241	.124	.28	-.107	.590
		> 6 times	.290	.121	.12	-.050	.631
	5-6 times	1-2 times	.236	.117	.25	-.092	.566
		3-4 times	-.241	.124	.28	-.590	.107
		> 6 times	.048	.133	.98	-.325	.423
	> 6 times	1-2 times	.187	.114	.44	-.133	.509
		3-4 times	-.290	.121	.12	-.631	.050
		5-6 times	-.048	.133	.98	-.423	.325

**. The mean difference is significant at the 0.05 level. Source: Research Survey*

4.6.15 e-WOM and Educational Qualification

The ANOVA test results between e-WOM and educational qualification (F=6.643 at p<0.001) in table 4.28 indicate that the F value of 6.643 is statistically significant at 0.000

Table 4.28: ANOVA between e-WOM and Educational Qualification

Dependent Variable		Sum of Squares	df	Mean Square	F	Sig Value
e-WOM	Between groups	11.315	3	3.772	6.643	.000
	Within groups	404.238	712	.568		
	Total	415.553	715			

Source: Research Survey

To further analyze which group had statistically significant mean differences Post hoc Scheffe test was conducted. The results are tabulated in Table 4.29

The post hoc Scheffe test results in table 4.29 indicate the difference in e-WOM is statistically significant among respondents who are graduates and postgraduates. However, the difference in e-WOM among XIIth pass and graduates, XIIth pass and postgraduates, doctoral and XIIth pass, doctoral and graduates, doctoral and postgraduates was statistically not significant.

There is no specific pattern observed from the results. It would be difficult to explain the difference in the dissemination of positive e-WOM between graduates and post-graduates.

Table 4.29: Post-Hoc Scheffe Test- Comparison of e-WOM between Respondents of different Educational Qualifications

Dependent Variable	I)Educational Qualification	(J) Educational Qualification	Mean Difference (I-J)	Std. Error	Sig	95% Confidence Interval	
						Lower Bound	Upper Bound
e-WOM	XIIth pass	Graduate	-.048	.108	.97	-.354	.256
		Post Graduate	-.287	.102	.05	-.575	.001
		Doctoral	-.345	.143	.12	-.746	.056
	Graduate	XIIth pass	.048	.108	.97	-.256	.354
		Post Graduate	-.238*	.064	.00	-.418	-.057
		Doctoral	-.296	.118	.10	-.628	.035
	Post Graduate	XIIth pass	.287	.102	.05	-.001	.575
		Graduate	.238*	.064	.00	.057	.418
		Doctoral	-.058	.113	.96	-.375	.258
	Doctoral	XIIth pass	.345	.143	.12	-.056	.746
		Graduate	.296	.118	.10	-.035	.628
		Post Graduate	.058	.113	.96	-.258	.375

**. The mean difference is significant at the 0.05 level. Source: Research Survey*

4.7 FACTOR ANALYSIS & RELIABILITY OF STUDY CONSTRUCTS

4.7.1. Factor Analysis

Exploratory factor analysis was first practically utilized by Spearman (1904). Eventually, it became a preferred tool in the evaluation of theories and validation of measurement instruments (Haig, 2014; Izquierdo et al., 2014). Factor analysis is based on the rudimentary assumption that for an aggregation of observed variables there are a set of underlying variables called factors (smaller than the observed variables), that can explain the interrelationships among those variables. SPSS 23.0 was used for factor analysis. Factor analysis was applied to all 8 constructs in the research instrument. The sampling adequacy was checked using the Kaiser- Meyer-Olkin (KMO) measure of sampling adequacy. All the values were above the acceptable threshold. Satisfaction had the highest KMO-measure of sampling adequacy of 0.935 followed by cognitive dissonance with a value of 0.934.

4.7.2 Reliability Analysis of Study Constructs

The present study uses Covariance based Structural Equation Modeling (CB-SEM) for the testing of study hypotheses. SEM consists of two sub-models: the measurement model and the structural model (Byrne, 2010). The relations between the latent variables i.e., trust, product involvement, perceived risks, choice difficulty, cognitive dissonance, satisfaction, repurchase intention, and e-WOM and their observed measures which can be referred to in section 3.11 are assessed and analyzed using the measurement model. On the other hand, a structural model depicts the links between the latent variables i.e., trust, product involvement, perceived risks, choice difficulty, cognitive dissonance, satisfaction, repurchase intention, and e-WOM (Byrne, 2010,) and is used to check the hypothesized relationships.

The measurement model in CB-SEM involves testing for reliability and validity. The reliability of the study constructs is measured by Cronbach's alpha and composite reliability.

4.7.2.1 Cronbach's alpha

The internal consistency or reliability of the constructs was measured using Cronbach's alpha. A research instrument is considered to be reliable based on the extent to which it is consistently able to measure the study concept. Cronbach's alpha is one way of measuring the strength of that consistency. The Cronbach's alpha value ranges from 0 to 1. A higher α coefficient indicates that majority of the items are covariant and a possible redundancy in measuring the concepts. The Cronbach's alpha for all the constructs was above 0.7 which is considered good and acceptable (Nunnally, 1978; Hair et al, 2016).

4.7.2.2 Composite Reliability

Composite reliability is an indicator of the shared variance among the observed variables used as an indicator of an underlying construct (Fornell & Larcker, 1981). Composite reliability values are calculated for each of the study constructs and compared with the cut-off value of 0.6 (Bagozzi and Yi, 1988). Higher composite reliability values is an indication that all measures consistently represent the same latent variable (Fornell and Larcker, 1981; Hair et al., 2009). In the present study, all the constructs have a composite reliability value greater than the acceptable cut-off value of 0.6, indicating that the measurement scales have adequate internal consistency and reliability. The construct of satisfaction had the highest composite reliability with a value of 0.974 followed by repurchase intention with a value of 0.953.

4.7.3 Factor Loading and Sampling Adequacy

The KMO measure of sampling adequacy and Bartlett's test of sphericity were conducted to measure sampling adequacy and suitability of data for factor analysis. The KMO test is also conducted to measure the construct validity and to demonstrate the existence of latent factors.

SPSS 23 was used to determine the factor validity of the study constructs. The KMO measure of sampling adequacy values ranged from 0.7 to 0.9 for all the constructs, which indicates the suitability of the data for factor analysis (Hutcheson, 1999). PCA (Principal

Component Analysis) was implemented with varimax rotation to identify the latent factors across the 63 items. The factor loadings for all the items were above the acceptable value of 0.4 (Malhotra, 2004). Bartlett's test of sphericity was significant with $p<0.05$ across all the constructs which indicated the suitability of factor analysis (Hair et al. 1998).

4.7.4 Product Involvement

i. Reliability

Product involvement was measured using a scale of 6 items. The Cronbach's alpha was 0.849 which is well above the acceptable threshold of 0.7 (Nunnally, 1978; Hair et al, 2016). The composite reliability (CR) value was 0.902 which is again above 0.7 (Fornell & Larcker, 1981) indicating that the constructs exhibit sufficient internal consistency and reliability.

ii. Factor Analysis

The KMO value and Bartlett's test of sphericity values are given in table 4.30.

Table 4.30: KMO Measure of Sampling Adequacy & Bartlett's Test of Sphericity for Product Involvement

KMO		**0.921**
Bartlett's Test of Sphericity	Approx. Chi-Square	4521.378
	df	15
	Sig.	0.00
% of Total Variance Explained		81.719

Source: Research Survey

The KMO measure of sampling adequacy value was above the acceptable threshold of 0.7 for the construct product involvement, which indicates the suitability of the data for factor

analysis (Hutcheson, 1999). Bartlett's test of sphericity was significant with $p<0.05$ which indicated the suitability of factor analysis (Hair et al. 1998).

The factor loadings mentioned in table 4.31, were above the acceptable value of 0.4 for all items (Malhotra, 2004), indicating that the data is suitable for further analysis like Structural Equation Modeling (SEM). All the factors put together were able to explain 81.179 percent of the variance. The value is above 50 percent and acceptable (Hair et al., 2016).

Table 4.31: Factor Analysis Results of Product Involvement

Construct	Items	Factor Loadings
Product Involvement	PINV1	.922
	PINV2	.919
	PINV3	.917
	PINV4	.915
	PINV5	.897
	PINV6	.852

Source: Research Survey

4.7.5 Trust

i. Reliability

Trust was measured using a scale of 5 items. The Cronbach's alpha was 0.860 which is well above the acceptable threshold of 0.7 (Nunnally, 1978; Hair et al., 2016). The composite reliability (CR) value was 0.892 which is again above the acceptable threshold of 0.7 (Fornell & Larcker, 1981). This indicates that the constructs exhibit sufficient internal consistency and reliability.

ii. Factor Analysis

The KMO measure of sampling adequacy value of trust was 0.844 which is above the acceptable threshold of 0.7. This indicates the suitability of the data for factor analysis (Hutcheson, 1999). The KMO value and Bartlett's test of sphericity values are given in table 4.32. Bartlett's test of sphericity was significant with $p<0.05$ which indicated the suitability of factor analysis (Hair et al. 1998).

Table 4.32: KMO Measure of Sampling Adequacy and Bartlett's Test of Sphericity for Trust

KMO		**0.844**
Bartlett's Test of Sphericity	Approx. Chi-Square	1420.916
	df	10
	Sig.	0.00
% of Total Variance Explained		65.176

Source: Research Survey

The factor loadings mentioned in table 4.33, were above the acceptable value of 0.4 for all items (Malhotra, 2004), indicating that the data is suitable for further analysis like Structural Equation Modeling (SEM).

Table 4.33: Factor Analysis Results of Trust

Construct	**Items**	**Factor Loadings**
Trust	TR1	.851
	TR2	.829
	TR3	.797
	TR4	.793
	TR5	.763

Source: Research Survey

All the factors put together were able to explain 65.176 percent of the variance. The value is above 50 percent and acceptable (Hair et al., 2016).

4.7.6 Perceived Risks

i. Reliability

Perceived risks were measured using a scale of 9 items. The Cronbach's alpha was 0.860 which is well above the acceptable threshold of 0.7 (Nunnally, 1978; Hair et al., 2016). The composite reliability (CR) value was 0.953 which is again above the acceptable threshold of 0.7 (Fornell & Larcker, 1981). This indicates that the constructs exhibit sufficient internal consistency and reliability.

ii. Factor Analysis

The KMO measure of sampling adequacy value of trust was 0.859 which is above the acceptable threshold of 0.7. This indicates the suitability of the data for factor analysis (Hutcheson, 1999). The KMO value and Bartlett's test of sphericity values are given in table 4.34.

Table 4.34: KMO Measure of Sampling Adequacy and Bartlett's Test of Sphericity for Perceived Risks

KMO		**0.859**
Bartlett's Test of Sphericity	Approx. Chi-Square	2759.499
	Df	36
	Sig.	0.00
% of Total Variance Explained		63.788

Source: Research Survey

Bartlett's test of sphericity was significant with $p<0.05$ which indicated the suitability of factor analysis (Hair et al., 1998).

The factor loadings mentioned in table 4.35, were above the acceptable value of 0.4 for all the items (Malhotra, 2004), indicating that the data is suitable for further analysis like Structural Equation Modeling (SEM). All the factors put together were able to explain 63.78 percent of the variance. The value is above 50 percent and acceptable (Hair et al., 2016).

Table 4.35: Factor Analysis Results of Perceived Risks

Construct	Items	Factor Loadings
Perceived Risks	PR1	.738
	PR2	.723
	PR3	.721
	PR4	.706
	PR5	.684
	PR6	.679
	PR7	.670
	PR8	.649
	PR9	.627

Source: Research Survey

4.7.7 Choice Difficulty

i. Reliability

The choice difficulty was measured using a scale of 4 items. The Cronbach's alpha was 0.821 which is well above the acceptable threshold of 0.7 (Nunnally, 1978; Hair et al., 2016). The composite reliability (CR) value was 0.897 which is again above the acceptable threshold of 0.7 (Fornell & Larcker, 1981). This indicates that the constructs exhibit sufficient internal consistency and reliability.

ii. Factor Analysis

The KMO measure of sampling adequacy value of trust was 0.757 which is above the acceptable threshold of 0.7. This indicates the suitability of the data for factor analysis (Hutcheson, 1999). The KMO value and Bartlett's test of sphericity values are given in table 4.36. Bartlett's test of sphericity was significant with $p<0.05$ which indicated the suitability of factor analysis (Hair et al. 1998).

Table 4.36: KMO Measure of Sampling Adequacy and Bartlett's Test of Sphericity for Choice Difficulty

KMO		**0.757**
Bartlett's Test of Sphericity	Approx. Chi-Square	1042.840
	Df	6
	Sig.	0.00
% of Total Variance Explained		65.147

Source: Research Survey

The factor loadings mentioned in table 4.37, were above the acceptable value of 0.4 for all the items(Malhotra, 2004).

Table 4.37: Factor Analysis Results of Choice Difficulty

Construct	**Items**	**Factor Loadings**
Choice Difficulty	CHD1	.838
	CHD2	.826
	CHD3	.801
	CHD4	.761

Source: Research Survey

This indicates that the data is suitable for further analysis like Structural Equation Modeling (SEM). All the factors put together were able to explain 65.147 percent of the variance. The value is above 50 percent and acceptable (Hair et al., 2016).

4.7.8 Cognitive Dissonance

i. Reliability

Cognitive dissonance was measured using a scale of 9 items. The Cronbach's alpha was 0.945 which is well above the acceptable threshold of 0.7 (Nunnally, 1978; Hair et al., 2016). The composite reliability (CR) value was 0.953 which is again above the acceptable threshold of 0.7 (Fornell & Larcker, 1981). This indicates that the constructs exhibit sufficient internal consistency and reliability.

ii. Factor Analysis

The KMO measure of sampling adequacy of cognitive dissonance was 0.934 which is above the acceptable threshold of 0.7. This indicates the suitability of the data for factor analysis (Hutcheson, 1999). The KMO value and Bartlett's test of sphericity values are given in table 4.38. Bartlett's test of sphericity was significant with $p<0.05$ which indicated the suitability of factor analysis (Hair et al. 1998).

Table 4.38: KMO Measure of Sampling Adequacy and Bartlett's Test of Sphericity for Cognitive Dissonance

KMO		**0.934**
Bartlett's Test of Sphericity	Approx. Chi-Square	8420.457
	df	36
	Sig.	0.00
% of Total Variance Explained		80.694

Source: Research Survey

The factor loadings mentioned in table 4.39, were above the acceptable value of 0.4 for all the items (Malhotra, 2004), indicating that the data is suitable for further analysis like Structural Equation Modeling (SEM). All the factors put together were able to explain 80.694 percent of the variance. The value is above 50 percent and acceptable (Hair et al., 2016).

Table 4.39: Factor Analysis Results of Cognitive Dissonance

Construct	Items	Factor Loadings
Cognitive Dissonance	CDE1	.918
	CDE2	.917
	CDE3	.913
	CDE4	.904
	CDW1	.894
	CDW2	.893
	CDW3	.892
	CDC1	.883
	CDC2	.869

Source: Research Survey

4.7.9 Satisfaction

i. Reliability

Satisfaction was measured using a scale of 6 items. The Cronbach's alpha was 0.959 which is well above the acceptable threshold of 0.7 (Nunnally, 1978; Hair et al., 2016). The composite reliability (CR) value was 0.974 which is again above the acceptable threshold of 0.7 (Fornell & Larcker, 1981). This indicates that the constructs exhibit sufficient internal consistency and reliability.

ii. Factor Analysis

The KMO measure of sampling adequacy of satisfaction was 0.935 which is above the acceptable threshold of 0.7. This indicates the suitability of the data for factor analysis (Hutcheson, 1999). The KMO value and Bartlett's test of sphericity values are given in table 4.40. Bartlett's test of sphericity was significant with $p<0.05$ which indicated the suitability of factor analysis (Hair et al., 1998).

Table 4.40: KMO Measure of Sampling Adequacy and Bartlett's Test of Sphericity, for Satisfaction

KMO		**.935**
Bartlett's Test of Sphericity	Approx. Chi-Square	5963.129
	df	15
	Sig.	0.00
% of Total Variance Explained		88.304

Source: Research Survey

The factor loadings have been mentioned in table 4.41, the factor loadings for all the items were above the acceptable value of 0.4 (Malhotra, 2004), indicating that the data is suitable for further analysis like Structural Equation Modeling (SEM). All the factors put together were able to explain 88.304 percent of the variance. The value is above 50 percent and acceptable (Hair et al., 2016).

Table 4.41: Factor Analysis Results of Satisfaction

Construct	**Items**	**Factor Loadings**
Satisfaction	SAT1	.950
	SAT2	.947

Construct	Items	Factor Loadings
	SAT3	.944
	SAT4	.940
	SAT5	.936
	SAT6	.922

Source: Research Survey

4.7.10 Repurchase Intention

i. Reliability

Repurchase intention was measured using a scale of 4 items. The Cronbach's alpha was 0.928 which is well above the acceptable threshold of 0.7 (Nunnally, 1978; Hair et al., 2016). The composite reliability (CR) value was 0.938 which is again above the acceptable threshold of 0.7 (Fornell & Larcker, 1981). This indicates that the constructs exhibit sufficient internal consistency and reliability.

ii. Factor Analysis

The KMO value and Bartlett's test of sphericity values are given in table 4.42.

Table 4.42: KMO Measure of Sampling Adequacy and Bartlett's Test of Sphericity, for Repurchase Intention

KMO		.838
Bartlett's Test of Sphericity	Approx. Chi-Square	2551.231
	Df	6
	Sig.	0.00
% of Total Variance Explained		82.516

Source: Research Survey

The KMO measure of sampling adequacy of repurchase intention was 0.838 which is above the acceptable threshold of 0.7. This indicates the suitability of the data for factor analysis (Hutcheson, 1999).. Bartlett's test of sphericity was significant with $p<0.05$ which indicated the suitability of factor analysis (Hair et al. 1998).

The factor loadings mentioned in table 4.43, were above the acceptable value of 0.4 for all the items (Malhotra, 2004), indicating that the data is suitable for further analysis like Structural Equation Modeling (SEM). All the factors put together were able to explain 88.304 percent of the variance. The value is above 50 percent and acceptable (Hair et al., 2016).

Table 4.43: Factor Loadings for Repurchase Intention

Construct	Items	Factor Loadings
Repurchase Intention	RI1	.940
	RI2	.937
	RI3	.925
	RI4	.827

Source: Research Survey

4.7.11 e-WOM

i. Reliability

e-WOM was measured using a scale of 6 items. The Cronbach's alpha was 0.485 initially which was not above the acceptable threshold of 0.7 (Nunnally, 1978; Hair et al., 2016).

During the calculation, the output indicated that Cronbach's alpha will improve on the deletion of the 6th item which read "I am proud to say to others that I am this company's customer". Hence the 6th item was deleted to obtain a Cronbach's alpha of 0.715.

The composite reliability (CR) value was 0.938 which is again above the acceptable threshold of 0.7 (Fornell & Larcker, 1981). This indicates that the constructs exhibit sufficient internal consistency and reliability.

ii. Factor Analysis

The KMO measure of sampling adequacy value of e-WOM was 0.732 which is above the acceptable threshold of 0.7. This indicates the suitability of the data for factor analysis (Hutcheson, 1999). The KMO value and Bartlett's test of sphericity values are given in table 4.44. Bartlett's test of sphericity was significant with $p<0.05$ which indicated the suitability of factor analysis (Hair et al. 1998).

Table 4.44: KMO Measure of Sampling Adequacy and Bartlett's Test of Sphericity for e-WOM

KMO		**.732**
Bartlett's Test of Sphericity	Approx. Chi-Square	3841.101
	Df	15
	Sig.	0.00
% of Total Variance Explained		87.997

Source: Research Survey

The factor loadings mentioned in table 4.45, were above the acceptable value of 0.4 for all the items (Malhotra, 2004). The data is suitable for further analysis like Structural Equation Modeling (SEM). All the factors put together were able to explain 87.997 percent of the variance. The value is above 50 percent and acceptable (Hair, et al., 2016).

Table 4.45: Factor Loadings of e-WOM

Construct	Items	Factor Loadings
e-WOM	e-WOM1	.930
	e-WOM2	.928
	e-WOM3	.922
	e-WOM4	.908
	e-WOM5	.968

Source: Research Survey

4.7.12 Reliability Analysis Summary

A summary of all the reliability measures used for testing the internal consistency of the research instrument is shared in table 4.46. The cronbach alpha values were in the range of 0.715-0.959 and the CR values varied from 0.892 to 0.974. All the values are above the acceptable threshold indicating that the research instrument has adequate internal consistency and reliability.

Table 4.46: Reliability Analysis - Study Constructs

Sl. No	Study Constructs	No.of Items	Cronbach's alpha	CR
1.	Product Involvement	6	0.849	0.902
2.	Trust	5	0.860	0.892
3.	Cognitive dissonance	9	0.945	0.953
4.	Perceived risks	9	0.860	0.953
5.	Choice difficulty	4	0.821	0.897
6.	Repurchase intention	4	0.928	0.953
7.	Satisfaction	6	0.959	0.974
8.	e-WOM	5	0.715	0.913

Source: Research Survey

4.8 VALIDITY TEST OF STUDY CONSTRUCTS

Measuring what is intended to be measured is construct validity (Field, 2005). Validity is measured using different methods like measuring face or content validity, convergent validity, and discriminant validity. Content validity is generally used in developing a new instrument, to include all items that are essential and eliminate undesirable items (Lewis, Snyder, & Rainer Jr, 1995). However, for the present study, the content validity is not measured as all the items to measure the study constructs are from pre-validated scales. Convergent and discriminant validity are used to assess the validity of the research instrument.

4.8.1 Convergent Validity

Convergent validity involves considering two measures that are supposed to be measuring the same construct and show that they are related. Strong correlations between a set of measures representing a given construct indicates that they adequately capture it (Carlson & Herdman,2010)

Table 4.47 provides the AVE values for the study variables.

Table 4.47: AVE Values of the Study Constructs

Study Constructs	PINV	TR	PR	CHD	CD	RI	SAT	e-WOM
AVE Values	0.515	0.559	0.582	0.533	0.645	0.769	0.796	0.553

Source: Research Survey

PINV: Involvement, TR: Trust, PR: Perceived risks, CHD: Choice Difficulty, CD:Cognitive dissonance, SAT: Satisfaction, RI: Repurchase Intention, e-WOM: Electronic Word of Mouth

The extent to which each measurement item was related to its theoretical construct was assessed using convergent validity. A scale is said to have convergent validity if its underlying construct explains more than half of its variance, i.e., the mean of the squared multiple correlations should be at least 0.50 (Fornell & Larcker,1981). As all the AVE

(Average Variance Extracted) values for the present study are above the acceptable threshold of 0.5 (Hair, et al., 2010) the constructs do exhibit convergent validity

4.8.2 Discriminant Validity

Discriminant validity indicates the extent to which the items of a construct are different from those of other constructs. The goal of discriminant validity is to ensure one can discriminate dissimilar constructs. In the present study, we are using the cross-loading indicator method and Fornell & Larcker criterion (Fornell & Larcker,1981). In this method, the square root of the Average Variance Extracted (AVE) is compared to the correlation of the latent constructs. It is expected that the latent construct explains the variance of its own indicators rather than the variance of the other latent constructs.

In the given table 4.48, it is evident that AVE values across the diagonal are greater than the squared latent variable correlations which indicate that the assumption of discriminant validity is supported

Table 4.48: Discriminant Validity Test (Fornell-Larcker Criteria)

Study Constructs	PINV	TR	PR	CHD	CD	RI	SAT	e-WOM
PINV	**0.718**							
TR	0.512	**0.748**						
PR	0.394	-0.398	**0.763**					
CHD	-0.359	-0.352	-0.359	**0.730**				
CD	0.119	-0.003	-0.029	0.048	**0.803**			
RI	0.021	0.029	0.165	0.04	-0.376	**0.877**		
SAT	0.095	0.048	0.107	0.029	-0.395	0.678	**0.892**	
e-WOM	0.114	0.099	0.077	-0.037	0.298	0.699	0.702	**0.744**

Source: Research Survey
Note: The bold diagonal values are the square root of AVE values. Correlations between the constructs are below the diagonal.

4.9 STRUCTURAL EQUATION MODELING (SEM)

The use of structural equation modeling across various branches of management has considerably increased (Chin, et al., 2008; Hair & Sarstedt, 2011). Covariance-based SEM was used to understand the multivariate relationships in the study. This is ideal for theory testing and studies involving reflective measures.

SEM is composed of two sub-models which are the measurement model and the structural model (Byrne, 2010). A measurement model is mainly used to assess the construct's validity and reliability, whereas the structural model is used to check the hypothesized relationships (Byrne, 2010). A measurement model also describes the links between the latent variables and observed measures. Analysis of Moment Structures 23 (AMOS 23) was used to perform structural Equation Modeling.

4.9.1 Measurement Model: Confirmatory Factor Analysis

Measurement and confirmatory factor analysis models are generally used to eliminate errors, making estimated relationships among latent variables less contaminated by measurement error. Confirmatory factor analysis is a statistical technique that confirms if the number of factors (or constructs) and the loadings of observed (indicator) variables on them conform to what is expected based on theory (Malhotra et al., 2007). CFA mainly contributes to determining the scale validation and confirming the multidimensionality of the theoretical construct (Byrne, 2010). According to Anderson and Gerbin (1988), assessment and refinement of confirmatory measurement models is prerequisite to testing structural equation models. Each construct in the model must be examined individually within a range of model classification levels until it fits the model. Subsequently,all constructs should be collectively examined to create a statistically significant and adequate model.

In CFA standardized factor loadings of each indicator are availed. The standardized loading factor (regression weight) indicates the contribution of each indicator to the respective

variable. Acceptable standardized factor loading is 0.5 and ideally 0.7 or higher Hair et al., (2006). Unlike EFA, CFA is dependent on not just factor loadings but also fitness indices.

Then, the commonly used Goodness-of-Fit (GOF) tests are chi-square, the Minimum Sample Discrepancy Function divided by df (CMIN/df), Comparative Fit Index (CFI), Goodness of Fit Index (GFI), Normed Fit Index (NFI), and Tucker Lewis Index (TLI) (Hair et al., 2014).

Chi-squared test (χ^2)

The chi-squared test ($\chi 2$) specifies the difference between observed and anticipated covariance matrices. The alternate hypotheses are proposed to indicate if there is a variance between the proposed model and the data structure (Gunzler & Morris, 2015). The smaller the difference, the better is the fit and vice versa.

Normed Fit Index (NFI)

The Normed Fit Index (NFI) also known as Bentler-Bonett Normed Fit Index, is used to scrutinize incongruity between the chi-squared value of the proposed model and the chi-squared value of the null model.

NFI values greater than or equal to 0.95 are considered to be very good, the values between 0.9 and 0.95 are considered to be good, whereas values between 0.8 and 0.9 are considered to be suffering, and values are considered to be bad if less than 0.8 (Portela,2012).

Root Mean Square Error of Approximation (RMSEA)

RMSEA considered to be one of the most edifying fit indices was developed by Steiger and Lind (1980). Due to its sensitivity to the number of estimated parameters in the model it is considered to be one of the most informative fit indices (Diamantopoulos & Siguaw, 2000). Based on consensus an RMSEA value less than 0.06 is considered to be more acceptable (Hu & Bentler, 1999).

Comparative Fit Index (CFI)

Unlike the RMSEA which is an absolute fit index, CFI is an incremental index used to compare a hypothesized model and a baseline model (model with the worst fit) on fit. According to Bentler (1990), CFI measures the relative improvement in fit starting from the baseline model to the postulated model. As CFI is a normed fit index, ranging from 0 to 1 with 0.95 being considered a threshold for good fit (Hu & Bentler, 1999)

Tucker-Lewis Index (TLI)

The TLI was proposed by Tucker and Lewis (1973) mainly for exploratory factor analysis. Bentler and Bonnett (1980) later extended it to covariance structure analysis and labeled it as the non-normed fit index. The TFI values over 0.90 are considered acceptable (Hu & Bentler, 1999).

GFI (Goodness of Fit Index)

The goodness of fit index provides for perfect fit and estimation using the maximum likelihood method. GFI value of 1 or a value very close to 1 is considered to be a good fit for the model. A GFI value of 0.90 is assumed to be an acceptable cut-off. There is consensus among several researchers that a GFI value closer to 1 is indicative of an acceptable fit (Hu and Bentler 1999; Hwang and Takane 2014; McDonald and Ho 2002).

Based on CFA it is observed that the values of the factor loadings in Table 4.57 are significant ($p<0.001$) and well above the acceptable threshold of 0.5 and hence we can proceed with the path model to test the relationship between the variables.

4.9.1.1 CFA for Trust

CFA for all trust indicators is exhibited in the figure 4.4. The factor loadings were in the range of 0.68 -0.81 above the acceptable threshold of 0.5 (Awang, 2014; Hair et al., 2006).

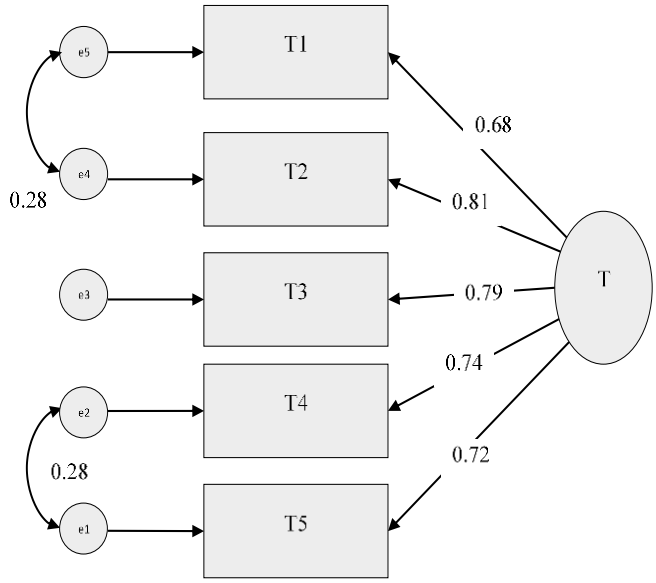


Figure 4.4: CFA loadings for Trust

The second item has the highest factor loading of 0.81. The indices that have been considered for assessing model fit are CMIN/DF (Chi-square/degree of freedom), RMSEA (Root Mean Square Error Approximation), CFI (Comparative Fit Index), and GFI (Goodness of Fit). The cutoff value for CMIN/DF is 5 and the RMSEA value should be less than 0.05 and a GFI value above 0.9 is considered an acceptable fit. For the construct of trust the CMIN/DF value was 0.65, with an RMSEA value of 0.00 and GFI value is 0.992 which indicates an acceptable model fit, and the CFI value was 0.98, the NFI value was 0.97 and the TLI value was 0.97.

4.9.1.2 CFA for Product Involvement

Based on the CFA for product involvement in figure 4.5 it is evident that all the factor loadings were above 0.5 and acceptable (Awang, 2014; Hair et al., 2006). The factor loadings were in the range of 0.65 to 0.81.

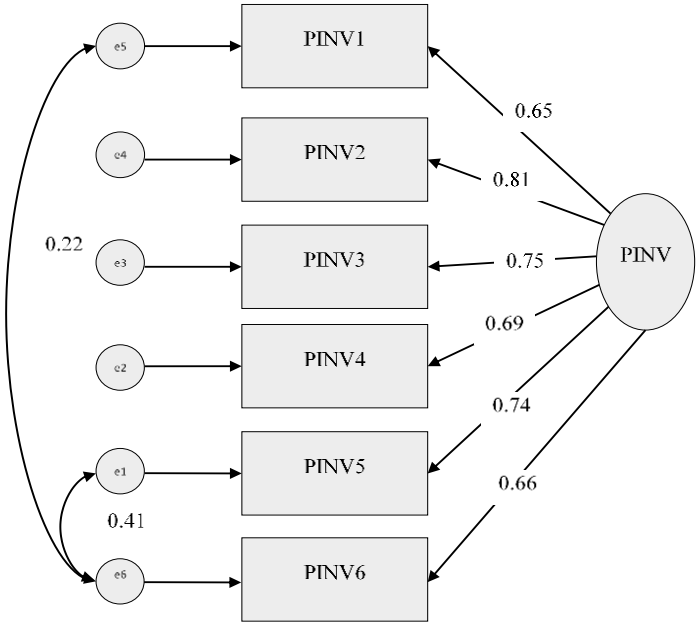


Figure 4.5: CFA loadings for Product Involvement

All the model fit indices were above the acceptable threshold value indicating a good model fit. For the construct of involvement, the CMIN/DF value was 2.022 with an RMSEA value of 0.037 and a GFI value is 0.999 which indicates an acceptable model fit. The CFI value was 0.968, the NFI value was 0.99 and the TLI value was 0.96.

4.9.1.3 Confirmatory Factor Analysis for Choice Difficulty

The factor loadings for choice difficulty were scrutinized using CFA. The factor loadings as seen in figure 4.6 were significant and above the acceptable threshold.

All the model fit indices were above the acceptable threshold value. For the construct of involvement, the CMIN/DF value was 2.9 with an RMSEA value of 0.045, the CFI value was 0.997, the TLI value was 0.97, the NFI value was 0.98 and the GFI value is 0.994 which indicates an acceptable model fit.

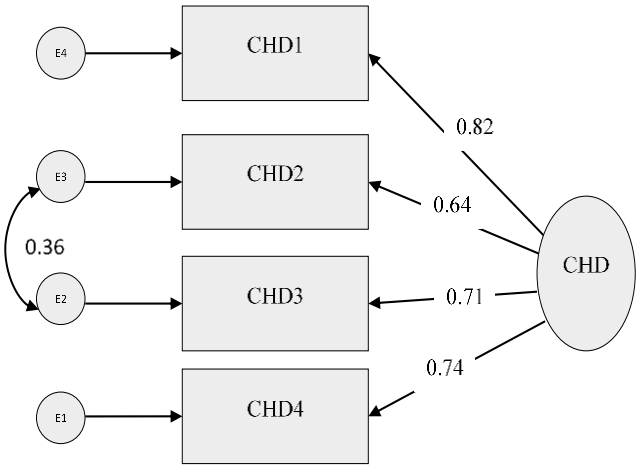


Figure 4.6: CFA Loadings for Choice Difficulty

4.9.1.4 CFA for Perceived Risks

Based on the CFA for perceived risks in figure 4.7, it is evident that all the factor loadings were above 0.5 and acceptable (Awang, 2014; Hair et al., 2006).

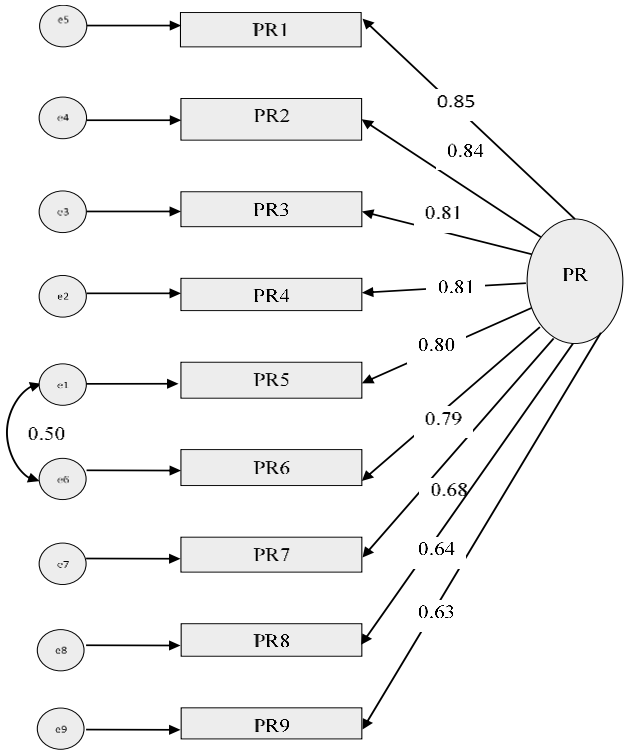


Figure 4.7: CFA Loadings for Perceived Risks

The model fit indices of CMIN/DF was 2.344, RMSEA was 0.043, CFI was 0.992, TLI value was 0.98, NFI value was 0.98 and GFI was 0.989. The fit indices proved that the model had a good fit.

4.9.1.5 CFA for Cognitive Dissonance

Based on figure 4.8 it is evident that all the factor loadings are above 0.5 and acceptable (Awang, 2014; Hair et al., 2006). The model fit indices for cognitive dissonance were as follows, the CMIN/DF value was 2.587, the GFI value was 0.987, CFI was 0.996, the NFI value was 0.99,the TLI value was 0.99 and the RMSEA was 0.047 indicating an acceptable fit.

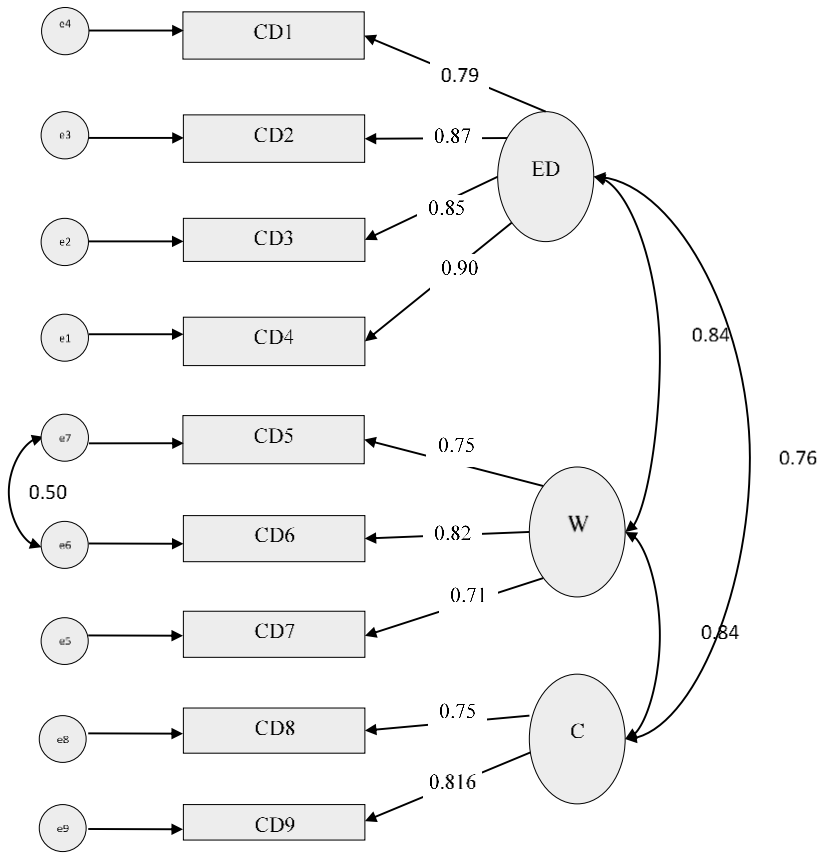


Figure 4.8: CFA loadings for Cognitive Dissonance

4.9.1.6 CFA for Satisfaction

CFA for indicators of satisfaction is exhibited in figure 4.9. The factor loadings were in the range of 0.69 to 0.94 and acceptable (Awang, 2014; Hair et al., 2006).

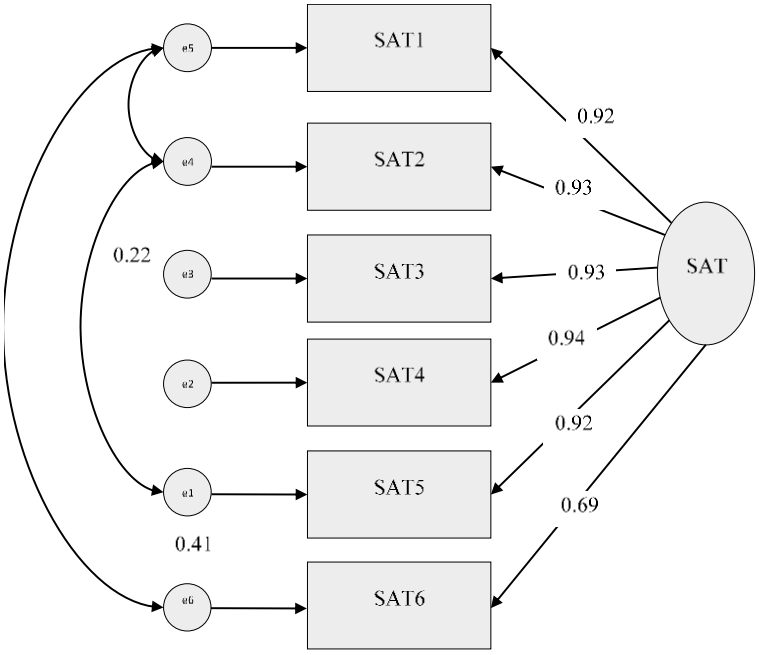


Figure 4.9: CFA loadings for Satisfaction

For the construct of satisfaction, the CMIN/DF value was 2.970 with an RMSEA value of 0.048 TLI value was 0.99, the NFI value was 0.98, the CFI value was 0.998 and the GFI value is 0.993, all the values are above the acceptable threshold indicating a good fit.

4.9.1.7 CFA for Repurchase Intention

The factor loadings for repurchase intention were scrutinized using CFA. The factor loadings as seen in figure 4.10 were significant and above the acceptable threshold. The values ranged from 0.72 to 0.93.

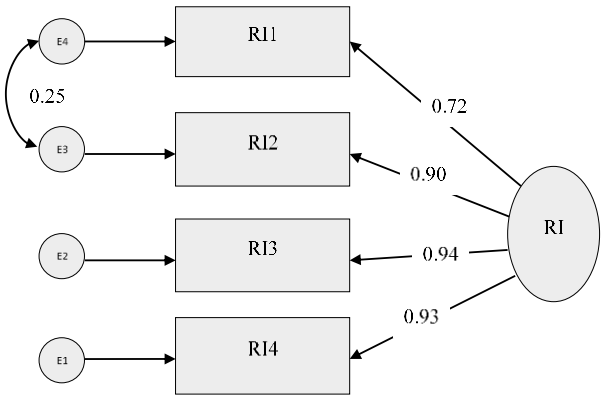


Figure 4.10: CFA loadings for Repurchase Intention

The cutoff value for CMIN/DF is 5 and the RMSEA value should be less than 0.05 and a GFI value above 0.9 is considered an acceptable fit. For the construct of repurchase intention, the CMIN/DF value was 0.03 with an RMSEA value of 0.00, TLI value was 0.99, NFI value was 0.98, CFI value was 0.97 and GFI value is 0.998 which indicates a good model fit.

4.9.1.8 CFA for e-WOM

Based on factor CFA for e-WOM in figure 4.11, it is evident that all the items are significant with factor loadings above the cut-off value of 0.5 (Awang, 2014; Hair et al., 2006). The second item has the highest factor loading of 0.94.

The cutoff value for CMIN/DF is 5 and the RMSEA value should be less than 0.05 and a GFI value above 0.9 is considered an acceptable fit. For the construct of repurchase intention, the CMIN/DF value was 1.164 with an RMSEA value of 0.015, TLI value was 0.98, CFI value was 0.97, NFI value was 0.98 and GFI value is 0.998 which indicates a good model fit.

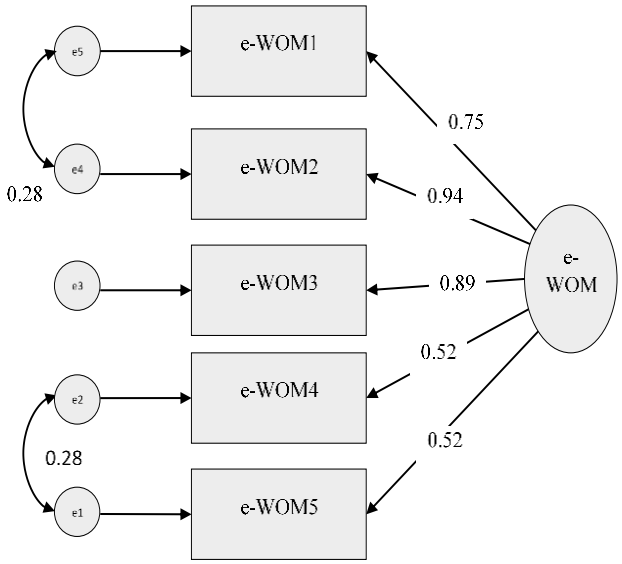


Figure 4.11: CFA loadings for e-WOM

Measurement Model

The relationship between all the study constructs and measurement items is shown in figure 4.12. Correlations are represented by double-headed arrows. Covariance determines only the direction between variables, and it is the measure of correlation. Correlation calculates the strength and direction of linear relationships among two variables. The p-values associated with all constructs i.e. product involvement, trust, perceived risks, choice difficulty, cognitive dissonance, repurchase intention, satisfaction and e-WOM were below 0.01, indicating that they are significant (Byrne, 2010).

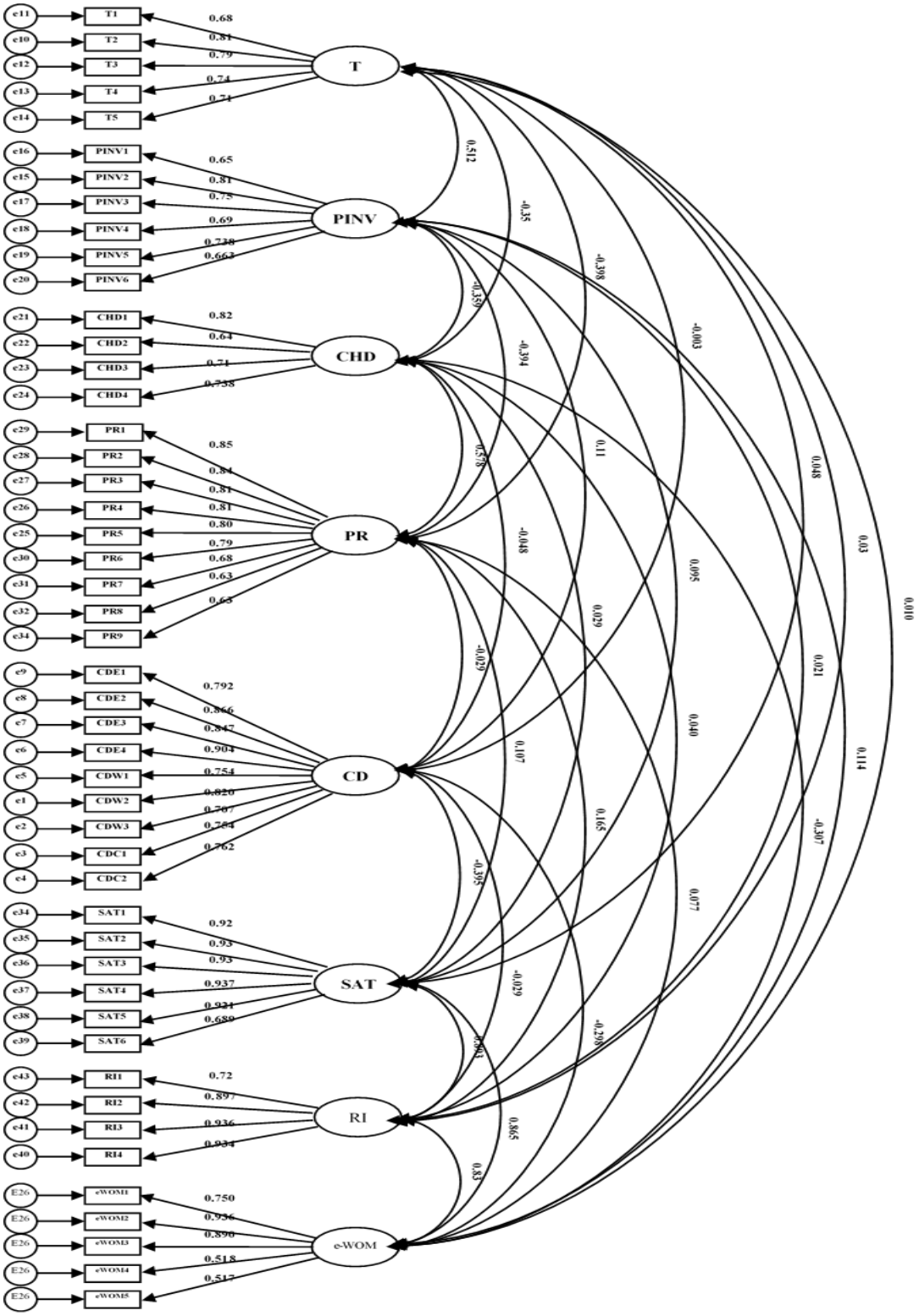


Figure 4.12: Measurement Model

The model fit measures for the measurement model as seen in table 4.49 are well within the acceptable threshold

Table 4.49: Factor Loadings from CFA (Measurement Model)

Constructs	Items	Factor Loadings
Product Involvement	PINV1	.647
	PINV2	.810
	PINV3	.747
	PINV4	.688
	PINV5	.738
	PINV6	.663
Trust	T1	.677
	T2	.810
	T3	.787
	T4	.741
	T5	.717
Perceived Risks	PR1	.849
	PR2	.841
	PR3	.810
	PR4	.806
	PR5	.796
	PR6	.786
	PR7	.680
	PR8	.635
	PR9	.625
Choice Difficulty	CHD1	.819
	CHD2	.641
	CHD3	.712
	CHD4	.738
Cognitive Dissonance	CDE1	.792
	CDE2	.866
	CDE3	.847
	CDE4	.904
	CDW1	.754

Constructs	Items	Factor Loadings
Cognitive Dissonance	CDW2	.762
	CDW3	.707
	CDC1	.754
	CDC2	.762
Satisfaction	SAT1	.919
	SAT2	.929
	SAT3	.931
	SAT4	.937
	SAT5	.921
	SAT6	.689
Repurchase Intention	RI1	.723
	RI2	.897
	RI3	.936
	RI4	.934
e-WOM	e-WOM1	.750
	e-WOM2	.936
	e-WOM3	.890
	e-WOM4	.518
	e-WOM5	.517

Source: Research Survey

The goodness of fit measures for measurement model are given in the table 4.50.The CMIN/DF value is < 3 and hence can be considered acceptable. Similarly, the GFI, AGFI, NFI, CFI, and IFI values are >0.90 indicating a good fit. The RMSEA value is just below the acceptable threshold of 0.05. The TLI is 0.96 indicating a good fit. The regression weights of the CFA model suggest the fulfillment of minimum criteria for accepting or rejecting observed variables considered for further statistical analysis.

Table 4.50: Fit Measures for CFA

Fit Indices	Calculated Value	Criteria for a good model fit
CMIN/DF	2.496	Acceptable as the value is <3 (Kline, 1998)
The goodness of Fit Index(GFI)	0.906	>0.8
Adjusted Goodness of Fit Index (AGFI)	0.903	≥0.90
Normed Fit Index (NFI)	0.907	≥0.90
Incremental Fit Index (IFI)	0.919	≥0.90
Non-Normed Fit Index (NNFI) or TLI	0.961	≥0.95(Hu & Bentler, 1999)
Comparative Fit Index (CFI)	0.919	≥0.90 (Hu & Bentler, 1999)
Root Mean Square Error of Approximation	0.049	≤0.05 (Hu & Bentler, 1999)

Source: Research Survey

As all the parameters and fit indices for all the constructs were above the acceptable threshold (Hair et al., 2013), the model is fit for further advanced analysis like Structural Equation Modeling (SEM)

4.9.2 Common Method Bias

Respondents may not apply their complete cognitive effort while answering long structured questionnaires, which can lead to common method Bias. Usually, CMV(Common Method Variance) is used to identify if Common Method Bias exists. Common Method Variance (CMV) is most often seen in contexts of the common scaling approach from a single source of data (Fuller et al, 2016) for example long questionnaires used in marketing for cross-sectional studies. Any occurrence of CMV can lead to artificial inflation or deflation of correlations (Conway & Lance, 2010), and it can also impact the reliability and validity of

the data. In the present study to reduce the bias, construct anonymity was maintained(Podsakoff & Organ, 1986). For the present study CMV was calculated by the conventional Harman's single factor test, EFA (Exploratory Factor Analysis). The first factor accounted for 24.39 percent of the variance which is less than the threshold of 50 percent (Podsakoff & Organ, 1986), this indicates that there is no CMV and hence there is no CMB as well.

4.9.3 Collinearity Statistics

The study constructs were assessed for excessive multicollinearity and results are tabulated in table 4.51. VIF (Variance Inflation Factor) and tolerance levels are generally considered to measure the same. Multicollinearity is said to occur when in the regression model several variables are significantly related not only to the dependent variable but also to other independent variables (Young, 2017). Excessive collinearity would challenge the assumption that independent variables are not highly correlated with each other. If VIF is above 10 then it is considered to be a serious cause for concern (Meyers, 1990). The most commonly accepted threshold for tolerance levels is it should be greater than 0.2 and the VIF should be less than 5 (Hair et al., 2014).

Table 4.51: Collinearity Statistics

D →	**INV**	**TR**	**PR**	**CHD**
IV ↓	**VIF**	**VIF**	**VIF**	**VIF**
INV		1.298	1.602	1.629
TR	1.204		1.453	1.510
PR	2.124	2.077		1.319
CHD	1.925	1.925	1.176	

Source: Research Survey

In the present study, the tolerance level across constructs was below 0.2. The VIF values as seen in Table 4.51 range between 1.176 to 2.124 indicating that the values are within

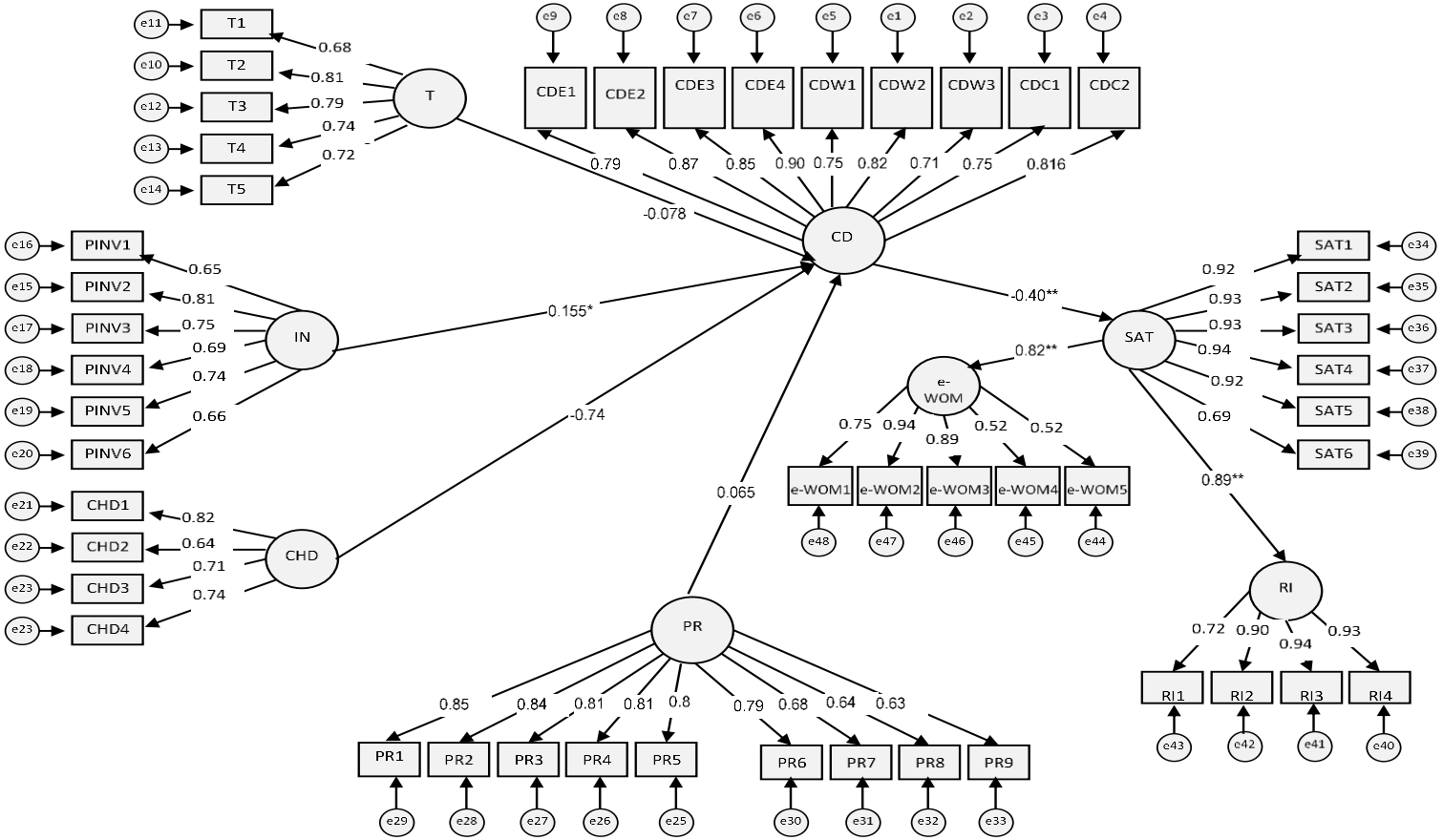
the acceptable threshold which indicates multicollinearity is not a cause of concern in the present study.

4.9.4 Structural Model

After the completion of the measurement model, reliability analysis, and validity analysis, structural equation modeling was used to assess the statistical significance of hypothesized relationships. The SEM model was used to calculate the goodness of fit measures and the strength of relationships between the endogenous and exogenous constructs.

The hypothesized relationships between the constructs of product involvement, trust, perceived risks, choice difficulty, cognitive dissonance, satisfaction, repurchase intention, and e-WOM were tested and shown in figure 4.13. The β coefficients were evaluated that indicated the strength of the relationship. The squared correlation values were used to assess the explanatory power of the model. Fit indices for the structural model ($p = 0.000$, CMIN/DF =2.945, RMSEA = 0.048, GFI = .906, AGFI = .900, NFI = .901, CFI = .902, TLI = .952 and IFI =.902) were all above the acceptable threshold.

The current study tested the research model with a bootstrapping procedure to acquire the path estimates and T values, which were used to test the hypotheses. The stated hypotheses were tested by viewing the significance, signs, and magnitude of the computed coefficients. The hypotheses are accepted if the p value$\leq$ 1 and the critical ratio (C.R) or T values $\geq$ 1.96. The structural model is in the figure.



Source: Research Survey

Figure 4.13: Structural Model 1: Factors Influencing Cognitive Dissonance in Online Shopping and Impact on Satisfaction Leading to Repurchase Intention and e-WOM

Table 4.52: Structural Model: Goodness of Fit

Fit Indices	Calculated Value	Criteria for a good model fit (Cut off Value)
CMIN/DF	2.945	Acceptable as the value is <3
The goodness of Fit Index(GFI)	0.906	>0.8
Adjusted Goodness of Fit Index (AGFI)	0.900	≥0.90
Normed Fit Index (NFI)	0.901	≥0.90
Incremental Fit Index (IFI)	0.902	≥0.90
Non-Normed Fit Index (NNFI) or TLI	0.952	≥0.95
Comparative Fit Index (CFI)	0.902	≥0.90
Root Mean Square Error of Approximation	0.048	≤0.05

Source: Research Survey

4.10 HYPOTHESES TESTING: RESULTS

The hypotheses were tested using Co-Variance-based SEM. Based on the structural modeling, some paths were not significant, and some paths were significant at 99 percent and 95 percent ($p<0.01$ and $p<0.05$). The results of hypotheses testing are shown in table 4.53 in which the β value along with T-value and P-value are mentioned. The path coefficient is denoted by the β value.

Table 4.53: Hypotheses Testing Results

Hypothesis	Path	β Value	T-value	P	Decision
H1: Product involvement positively influences cognitive dissonance in the context of online shopping.	PINV → CD	.155	3.076	.002	Accepted
H2: There is a significant negative relationship between trust and cognitive dissonance in the context of online shopping.	TR → CD	-.078	-1.56	.118	Rejected
H3: Perceived risks positively influence cognitive dissonance in the context of online shopping	PR → CD	.065	0.87	.335	Rejected
H4: Choice difficulty positively influences cognitive dissonance in the context of online shopping.	CHD → CD	-.074	-0.96	.383	Rejected
H5: Cognitive dissonance negatively impacts satisfaction in the context of online shopping.	CD → SAT	-.396	-10.46	***	Accepted
H6:Satisfaction positively impacts repurchase intention in the context of online shopping	SAT → RI	.898	23.06	***	Accepted
H7:Satisfaction positively impacts e-WOM in the context of online shopping	SAT → e-WOM	.814	24.15	***	Accepted

*Source: Research Survey. Note: *= p < 0.05 (95%), **= p < 0.01 (99%)*

The relationship between cognitive dissonance and involvement is significant with a p value<0.05 The path coefficient (β Value) stands at 0.155. The relationship between cognitive dissonance and trust is not significant with a p-value >0.05. The relationship between cognitive dissonance and perceived risks is not significant with a p-value >0.05. The relationship between cognitive dissonance and choice difficulty is not significant with a p-value >0.05. The relationship between cognitive dissonance and satisfaction is highly significant with a p-value <0.05. Cognitive dissonance negatively influenced satisfaction and this was denoted by a β Value of -0.396. The relationship between cognitive dissonance and repurchase intention is highly significant with a p-value <0.05. Cognitive dissonance negatively influenced satisfaction and this was denoted by a β Value of 0.891. The relationship between satisfaction and e-WOM is highly significant with a p-value <0.05. Cognitive dissonance negatively influenced satisfaction and this was denoted by a β Value of 0.824.

4.10.1 Product Involvement and Cognitive Dissonance

H1: Product involvement positively influences cognitive dissonance in the context of online shopping.

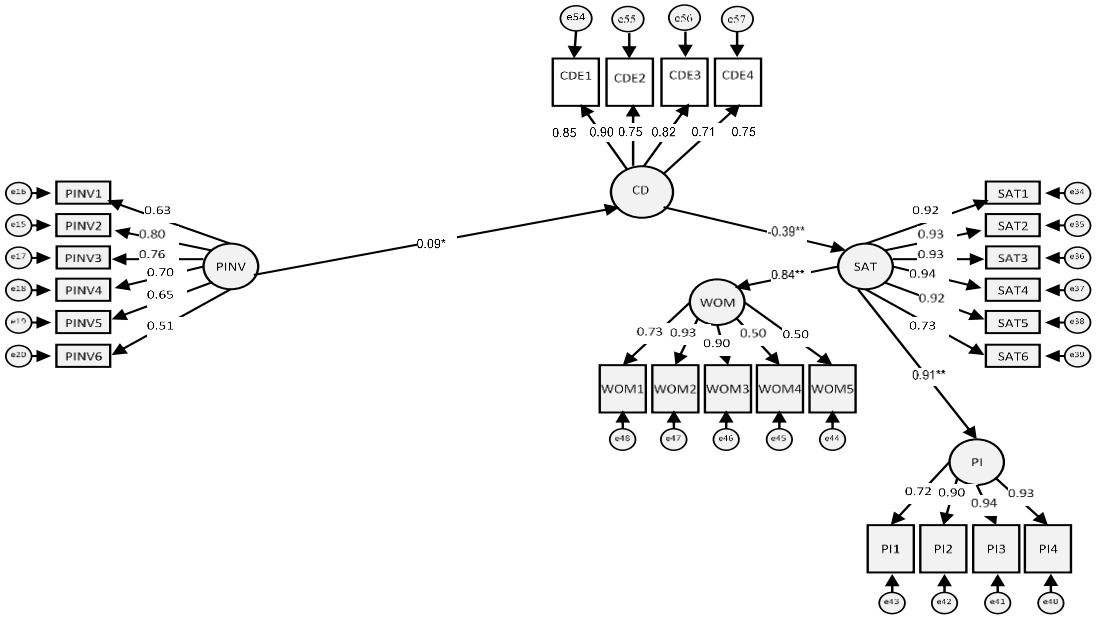
The path between product involvement and cognitive dissonance was found to be highly significant with a p<0.05 level, and a Critical Ratio (C.R or T value) at 3.076. The C.R. value is above the acceptable threshold of 1.96. Hence hypothesis H1 is accepted. Korgaonkar & Moschis (1982) conducted an experimental study based on the purchase of soft drinks and radios which had resulted in similar results. Kim (2011) obtained similar results in the context of purchase of services.

The hypothesis was tested for the Electronics category which consists of both electronic devices & appliances and electronic accessories. Electronic devices & appliances are high-ticket items that are extremely important for generating revenue for the E-tailing organization. Many consumers are still hesitant to purchase large appliances from online shopping portals. The present finding confirms that product involvement positively

influences cognitive dissonance, indicating that product categories of higher involvement may lead to situations of higher cognitive dissonance.

Further to the major findings of the study, an attempt was made to understand the influence of product involvement on the individual dimensions of cognitive dissonance. Models 1a, 1b, and model 1c provide the details of the relationship between product involvements on the individual dimensions of cognitive dissonance.

Fig 4.14 provides the path model for product involvement and the emotional dimension of cognitive dissonance



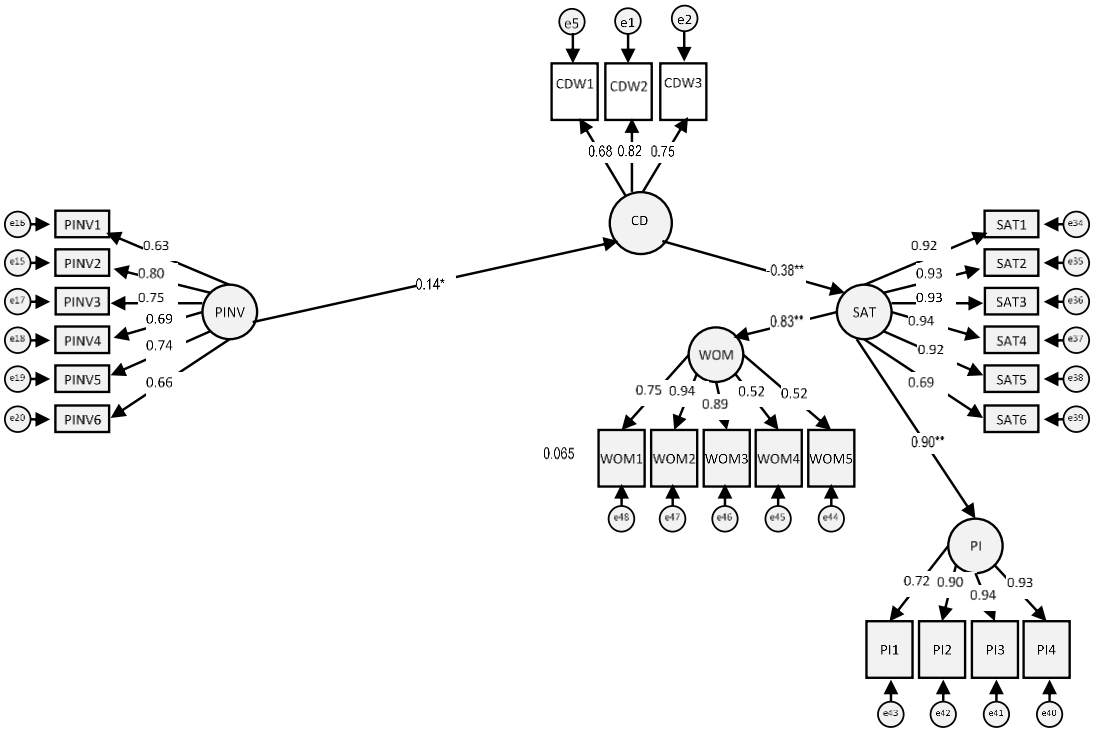
Source: Research Survey

Figure 4.14: Model 1a -Structural Model for the Influence of Product Involvement on Emotional Dimension

The fit indices of CMIN/DF (2.54), NFI (0.935), CFI (0.949), and GFI (0.90) were all above the acceptable threshold. The β value between product involvement and the emotional dimension of cognitive dissonance was 0.09 and the C.R. value was 2.235. This

indicates that product involvement has a positive influence on the emotional dimension of cognitive dissonance, however, the strength of the relationship is not very strong.

Figure 4.15 provides the structural model for exploring the relationship between product involvement and the wisdom of purchase dimension. The fit indices of CMIN/DF (2.7), NFI(0.937), CFI(0.950), and GFI(0.91) were all above the acceptable threshold.

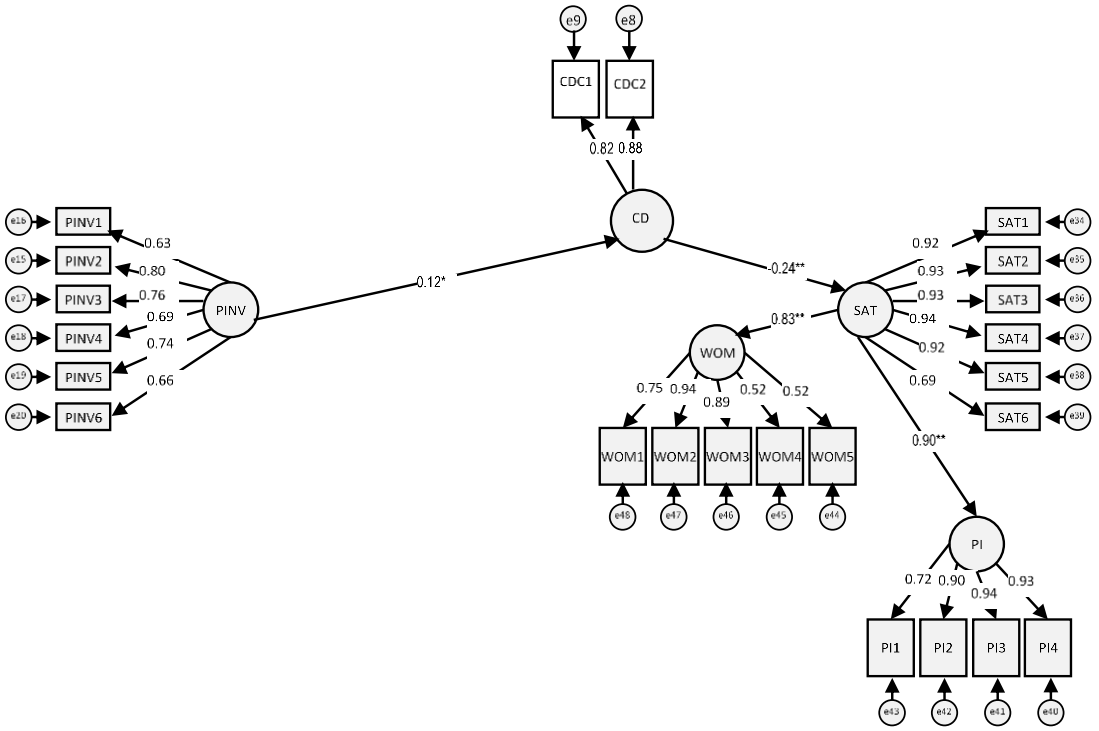


Source: Research Survey

Figure 4.15: Model 1b -Structural Model for the Influence of Product Involvement on Wisdom of Purchase Dimension

The β value between product involvement and wisdom of purchase dimension of cognitive dissonance was 0.14 and the C.R. value was 3.248. This indicates that product involvement had a significant positive influence on the wisdom of purchase dimension and the strength of the relationship was stronger than with the emotional dimension.

Figure 4.16 provides the structural model for the wisdom of purchase dimension. The fit indices of CMIN/DF (2.87), NFI (0.941), CFI (0.935), and GFI (0.90) were all above the acceptable threshold.



Source: Research Survey

Figure 4.16: Model 1c -Structural Model for the Influence of Product Involvement on Concern over the Deal Dimension

The β value between product involvement and concern over the deal dimension of cognitive dissonance was 0.12. Product involvement had a significant positive influence on the concern over the deal dimension.

Based on all the models; Model 1a, Model 1b, and Model 1c it is evident that product involvement had the strongest influence on the wisdom of purchase with the highest β value

of 0.14 followed by concern over the deal dimension which had a β value of 0.12 and emotional dimension which had a β value of 0.09.

Researchers have not focused on the relationship between product involvement and individual dimensions of cognitive dissonance, the present study elaborates on this relationship. Surprisingly, the wisdom of purchase dimension had the strongest relationship with product involvement indicating that a consumer in the context of high involvement purchases is more concerned if he/she has made the right decision regarding the purchase. This indicates that some amount of positive reinforcement regarding their purchase might reduce the cognitive dissonance.

4.10.2 Trust and Cognitive Dissonance

H2: There is a significant negative relationship between trust and cognitive dissonance in the context of online shopping.

The path between trust and cognitive dissonance was not statistically significant, as the P-value >0.05. Hence hypothesis H2 is rejected.

Surprisingly, the present study's findings are not in line with the findings of other studies (Kim, 2011; Sharifi & Esfidani, 2014; Tomar et al., 2020). The study conducted by Kim (2011) was in the context of hotel-motel organizations and the study conducted by Sharifi & Esfidani (2014) was in the retail purchase of Mobiles in Tehran. The study conducted by Tomar et al., (2020) was among both online and offline shoppers who purchased only mobile phones. The present study focused on trust in online shopping, and the online shoppers in the present study purchased electronic products on online shopping portals like Amazon, Flipkart, Paytm, etc, unlike the other studies which were based in different countries and different contexts. The findings in the context of online shopping of electronic products differed from other studies. One of the reasons that can be attributed to this is that in the study conducted by Kim (2011) the service provider had complete control over the final product or service being offered, whereas in the context of online shopping there are multiple stakeholders who come into the picture like E-tailer, the vendors, the

manufacturers. Similarly in the study conducted by Sharifi & Esfidani (2014), the relationship was between cognitive dissonance and trust in the brand of mobiles purchased.

4.10.3 Perceived Risks and Cognitive Dissonance

H3: Perceived risks influences cognitive dissonance in the context of online shopping

The path between perceived risks and cognitive dissonance was not statistically significant as the value of P was greater than 0.05. Hence hypothesis H3 is rejected.

However, as mentioned in the literature review, there have been contradicting views about the influence of perceived risks and cognitive dissonance. The findings of the present study are in line with Koller et al.,(2008) and Khraim, (2020) which were based on the purchases of books (online) and electric vehicles.

These results differ from the findings of Özyörük, (2021); Koller & Salzberger, (2009) which were based on the purchase of products (both offline and online) and services. Koller & Salzberger, (2009) had contradictory results where perceived risks in the pre-purchase phase led to cognitive dissonance in the post-purchase phase, these studies were in the context of travel. Özyörük's, (2021) study was based on consumers who bought from either the offline or online retail channel. None of the studies solely focused on online shopping. The present study did not elicit any relationship between risks perceived by online shoppers like financial risk, product risk, time risk and convenience risks and cognitive dissonance in the online purchase of electronic products.

4.10.4 Choice Difficulty and Cognitive Dissonance

H4: Choice difficulty positively influences cognitive dissonance in the context of online shopping.

The relationship between choice difficulty and cognitive dissonance was not statistically significant as the P value was greater than 0.05. Hence hypothesis H4 is rejected.

The nature of the relationship between choice difficulty and cognitive dissonance differed in different contexts. The present study was a novel attempt to assess the relationship within the online shopping context which is known for its ubiquitous choice.

Most of the studies (Festinger, 1957; Brehm and Cohen 1962; Ivy et al., 1978; Mensaco & Hawkins) based on the relationship between choice difficulty and cognitive dissonance was seminal research. Apart from the seminal studies, not many researchers have explored this relationship. The findings of the seminal research indicate that choice difficulty can lead to cognitive dissonance. The seminal studies were experimental and qualitative in nature.The only study that assessed this relationship in the E-commerce setting was by Yamguchi & Abe (2006).The relationship was not statistically significant and contradictory to the seminal research. The current study differs from the findings of seminal research due to the fact that along with a huge choice, consumers have enough tools like recommendation engines that aid in decision-making. As the majority of online shoppers are in the age group of 18-44, they might be variety seekers and do not mind browsing huge catalogs. This indicates that the findings of the present study are in line with the findings of the study by Yamaguchi & Abe (2006) which was conducted in an online fashion portal based on the transaction data.

4.10.5 Cognitive Dissonance and Satisfaction

H5: Cognitive dissonance negatively impacts satisfaction in the context of online shopping.

Cognitive dissonance did have a negative impact on satisfaction, with a p-value <0.05 and a C.R. value of 10.46. Hence hypothesis H5 is accepted.

The findings of the present study are in tandem with the earlier studies (Koller & Salzberger, 2012; Graff & Kittipong, 2012; Lin et al., 2018; Mousavi, 2020), however, the context of these studies differed as they were conducted in the offline purchase of books, mobiles, online purchase of apparels and the usage of ride-sharing apps. In the present study, the strength of the relationship was moderate with a negative beta value of 0.396. This reiterates the importance of mitigating cognitive dissonance to increase satisfaction

levels as consumer satisfaction is considered to be one of the Key Performance Indicators (KPI) for many online retailers.

The relationship between cognitive dissonance and satisfaction in online shopping emerged as the third strongest relationship in the study. On comparing the β values of studies conducted by other researchers, it is observed that the strength of the relationship was stronger in the present research study with a β value of -0.396, whereas the β value for the study conducted by Park et al., (2015) was -0.277, -0.223 for the study conducted by (Lin et al., 2018) and -0.280 in the study conducted by Mousavi et al.,(2020). This is an indication that the strength of the relationship is stronger in the online purchase of electronics. This is a valuable input for E-tailers to ensure they provide positive reinforcement regarding the purchase of electronics and try their best to mitigate cognitive dissonance.

To further identify the impact of individual dimensions of the cognitive dissonance on satisfaction, linear regression was used. These are additional findings in table 4.54 further strengthen the study.

Table 4.54: Regression Results: Satisfaction and dimensions of cognitive dissonance

Study Constructs	R	R Square	Adjusted R Square	β-value
Emotional dimension →Satisfaction	-0.362*	0.131	0.130	-0.362*
Wisdom of Purchase → Satisfaction	-0.340*	0.116	0.114	-0.340*
Concern over Deal → Satisfaction	-0.221*	0.048	0.047	-0.221*

Source: Research Survey

The relationship between the dimensions of cognitive dissonance was statistically significant ($p<0.05$) and a negative relationship with satisfaction. As seen in table 4.54, it is evident that the relationship between the emotional dimension of cognitive dissonance has the highest impact on satisfaction with an R value of -0.362 ($p=0.000$) followed by

wisdom of purchase with a R value of -0.340 (p=0.000) and concern over deal with a R value of -0.221 (p=0.000).

The findings of the current study indicate that emotional dimension of cognitive dissonance had the strongest relationship with satisfaction. Mao and Oppewal (2010) had conducted a similar study in the choice of university among students which was an experimental study. The results were similar to the findings of the present study, emotional dimension emerged as the dimension that had the strongest influence on satisfaction. E-tailers need to focus on measures that can keep a check on the emotional dimension. Wisdom of purchase followed emotional dimension and the least influential was concern over the deal dimension.

4.10.6 Satisfaction and Repurchase Intention

H6: Satisfaction positively impacts repurchase intention in the context of online shopping

The relationship between satisfaction and repurchase intention was highly statistically significant with a p-value <0.001 and a C.R. value of 23.06. The relationship between satisfaction and repurchase intention emerged as the strongest with a β value of 0.891**.** This is a strong indication that customer satisfaction has to be maintained to ensure a high rate of repurchase intention.

The findings of the present study are in line with the findings of the previous studies (Mao & Oppewal, (2010) which was an experimental study in the context of choice of university, Park et al., (2012) in the context of services; Sharifi & Esfidani, (2014) in the context of retail purchase of mobiles; Lin et al., (2018) in the context of online post payment dissonance in online shopping of apparels. The findings indicate that even though electronics products are considered to have lower repeat frequency, satisfied customers may end up buying again from the same E-tailer.

4.10.7 Satisfaction and e-WOM

H7: Satisfaction positively impacts e-WOM in the context of online shopping

The relationship between e-WOM and satisfaction is statistically highly significant with a p- value less than 0.001 and a C.R. value of 24.15. This relationship is the second strongest relationship with a β value of 0.814. The present study indicates that satisfaction is a strong influencer of e-WOM in the context of online shopping for electronic products. These findings are in line with previous research studies (Mao & Oppewal, 2010; Sharifi & Esfidani, 2014; Lin et al., 2018). The impact of satisfaction on e-WOM is lesser than on repurchase intention indicating that a satisfied online shopper of electronic products is more likely to repurchase products from the E-tailer than disseminate positive e-WOM. However, in the study conducted by Sharifi & Esfidani, (2014), the impact of satisfaction was higher on attitudinal loyalty i.e., word-of-mouth communication than behavioral loyalty i.e., repurchase intention.

4.10.8 Explanatory Power

The explanatory power of the model is expressed in terms of the coefficient of determination or squared multiple correlations. The squared multiple correlations are used in the measurement of variance explained in each of the endogenous constructs and are therefore a measure of the model's explanatory power (Shmueli & Koppius, 2011). R^2 values range from 0 to 1, generally, R^2 values of 0.75, 0.50, and 0.25 can be considered substantial, moderate, and weak (Henseler et al, 2009; Hair & Sarstedt, 2011).

Table 4.55: Explanatory Power of the Dependent Variables

Dependent Variables	R Square
Cognitive Dissonance	0.02
Satisfaction	0.157
Repurchase Intention	0.843
e-WOM	0.679

Source: Research Survey

The higher the number of predictor constructs, the higher will be the $R^{2.}$ Acceptable R^2 values depend mainly on the context of the study, in certain studies, an R^2 value of 0.10 is

considered to be acceptable or satisfactory (Falk & Miller, 1992; Raithel, et al., 2012; Hair, et al., 2018). Table 4.55 indicates the R square values for the endogenous constructs in the study.

The adjusted R square value of cognitive dissonance is 0.02 indicating that the independent variables explained a very small fraction of cognitive dissonance. Cognitive dissonance is a complex construct, an amalgamation of many more variables might be able to better explain the same. Similar results were obtained for the explanatory power of cognitive dissonance in many other studies (Marikyan et al., 2020; Lin et al., 2018) of varying contexts. However, a significant finding that cognitive dissonance has an impact on the outcome variables is evident from the R square values. The variance in the endogenous construct of satisfaction, explained by cognitive dissonance is 15.7 percent. This indicates that cognitive dissonance has to be mitigated to ensure online shoppers are satisfied.

Satisfaction explains 83 percent of the variance in repurchase intention indicating that a satisfied customer might stick to the online retailer and might not switch brands frequently. Satisfaction explains the 67.9 percent variance in e-WOM. This is a very significant finding for many e-tailers as it clearly indicates that a satisfied customer is willing to disseminate positive e-WOM which in turn might attract new customers.

4.11 CHAPTER SUMMARY

Chapter 4 dealt with data analysis of primary data collected through a structured questionnaire and interpretation of the analysis. Analysis was done using SPSS (23.0) and AMOS. The analysis begins with socio-demographic profiling of the primary data, followed by descriptive analysis. The Exploratory Factor Analysis (EFA) was conducted. Followed by Confirmatory Factor Analysis (CFA). Tests were conducted to assess the validity and reliability of the research instrument. Post-affirmation of the same, the structural model was used to test the hypotheses of the conceptual framework. Various model fit criteria were used to assess if the model fit was good for the data.

CHAPTER 5

FINDINGS AND CONCLUSIONS

CHAPTER 5

FINDINGS AND CONCLUSIONS

5.1 CHAPTER OVERVIEW

Chapter 5 covers the conclusions are drawn on the basis of analysis details in chapter 4. All the findings of the study are detailed in section 5.2. The other findings of the study are elaborated in section 5.3. The conclusions are derived in section 5.4. Based on the conclusions and findings, recommendations are drawn in section 5.5. Section 5.6 covers the theoretical implications. Section 5.7 elaborates on the managerial implications. Section 5.8 lists the study limitations. Directions for future research are provided in section 5.9.

The study incorporated a descriptive research design to study cognitive dissonance in online shopping of electronic products. A research survey strategy was utilised to collect data from online shoppers of Tier I cities. The research objectives and questions were formulated based on the research gaps. To answer the research objectives, seven hypotheses were empirically tested. Descriptive and inferential statistics were used to understand the associations between various socio-demographic variables. CB-SEM was used for the evaluation of the measurement model and structural model. Based on the findings, a few of the proposed hypotheses were not valid for the Indian context.

5.2 MAJOR FINDINGS OF THE STUDY

The primary data collected was analysed through relevant data analysis techniques to arrive at the findings of the study. The findings are categorised into major findings derived through hypotheses testing and other findings derived through inferential statistics.

5.2.1 Findings on Testing of Hypotheses

Hypotheses were tested based on ANOVA and SEM. F-statistics and p-value was the main criterion used in ANOVA for the acceptance/rejection of hypotheses. In SEM the main criteria considered for the acceptance/ rejection of hypotheses were critical ratio (C.R.), path estimates (β) value, and significance level (p).

5.2.1.1 Product Involvement and Cognitive Dissonance

The relationship between product involvement and cognitive dissonance was significant and positive with $\beta = 0.155$, C.R. = 3.076 at $p<0.05$. Product involvement positively influenced cognitive dissonance in online shopping of electronic products; hence hypothesis H1 is accepted.

Product Involvement and Dimensions of Cognitive Dissonance

a) Product Involvement and Emotional Dimension of Cognitive Dissonance

Product involvement positively influenced the emotional dimension of cognitive dissonance with $\beta=0.093$, C.R.=2.235 at $p<0.05$. This indicates that product involvement positively influences the emotional dimension of cognitive dissonance in online shopping of electronic products. Product involvement had the weakest relationship with the emotional dimension of cognitive dissonance in online shopping.

b) Product Involvement and Wisdom of Purchase Dimension of Cognitive Dissonance

Product involvement had a significant and positive influence on the wisdom of purchase dimension of cognitive dissonance with $\beta= 0.139$, C.R. =3.248 at $p<0.01$. This indicates that product involvement positively influenced the wisdom of purchase dimension of cognitive dissonance in the online shopping of electronic products. Product involvement had the strongest relationship with the wisdom of purchase dimension of cognitive dissonance in online shopping.

c) Product Involvement and Concern over the Deal Dimension of Cognitive Dissonance

Product involvement significantly and positively influenced concern over the deal dimension of cognitive dissonance (β= 0.120, C.R.=2.863 at p<0.01). This indicates that product involvement positively influenced the concern over the deal dimension of cognitive dissonance in the online shopping of electronic products. The strength of the relationship between product involvement and concern over the deal dimension of cognitive dissonance in online shopping was medium.

5.2.1.2 Product Involvement across Categories of High Involvement and Low Involvement and Cognitive Dissonance

The relationship across product categories of high and low involvement and cognitive dissonance was not significant (ANOVA test results: F=1.750 at p=0.175, in T-test, T=0.97 at p= 0.335). This indicates that the cognitive dissonance experienced does not vary across product categories of different levels of involvement.

5.2.1.3 Trust in Online Shopping and Cognitive Dissonance

The relationship between trust in online shopping and cognitive dissonance was not statistically significant, with a β= -0.078, C.R. = 3.076 at p= 0.118. Hence hypothesis H2 is not accepted, indicating that trust in online shopping does not influence cognitive dissonance in online shopping of electronic products.

5.2.1.4 Perceived Risks in Online Shopping and Cognitive Dissonance

The relationship between perceived risks in online shopping and cognitive dissonance was not statistically significant, with β= 0.065, C.R. = 0.87 at p= 0.335. Hence hypothesis H3 is not accepted, indicating that risks perceived by an online shopper do not influence cognitive dissonance in online shopping of electronic products.

5.2.1.5 Choice Difficulty in Online Shopping and Cognitive Dissonance

The relationship between choice difficulty in online shopping and cognitive dissonance was not statistically significant with a $\beta = -0.074$, C.R = -0.96 at $p = 0.383$. Hence hypothesis H4 is not accepted, indicating difficulty in choosing a product does not influence cognitive dissonance in online shopping for electronic products.

5.2.1.6 Cognitive Dissonance and Satisfaction in Online Shopping

The relationship between cognitive dissonance and satisfaction was highly significant and negative with $\beta = -0.396$, C.R. =-10.46 at $p < 0.001$. Cognitive dissonance negatively influenced satisfaction in online shopping of electronic products. Hence the, hypothesis H5 is accepted.

Satisfaction in Online Shopping and Dimensions of Cognitive Dissonance

Linear regression was used to test the impact of individual dimensions of the cognitive dissonance on satisfaction

a) **Emotional Dimension of Cognitive Dissonance and Satisfaction**

   The emotional dimension of cognitive dissonance significantly negatively impacted satisfaction with a β value of -0.362. This indicates that if the emotional dimension of cognitive dissonance increases by a value of 1, satisfaction decreases by a value of 0.362. The emotional dimension of cognitive dissonance had the strongest relationship with satisfaction in online shopping of electronic products compared to other dimensions of cognitive dissonance.

b) **Wisdom of Purchase Dimension of Cognitive Dissonance and Satisfaction**

   The wisdom of purchase dimension of cognitive dissonance significantly negatively influenced satisfaction with a β value of -0.340. This indicates that if the wisdom of purchase dimension of cognitive dissonance increases by a value of 1, satisfaction decreases by a value of 0.340. The relationship between the wisdom of purchase dimension of cognitive dissonance emerged as the second strongest

relationship between cognitive dissonance and satisfaction in online shopping of electronic products.

c) Concern over the Deal Dimension of Cognitive Dissonance and Satisfaction

Concern over the deal dimension of cognitive dissonance significantly negatively influenced satisfaction with a β value of -0.221. This indicates that if the wisdom of purchase dimension of cognitive dissonance increases by a value of 1, satisfaction decreases by a value of 0.221. Concern over the deal dimension of cognitive dissonance had the least influence on satisfaction in online shopping of electronic products.

5.2.1.7 Satisfaction in Online Shopping and Repurchase Intention in Online Shopping

The relationship between satisfaction and repurchase intention was highly significant and positive with $\beta = 0.898$, C.R. = 23.06 at $p<0.001$. Satisfaction positively influenced repurchase intention in online shopping of electronic products. Hence hypothesis H6 is accepted.

5.2.1.8 Satisfaction in Online Shopping and e-WOM

The relationship between satisfaction and e-WOM was highly significant and positive with $\beta = 0.814$, C.R. = 24.15 at $p<0.001$. Satisfaction positively influenced e-WOM in online shopping for electronic products. Hence, hypothesis H7 is accepted.

5.3 OTHER FINDINGS

5.3.1 Trust in Online Shopping and Recurrence of Purchase of Electronic Products

The relationship between trust and frequency of purchase was significant, with $F=3.814$ at $p<0.05$. Trust in online shopping increased with increased recurrence of electronic product purchases, i.e. online shoppers who purchased products more times trusted the online shopping portals to a greater extent.

5.3.2 Perceived Risks in Online Shopping and Internet Experience

The relationship between perceived risks and internet experience was significant, with $F=5.159$ at $p<0.05$. It was evident from the results that with the increase in internet usage among online shoppers, the various risks perceived by online shoppers, like financial risk, time risk and convenience risk, reduced in online shopping of electronic products.

5.3.3 Perceived Risks in Online Shopping and Recurrence of Purchase

The relationship between perceived risks and purchase frequency was significant, with $F=10.501$ at $p <0.001$. With the increasing recurrence of purchases, online shoppers perceived lesser risks in online shopping like financial risk, time risk and convenience risk for electronic products.

5.3.4 Choice Difficulty in Online Shopping and Age

The relationship between choice difficulty and age was significant, with $F=5.393$ at $p<0.05$. Online shoppers belonging to the age group of 45 years and above experienced greater difficulty choosing a product from a huge variety of electronic products in online shopping portals. This can be attributed to the fact that online shopping grew exponentially only in the past few years. Unlike other younger age groups for whom online shopping is a part of life, online shoppers of 45 years who were used to conventional shopping had to make the switch later in life. This poses a challenge to online shoppers who are technically disabled and not used to purchasing online.

5.3.5 Choice Difficulty in Online Shopping and Educational Qualification

The relationship between choice difficulty and educational qualification was significant, with $F=3.136$ at $p<0.05$. Online shoppers who were XIIth standard pass-out experienced greater difficulty choosing a product than online shoppers who were graduates. One possible reason could be that online shoppers who are just XIIth standard pass-outs are formally less educated and will not have the financial resources and experience compared to other qualified online shoppers.

5.3.6 Choice Difficulty in Online Shopping and Internet Experience

The relationship between choice difficulty and internet experience was significant, with $F=8.926$ at $p<0.001$. The results indicated that online shoppers with more years of internet usage experience faced lesser difficulty while choosing products in online shopping than online shoppers with less internet experience. This could be because online shoppers who have had internet more internet usage experience are used to either shopping or browsing through online shopping portals, which provides them with knowledge and heuristics to choose a product from the huge catalogues.

5.3.7 Cognitive Dissonance and Employment Status

The relationship between cognitive dissonance and employment status was significant, with $F=5.864$ at $p<0.001$. Cognitive dissonance was relatively lesser among salaried online shoppers than self-employed and unemployed online shoppers. Salaried employees have a fixed income every month, which reduces uncertainty. Whereas online shoppers who are either unemployed or self-employed either have income or the income depends on the projects or work, they do. This increases the uncertainty among the non-salaried group of online shoppers.

5.3.8 Cognitive Dissonance and Internet experience

The relationship between cognitive dissonance and internet experience was significant, with $F=4.160$ at $p <0.01$. Cognitive dissonance was relatively lesser among online shoppers with internet usage experience of 8-12 years and more than 12 years, indicating that greater exposure to internet usage can help mitigate cognitive dissonance.

5.3.9 Socio-Demographic Profile of Online Shoppers

Female respondents formed a significant share of respondents, with 53.2 percent. The age group of 25-34 years was the dominant age group, with 43.2 percent of the respondents coming from this age group. A significant proportion of the respondents were post-graduates, i.e. 55 percent of the respondents were post-graduates. The majority of the online shoppers, i.e. 41 percent, earned a monthly income of 1,20,000, followed by the

respondents who earned 30,001-60,000 a month. Salaried employees accounted for a higher portion of the respondents, forming 62.8 percent. Most salaried employees worked in private firms, whereas the remaining online shoppers worked in government organisations. The majority of online shoppers were married. Of the married couples, the majority of the spouses were employed.

Most online shoppers were well versed with internet usage, as 45.40 percent of the respondents had more than 12 years of internet experience, followed by online shoppers with 8-12 years of internet experience. Online shoppers preferred Amazon over other shopping portals, followed by Flipkart. The majority of the respondents, i.e. 62 percent purchased from both the sub-categories of products, i.e. electronic devices/appliances and electronic accessories. Most of the online shoppers, i.e. 36 percent purchased 1-2 times in a time frame of 6 months, followed by online shoppers who purchased 3-4 times in six months.

5.4 CONCLUSIONS

5.4.1 Product Involvement and Cognitive Dissonance

Product involvement indicates the relevance or importance of electronic devices and accessories from a consumer's perspective. A consumer with higher product involvement has higher expertise and considers the product central to his identity. Online shoppers with higher involvement look into as many details as possible before making a purchase decision. As consumers spend considerable time processing information and making a high-involvement purchase, leading to anxieties and cognitive dissonance

Product involvement largely influenced the wisdom of purchase of online shoppers representing the cognitional discomfort if the product was necessary at all and if it was the right choice to purchase the product from the preferred online shopping portal. The cognitional discomfort creates doubts in the mind of online shoppers regarding his/her purchase decisions.

The concern over the deal causing an online shopper to retrospect if they have been fooled or if there is something wrong with the deals offered is impacted by product involvement. This is an indication that online shoppers tend to have second thoughts even after the purchase of the products if they have made the right decision and this apprehension increase with the increase in product involvement.

The emotions like anger, pain, frustration and regret arising due to cognitive dissonance faced by consumers are based on the relevance and importance of the product category.

5.4.1.1 Cognitive Dissonance and Product Categories

Online shoppers are experiencing cognitive dissonance in both the instances of high-involvement products (electronic devices) and low-involvement products (electronic accessories). Electronic devices and appliances had a different range of products like mobiles, laptops, televisions, washing machines and so on. Electronic accessories include mobile cases and covers, screen guards, and data cables to products like storage devices, headphones, firesticks, and charging mobile stands. A few of the products like storage devices and headphones are branded and have more technical specifications as compared to other electronic accessories. Respondents may be more involved while purchasing electronic accessories with more technical specifications like Bluetooth devices, storage devices and so on. Hence, it is proved that the magnitude of the cognitive dissonance experienced across product categories of high and low involvement is similar.

The negative emotions like anger, pain, and frustration that arise due to cognitive dissonance are equally relevant to both the product categories i.e. electronic accessories (low involvement) and electronic devices (high involvement).

The cognitional discomfort due to cognitive dissonance provokes the online shopper to retrospect if the purchase was necessary and if it was the right decision to purchase from the preferred online shopping portal was relevant to both the product categories i.e. electronic accessories (low involvement) and electronic devices (high involvement).

Consumers are often attracted by online shopping deals and offers but after the purchase, they are second-guessing the deals and offers. Consumers have questions if the deals and offers are genuine and if there are any loopholes with the deals and offers provided. These concerns regarding the deals and offers are equally relevant to both the product categories i.e. electronic accessories (low involvement) and electronic devices (high involvement).

5.4.2 Trust in Online Shopping and Cognitive Dissonance

The prevalence of trust in online shopping among consumers did not influence the anxieties and concerns arising due to cognitive dissonance. For an E-tailing organisation to be trustworthy, an online shopper expects that there is sufficient information available on the portal that is reliable and accurate. Adequate security measures reinforce trust among online shoppers. Online shoppers face many glitches while shopping, they expect the portals to provide them with a dependable infrastructure. Online shopping portals operate 24X7 to ensure they earn the consumers' trust by certifying the sellers, providing seller warranties and guarantees, providing product reviews with videos and pictures, a 30-day return policy, and so on. Moreover, there are a few products and brands that are fulfilled by the specific online shopping portal and which come with the tag "Fulfilled by Amazon" or "Fulfilled by Flipkart", products with such tags undergo additional checks. The majority of the online shoppers were having higher internet usage experience and hence are aware of the nuances of online shopping. All these measures taken by the E-tailers might have contributed to the building of trust over the years.

Trust is not a factor in mitigating cognitive dissonance in the online shopping of electronic products. The emotional discomfort exhibited in the form of anger, pain, frustration and so on cannot be alleviated by trust in online shopping. The cognitional discomfort that arises due to ambiguity regarding the purchase and ambiguity regarding the deals is not mitigated by trust in online shopping. Online shoppers have to not just trust the online shopping portal but also all the stakeholders who are involved in making the purchase a success. For example, many products are not fulfilled by the E-tailer, sometimes they are vendor fulfilled, and the purchase process is complete only after the delivery and installation of

the product and this is handled by the brand and not the E-tailer. Therefore due to the multiple stakeholders, just trust in online shopping may not mitigate the anxieties related to the online shopping of electronic products.

5.4.3 Perceived Risks in Online Shopping and Cognitive Dissonance

In the context of online shopping, consumers perceive greater risks than the traditional offline retail channel due to intangibility. The risks perceived by online shoppers in the purchase of electronic products did not elicit an influence on the emotional and cognitional discomfort arising due to cognitive dissonance. Online shoppers may perceive financial risks like being overcharged for the product. They also perceive product risks that the product received may not perform as expected. Online shoppers have concerns regarding the confidentiality of financial information like credit card information collected by the payment gateways during transactions. Time risks are another major concern, like not receiving the product on the specified date and time. Online shoppers in the present day have a major time crunch and hence convenience risks like inability to find the product, greater website loading time and so on can create concerns among online shoppers. The risks perceived by online shoppers did not have any bearing on the cognitional and emotional discomfort arising due to cognitive dissonance.

The uncertainties that bothered customers earlier are taken care of by the E-tailers through measures like product exchange, and return policies thus eliminating the fear of product risk, and financial risk. With excessive competition, online shopping portals are providing an amazing ecosystem and experience in terms of website experience, cancellation policies and so on. Thus, reducing convenience risk. The only risk that still prevails is the risk associated with delivery timelines, especially in products delivered by third-party vendors and maybe the security risk associated with data confidentiality.

ANOVA results revealed that with increasing internet experience, the perceived risks were reduced, this could be one of the reasons for perceived risks not influencing cognitive dissonance. The majority of online shoppers are well educated (post-graduates and graduates) and 45 percent of the online shoppers had more than 12 years of internet

experience indicating that the internet usage experience mitigates the risks perceived to an extent. Another reason that can be attributed to the finding is the fact that the majority of the online shoppers in the study purchased more than twice from the specified category of electronics. This might contribute to online shoppers gaining more knowledge of the purchase nuances. Therefore, one can safely assume that for the well-educated and consumers with greater internet experience, perceived risks might not fuel cognitive dissonance.

5.4.4 Choice Difficulty in Online Shopping and Cognitive Dissonance

The complexities in making a choice from the vast catalogue of products did not bear any relevance to the anxieties faced by online shoppers in the purchase of electronic products. The choice difficulty is generally experienced by consumers when the task of making a choice is overwhelming, for example, there are more than 10 lakh electronic accessories products in most online shopping portals and choosing a product from such huge catalogues requires a lot of information processing. This can be overwhelming for customers. Comparing alternatives is very complex as many of the products are similar in features and price; hence this process may take time and a lot of cognitive effort. Some consumers are perplexed seeing the number of online shopping portals; deciding which portal is appropriate can be daunting. The emotional despair and ambiguities concerning the purchase and deals are not influenced by the complexities of choosing from an online shopping portal.

The electronics product category is a brand-heavy category. This category generally consists of more expensive products; a consumer would have pre-decided the product based on weeks or months of research consulting their near and dear ones. Hence, the huge catalogues on websites may not overwhelm the customers. Even though electronic accessories are not brand-heavy, recommendation engines often recommend electronic accessories based on the purchase history of many customers; the devices purchased and vendor preferences. Many online shopping websites provide the feature of comparison, wherein a consumer can compare any product from the catalogue; this reduces the effort

required to open multiple browse pages to compare products. Most of the online shoppers were experienced online shoppers who made multiple online purchases which helped them find the relevant products quickly. Choice difficulty not impacting cognitive dissonance is an assurance to vendors and E-tailers selling electronic products and accessories not to fret about the selection.

5.4.5 Cognitive Dissonance and Satisfaction in Online Shopping

The anxieties and negative emotions arising from cognitive dissonance negatively influence satisfaction, reducing satisfaction and leading to dissatisfaction in online shopping. Satisfaction in online shopping involves consumers' satisfaction with their overall purchase experience. A satisfied consumer is confident of the preferred online shopping portal. A satisfied online shopper is a consumer who considers purchasing online as a wise decision. Any regret, anxiety or ambiguity in the online shopping of products can hamper satisfaction. E-tailers must ensure a smooth customer experience to enhance satisfaction and mitigate cognitive dissonance.

The emotions of anger, pain, frustration, and regret arising from cognitive dissonance largely reduce overall satisfaction and confidence derived from the online shopping experience. All these emotions are negative and can strongly reduce the enjoyment a consumer derives from online shopping.

The cognitional discomfort arising from the ambiguity of whether the product was necessary and whether it was the right choice to purchase the product from the preferred online shopping portal influences the confidence an online shopper has in the purchase decision. The confusion and ambiguity regarding the purchase decision lead to second thoughts concerning the purchase and eventually hampers satisfaction.

Online shoppers purchase many products through deals and offers; however, there is always a certain amount of confusion or uncertainty about whether the deal fooled them or if there was something wrong with the offer/deal they purchased. Online shoppers' satisfaction relies on the magnitude of concern they show after purchasing the product.

5.4.6 Satisfaction in Online Shopping and e-WOM

Online shoppers satisfied with the preferred online shopping portals are disseminating positive e-WOM regarding the E-tailer. Consumers are willing to disseminate positive e-WOM in the online purchasing of electronic products. A satisfied online shopper is willing to speak about the preferred online shopping portal more frequently than other online shopping portals. A consumer with enough confidence in the purchase arising due to satisfaction will speak about the preferred online shopping portal to many individuals. These consumers speak more favorably and positively about the preferred online shopping portals than the other ones. Positive e-WOM helps in new customer acquisition and can help organisations benefit tremendously. Hence it is important to ensure that consumers are satisfied and have a hassle-free purchase experience, which will lead to positive e-WOM.

5.4.7 Satisfaction in Online Shopping and Repurchase Intention in Online Shopping

A consumer satisfied and pleased with the overall experience of online shopping portals and confident in his purchase decision of electronic products will have the intent to repurchase from the same online shopping portal in the near future. The intent of the consumer to use the online shopping portal in the near future is referred to as repurchase intention. The probability of the online shopper using the preferred online shopping portal to purchase products is high when they are satisfied. A consumer satisfied with the overall purchase experience and confident in the online shopping portal will be willing to purchase from the portal again. Satisfied online shoppers will also use the preferred online shopping portal as much as possible due to their familiarity and confidence in the portal. Whenever consumers have to make a new purchase, the preferred online shopping portal will always be a part of their choice set, and the probability of choosing the preferred online shopping portal over other online shopping portals will be much higher.

Currently, when customer acquisition costs are skyrocketing, consumers with repurchase intention are a boon to many E-tailers. More so the strength of the relationship indicates that satisfied customers are willing to repurchase electronic products from the same online

shopping portal, even though the frequency of purchases may be low. E-tailers have to ensure they provide a seamless experience to the customers as these are big ticket items and generally bring in a long-term relationship with the customers

This long-term association exists due to the after-sales service like installation and liaising between brands in electronic products. As the customer acquisition costs are much higher than the customer retention costs, this finding strongly reinforces that e-tailers target high levels of customer satisfaction

The figure 5.1 shows that product involvement influences cognitive dissonance in online shopping. It further represents how product involvement influences the emotional and cognitional discomfort arising from cognitive dissonance. In the present study, wisdom of purchase dimension had the strongest impact on cognitive dissonance. The proposed model can guide the e-tailing organizations to assess cognitive dissonance and mitigate the same before it leads to other negative consequences. The model also depicts the relationship between the dimensions of cognitive dissonance and satisfaction. In the current study emotional dimension had the maximum impact on satisfaction. A satisfied customer further goes onto repurchase the product from the preferred online shopping portal and disseminate positive e-WOM. Cognitive dissonance has to be mitigated to ensure positive post purchase outcomes.

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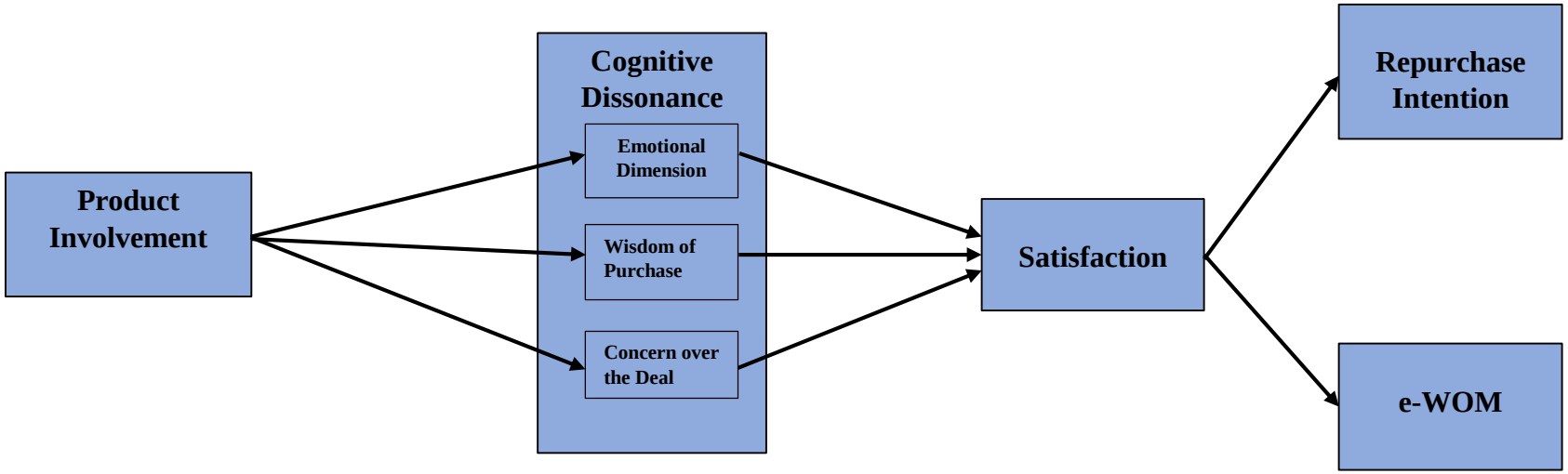

Figure 5.1: Proposed Model of Cognitive Dissonance in Online Shopping

5.5 RECOMMENDATIONS

Online shopping is the new norm followed by the majority of the population across the globe. Multiple E-tailing organisations selling similar or more or less the same products have mushroomed. Surviving these e-tailing organisations becomes difficult as their services have very few points of differentiation. Most of the successful e-tailing organisations vouch that customer-centricity has led to the success of their organisations. As a result of which they focus on measures to enhance customer satisfaction. Profits of these firms heavily depend on the customers returning to their portal to repurchase products as the number of customers has reached a saturation point. In such scenarios and hindrance to customer satisfaction has to be dealt with before it leads to major negative repercussions. One such hurdle is cognitive dissonance, which is said to negatively impact satisfaction. Cognitive dissonance is a pertinent topic in consumer behavior that is extremely relevant owing to the huge number of online shopping portals and changing demographics. The study tried to identify the factors influencing cognitive dissonance and its subsequent impact on satisfaction. Based on the study findings, the following recommendations are provided.

1. Product involvement that represents the importance and relevance of the product to a consumer is an important construct in consumer behaviour. A consumer's expertise and interest are based on the product involvement level. The relevance of the product and the importance of the product representing product involvement influences cognitive dissonance in online shopping. The cognitional and emotional discomfort arising from cognitive dissonance is relevant to both product categories of high-involvement and low-involvement purchases. Based on the relevance of product involvement in both electronic devices and electronic accessories, E-tailing organisations need to give equal importance in terms of merchandising activities of both categories as online shoppers face similar emotions and cognitional discomfort across both categories.

Product involvement impacts the ambiguities concerning the necessity of the purchase and the choice of an online shopping portal which subsequently impacts satisfaction, repurchase intention and e-WOM. The post-purchase constructs of satisfaction and repurchase intention significantly impact the costs incurred by e-tailers. Hence e-tailers have to be wary of the magnitude of the product involvement and ensure that ambiguities regarding the purchase of the products and deals are addressed.

The concerns and doubts regarding the deals and offers are influenced by the interest and expertise in the product. A consumer who is highly involved in a product category and feels the product category is crucial will be extremely cautious about the deals and offers. E-tailers must be cautious and honour and fulfil the deals and offer efficiently to mitigate cognitive dissonance.

The negative emotions like anger, regret, frustration and so on arising due to cognitive dissonance are positively influenced by the importance and relevance of the product. As consumers' interest in the product category increases so do the negative emotions in certain situations where a consumer faces glitches. These negative emotions must be tackled with utmost care to alleviate cognitive dissonance.

2. Trust in online shopping, perceived risks in online shopping and choice difficulty did not relate to the discomfort arising from cognitive dissonance. There are certain minimum requirements that an online shopping portal must have in place to attract customers, like security, dependable infrastructure, reliable and accurate information and so on; however, it does not indicate that they influence cognitive dissonance. Perceived risks can be reduced if online shopping portals adopt adequate security measures to protect the confidentiality, ensure timely delivery of products, ensure the website loading time is not very high and so on. Having a huge catalogue of products has become a new norm to attract footfall; however, the E-tailers need not worry about this selection becoming overwhelming for consumers in the online shopping of electronic products.

3. The uncertainties in online shopping can lead to anxieties and negative emotions regarding purchase decisions and deals. These concerns and negative feelings stemming from cognitive dissonance can lead to dissatisfaction. Satisfaction is the key performance indicator for many E-tailing organisations. Satisfied customers will be willing to repeatedly repurchase from the same online shopping portal and help disseminate positive e-WOM. Hence e-tailing organisations must provide an overall positive shopping experience that online shoppers will thoroughly enjoy and be pleased with.

   The emotional discomfort causing negative emotions like anger, pain, and frustration have a strong negative influence on satisfaction. Hence E-tailers have to address any concerns or complaints or concerns of customers arising due to negative emotions with utmost care and ensure no further negative consequences.

   The cognitional discomfort arising from the uncertainty of purchase decisions negatively influences satisfaction. These doubts regarding the appropriateness of the purchase decision and the deals have to be addressed on a timely basis by the online shopping portals.
4. Satisfaction with online shopping of electronic products had a very strong positive influence on repurchase intention. The probability of a satisfied customer purchasing again from the preferred shopping portal is much higher. Retention of customers is critical as it is much cheaper than acquisition. As electronic devices/appliances and accessories are low-frequency purchases, e-tailers must provide customers with a seamless and amazing shopping experience to ensure repeat purchases. E-tailing organisations must work towards providing customers with a shopping experience they can enjoy and are pleased with and will bring them back to the preferred online shopping portal for future purchases.
5. Satisfaction with online shopping of electronic products positively influences a consumer's willingness to disseminate positive e-WOM. Hence E-tailing organisations have to ensure they devise strategies to meet or exceed consumers' expectations in every step of online purchases. A satisfied customer will speak

favourably of the preferred online shopping portal to others which can eventually attract many consumers. Many consumers anchor their decision-making to purchase a product on the number of ratings and reviews for the chosen product (Atmojo et al., 2019). Hence e-tailers must mitigate cognitive dissonance in all possible ways and ensure that customers are satisfied.

5.6 THEORETICAL IMPLICATIONS

Many studies probed the relationship between product involvement and cognitive dissonance. However, these studies were qualitative and focused on one type of product category, i.e. either high-involvement or low-involvement product category. Many of these studies did not analyse the relationship solely in the context of online shopping. It is confirmed that product involvement largely influences cognitive dissonance positively. Most of these studies did not further assess the impact of the relevance of the product on the individual dimensions of cognitive dissonance. The present research bridges the gap of understanding how the significance of the product can impact the negative emotions and ambiguities regarding the purchase decision and offers & deals in online purchase of electronic products. Surprisingly product involvement had a more substantial influence on the cognitional components of cognitive dissonance, i.e. wisdom of purchase and concern over the deal. This is an important revelation in understanding the relationship between product involvement and cognitive dissonance. The study also addresses the research gap to assess if cognitive dissonance varies across product categories of different levels of involvement. Online shoppers experienced similar cognitive dissonance while purchasing electronic devices (High involvement) and electronic accessories (low involvement). This reiterates the findings of Gbadamosi (2009), who had cautioned against the generalisation of cognitive dissonance in products of high involvement only.

Research studies (Tomar et al., 2020; Sharifi & Esfidani, 2014) examined the role of trust in mitigating cognitive dissonance. These studies were primarily based on offline purchases of products. There existed a gap in assessing this relationship in the context of online shopping. This gap was bridged, and the results were contrary to the popular belief

that trust negatively influences cognitive dissonance in online shopping. Trust in online shopping based on reliable information, dependable infrastructure, and security did not influence the anxieties and cognitional discomfort arising from cognitive dissonance. This is a significant contribution and a revelation that findings in the context of offline shopping cannot be generalised to the online shopping context due to the varying complexities and stakeholders involved in the purchase process.

There was a discontinuity and lack of in-depth studies among researchers analysing the relationship between perceived risks and cognitive dissonance. The two constructs were analysed to study smoking behaviour (Eiser et al., 2008) and in the context of holiday bookings (Koller & Salzberger, 2009). The current study bridged the gap in research in analysing the influence of various perceived risks in online shopping on cognitive dissonance. The present study assessed whether the financial, product, convenience, and time risks impacted cognitive dissonance. The results revealed that the risks perceived by online shoppers have no impact on the cognitive dissonance experienced. This is a significant contribution as researchers believed perceived risks are a precursor to cognitive dissonance.

Seminal researchers (Festinger, 1957; Bem, 1972) studied the relationship between choice difficulty and cognitive dissonance. These studies were experimental, and the sample sizes were extremely small. An attempt to assess this relationship in fashion e-commerce portals was done by Yamaguchi & Abe (2016); however, this study was based on secondary data and the conceptualisation of choice difficulty and cognitive dissonance significantly varied. There was a persistent gap in assessing this relationship in real-life settings using large-scale surveys. The complexity of choosing from a huge catalogue of products did not elicit any influence on cognitive dissonance in online shopping. This contributes significantly to understanding the dynamics of choice in cognitive dissonance as most e-tailing organisations are betting on huge assortments of products.

The study also contributes to a better understanding of the relationship between cognitive dissonance and satisfaction in the online shopping of electronic products. Even though

research studies were conducted to assess this relationship, they differed significantly from the present in conceptualising cognitive dissonance and satisfaction. The study confirmed that cognitive dissonance negatively impacts satisfaction. Apart from Mao & Oppewal (2010), other researchers did not analyse the relationship between the individual dimensions of cognitive dissonance and satisfaction. The study by Mao & Oppewal (2010) was conducted in the choice of university and differed in the conceptualisation of cognitive dissonance. This research addressed the gap in assessing the relationship between all three dimensions of cognitive dissonance, i.e., the emotional dimension, the wisdom of purchase and concern over the deal and satisfaction. The negative emotions arising from cognitive dissonance had the highest impact on satisfaction, followed by the cognitional discomfort regarding the purchase decision. None of the previous studies on online shopping considered "concern over the deal". However, in the present study, the concern over the deal dimension was included as most online shopping portals thrive on deals and offers and acquire customers through these methods. This inclusion can provide a foundation for future researchers to customise the dimensions and consider it as an integral part of the studies of online research as online shopping portals lure customers through various deals and deals are a perennial part of the growth story of online shopping portals.

The study also revealed the most substantial relationship between satisfaction and repurchase intention. The relationship between satisfaction and e-WOM emerged as the second most vital relationship. This finding fulfils the research gap of analysing the relationship between satisfaction and repurchase intention, satisfaction and e-WOM for the Electronics Product category using a large-scale survey in a developing economy like India. One can conclude that in the Indian context, product involvement influences cognitive dissonance. It is necessary to mitigate cognitive dissonance as it significantly affects satisfaction, which is a key performance indicator for many E-tailing organisations.

5.7 MANAGERIAL IMPLICATIONS

The proposed conceptual framework is one of a kind study in an emerging E-tailing market like India, which is also the second largest customer base in the world. The findings

indicated product involvement positively correlated with cognitive dissonance. Cognitive dissonance experienced across product categories of different levels of involvement was similar indicating that e-tailers have to focus equally on merchandising electronic devices and electronic accessories. Product involvement had a stronger relationship with the cognitional discomforts arising from purchase decisions and offers/deals indicating that e-tailers have to be highly cautious about merchandising and marketing efforts and avoid any claims they cannot fulfil.

Trust in online shopping did not influence cognitive dissonance. This could indicate that online shoppers expect the minimum qualities of reliable information, dependable infrastructure, security, confidentiality and so on, but none of these help in reducing cognitive dissonance. The ambiguity regarding the huge catalogue to avoid indecisiveness or confusion can be addressed by the findings of the relationship between choice difficulty and cognitive dissonance. As the difficulty experienced in choosing a product did not influence cognitive dissonance, e-tailers can continue adding products to their catalogue and, at the same time, curating and showing products that are top sellers. This makes decision-making easy for the customers. The risks perceived by online shoppers did not elicit any influence on cognitive dissonance. Hence, e-tailers can be assured that perceived risks are not of significant concern to consumers, as many are now well aware of the systems and processes involved in online shopping.

Cognitive dissonance in online shoppers negatively influenced satisfaction leading to dissatisfaction. This is an important finding, as satisfaction is a Key Performance Indicator (KPI) for many e-tailing organisations. E-tailing organisations must ensure they provide customers with a seamless online shopping experience. Customers' satisfaction levels have to be gauged from time to time, and any discontent among consumers has to be addressed with a quick turnaround time.

Satisfaction had a very strong positive relationship with repurchase intention. This is a very valuable insight for organisations as electronics as a product category has low repeat

purchases. The finding that satisfied customers are very likely to purchase again from the e-tailer motivates e-tailers to provide an augmented experience to customers.

Satisfaction had a positive relationship with e-WOM, indicating that satisfied customers will provide positive e-WOM. e-WOM is a necessary hygiene factor for many customers purchasing online, and having more positive reviews acts as an arsenal to boost sales for a particular product. Search results of products with higher positive reviews and ratings appear at the top. Hence, e-tailers must take measures to motivate satisfied online shoppers to provide positive e-WOM.

5.8 LIMITATIONS OF THE STUDY

Research studies in social sciences are prone to shortcomings and limitations. The present study also has a few limitations, which are mentioned below

1. The present study's findings are based on a limited set of products (Electronics product category). In the present study, cognitive dissonance was assessed for online shoppers of electronic products.
2. Data collection was online primarily due to the constraints arising from the pandemic. Due to several restrictions imposed by the Government of India, offline collection of data was not possible
3. The use of convenience sampling for choosing online shoppers may cause hindrance to generalization of the findings.

5.9 DIRECTIONS FOR FUTURE RESEARCH

Cognitive dissonance is an elusive and a very complex construct which requires to be analysed from multiple perspectives. The present study initiates a discussion which can act as a foundation for other research studies

Further research may be conducted with a broader set of products and services to understand consumer decision-making processes in greater detail. Future researchers can apply the conceptual framework across different categories like fashion, furnishings, and

online shopping portals. Each of the product category varies significantly from one another, fashion and home decor is a category heavily dominated by private labels in online shopping portals.

The present study used a large scale survey to assess choice difficulty. To further strengthen the findings on choice difficulty and cognitive dissoance a triangulation of results acquired from both quantitative and experimental studies can be obtained.

Trust in online shopping is a multi-faceted construct owing to the many stakeholders involved like the brand, vendors and the online shopping portal itself. Future researchers can try dissecting each of these layers for a better understanding of the relationship between trust and cognitive dissonance.

Due to the pandemic, online shopping adoption across tier II cities and rural areas has increased; future researchers can include these cities and towns and broaden their studies.

Longitudinal research can aid in understanding cognitive dissonance in different phases of online shopping, providing valuable insights to researchers and e-tailing organisations.

5.10 CONCLUDING NOTE

“There is only one boss – the customer. And he can fire everybody in the company from the chairman on down. Simply, by spending his money somewhere else” said the legendary Sam Walton, founder of Walmart. It takes a ton of time and money to win a customer, but you can loose them in seconds in the present day when customers are spoilt for choice with retailers falling over each other to woo them. Organizations are paying big dollars first to acquire and then to grow and retain the fickle minded customer. At the end of the day, what makes customers stick is a behavioral aspect deeply rooted in the science of satisfaction. What then are the layers of this behavioral aspect that determine satifaction levels? – we explore this question with a starting premise that the answer lies in cognitive dissonance.

The objective of the present study was to analyze cognitive dissonance in online shopping by assessing the factors that can influence cognitive dissonance. The study further explored how cognitive dissonance impacts satisfaction and how satisfaction subsequently

influences repurchase intention and e-WOM. The results revealed that product involvement had the highest influence on cognitive dissonance. And cognitive dissonance, inturn conclusively leads to dissatisfaction and satisfaction levels have a very high influnce on repurchase intention and e-WOM. The study is a humble effort towards understanding a complex construct like cognitive dissonance among online shoppers in India. The study findings clearly indicated that reducing cognitive dissonance can help retailers optimise their customer retention strategies.

REFERENCES

REFERENCES

Abrar, P. (2021, March). B2B startup Udaan sees demand for electronic products rising in lockdowns. Retrieved from Business Standard: https://www.business standard.com/article/companies/b2b-startup-udaan-sees-demand-for-electronic-products-rising-in-lockdowns-121031500647_1.html. Accessed March, 2022

Adams, S. J. (1961). "Reduction of cognitive dissonance by seeking consonant information". *The Journal of Abnormal and Social Psychology*, 62(1), 74-78.DOI:https://doi.org/10.1037/h0047029.

Afuah, A., & Tucci, C. (2001). Internet Business Models and Strategies. Boston: McGraw-Hill.

Akolawala, T. (2020, August). Flipkart, Amazon Sales See Huge Demand for Power Banks, Trimmers, Storage Products. Retrieved from Gadgets 360: https://gadgets.ndtv.com/mobiles/news/flipkart-freedom-amazon-prime-day-sales-scale-large-work-from-home-devices-2280682. Accessed May, 2021

Aldrich, M. (2011). Inventor's Story. Retrieved from MAA: Michael Aldrich Archive: https://www.aldricharchive.co.uk/inventors-story. Accessed April, 2018.

Alhaimer, R. (2021). "Fluctuating Attitudes and Behaviors of Customers toward Online Shopping in Times of Emergency: The Case of Kuwait during the COVID-19 Pandemic". *Journal of Internet Commerce*, 21 (1), 1-26. DOI: 10.1080/15332861.2021.1882758.

Al-Hattami, H. M. (2020). "Determinants of intention to continue usage of online shopping under a pandemic: COVID-19". *Cogent Business & Management*, 8(1), 1-16.

Allred, C., Smith, M. S., & Swinyard, W. R. (2006). "E-shopping lovers and fearful conservatives: a market segmentation analysis". *International Journal of Retail & Distribution Management*, 34(4/5), 308-333.

Allua, S., & Thompson, C. B. (2009). “Inferential Statistics”. *Air Medical Journal*, 28(4), 168-171.

Amaro, S., & Duarto, P. (2015). “An integrative model of consumers' intentions to purchase travel online”. *Tourism Management*, 46, 64-79.

Anderson, J. C., & Gerbing, D. W. (1988). “Structural equation modeling in practice: A review and recommended two-step approach”. *Psychological Bulletin*, 103(3), 411-423.

Anderson, L. K., Taylor, R. J., & Holloway, R. J. (1966). “The Consumer and His Alternatives: An Experimental Approach”. *Journal of Marketing Research*, 3(1), 62-67.

Aronson, E. (1968). Theories of Cognitive Consistency. In Dissonance Theory: Progress and Problems (pp. 5-27). Chicago IL: Rand Mcnally.

Aronson, E. (1992). “The return of the repressed: Dissonance theory makes a comeback.” *Psychological Inquiry*, 3(4), 303-311.

Aronson, E., & Mills, J. (1959). “The effect of severity of initiation on liking for a group”. *The Journal of Abnormal and Social Psychology*, 59(2), 177-181.

Atmojo, P., Nugroho, R., Dyah, B., Saleh, A. B., & Raymond, K. (2019). “The Effect of E-WOM and Structural Assurances Mediated by Guanxi towards Customer Behavioral Loyalty”. *Pertanika Journal of Social Sciences & Humanities*, 27(3), 1593-1607.

Auster, D. (1965). “Attitude Change and Cognitive Dissonance”. *Journal of Marketing Research*, 2(4), 401-405.

Awang, Z. (2014). Research Methodology and Data Analysis. Universiti Technologi Mara, UiTM Press.

Babin, B. J., Darden, W. R., & Griffin, M. (1994). "Work and/or Fun: Measuring Hedonic and Utilitarian Shopping Value". *Journal of Consumer Research*, 20(4), 644-656.https://doi.org/10.1086/209376.

Bagozzi, R. P., & Youjae, Y. (1988). "On the evaluation of structural equation models". *Journal of the academy of marketing science*. 16, 74-94.

Balakrishnan, J., Foroudi, P., & Dwivedi, Y. (2020). "Does online retail coupons and memberships create favourable psychological disposition?" . *Journal of Business Research*, 116, 229-244.

Bandalos, B. (2016). Confirmatory Factor Analysis. In J. P. Stevens, Applied Multivariate statistics for the social sciences (pp. 389-420). Routledge.

Bansal, V. (2018, October 12). Bigger Billion Days: How this year's festive season could prove transformative for Flipkart . Retrieved from Economic Times: https://economictimes.indiatimes.com/small-biz/startups/features/bigger-billion-days-how-this-years-festive-season-could-prove-transformative-for-flipkart/articleshow/66173748.cms . Accessed October, 2020

Barari, M., Ross, M., & Surachartkumtonkun, J. (2020). "Negative and positive customer shopping experience in an online context". *Journal of Retailing and Consumer Experiences*,53, 1-9.DOI:https://doi.org/10.1016/j.jretconser.2019.101985.

Barclay, D. W., Higgins, C. A., & Thompson, R. (1995). "Influence of Experience on Personal Computer Utilization". *Journal of Management Information Systems*, 11(1), 167-187.

Bauer, H. H., Sauer, N. E., & Becker, C. (2006). "Investigating the relationship between product involvement and consumer decision-making styles". *Journal of Consumer Behaviour*, 5(4), 342-354.

Bawa, A., & Kansal, P. (2008). "Cognitive Dissonance and the Marketing of Services: Some Issues". *Journal of Services Research*, 8(2), 31-51.

Beck, M., & Crié, D. (2018). “I virtually try it … I want it ! Virtual Fitting Room: A tool to increase on-line and off-line exploratory behavior, patronage and purchase intentions”. *Journal of Retailing and Consumer Services*, 40, 279-286.

Beldad, A., Hegner, S., & Hoppen, J. (2016). “The effect of virtual sales agent (VSA) gender – product gender congruence on product advice credibility, trust in VSA and online vendor, and purchase intention”. *Computers in Human Behavior*, 60, 62-72.

Bell, J. (2005). Doing your research project (4th Edition ed.). Buckingham: Open University Press.

Bellman, S., Lohse, G. L., & Johnson, E. J. (1999). “Predictors of Online Buying Behavior”. *Communications of the ACM*, 42(12), 32-38.

Bem, D. J. (1967). “Self-perception: An alternative interpretation of cognitive dissonance phenomena”. *Psychological Review*, 74(3), 183-200.

Bentler, P. M., & Bonett, D. G. (1980). “Significance Tests and Goodness-of-Fit in the Analysis of Covariance Structures”. *Psychological Bulletin*, 588-600.

Bhalla, T. (2020). Flipkart India trims losses as revenues grow in FY20. Retrieved from Mint: https://www.livemint.com/companies/news/flipkart-india-cuts-losses-reports-revenue-of-rs-34-610-crore-in-fy-20-11606837204744.html. Accessed July, 2022

Bhatnagar, A., & Ghose, S. (2004). “Segmenting consumers based on the benefits and risks of Internet shopping”. *Journal of Business Research*, 57(12), 1352-1360.

Bhatnagar, A., Misra, S., & Rao, R. H. (2000). “On Risk, Convenience, and Internet Shopping Behavior”. *Communications of the ACM*, pp. 98-105.

Bian, X., & Moutinho, L. (2011). “The role of brand image, product involvement, and knowledge in explaining consumer purchase behaviour of counterfeits: Direct and indirect effects”. *European Journal of Marketing*, 45(1/2), 191-216.

Bilgihan, A., Kandampully, J., & Zhang T. (2016). "Towards a unified customer experience in online shopping environments: Antecedents and outcomes." *International Journal of Quality and Service Sciences*, 8(1), 102-119.DOI: https://doi.org/10.1108/IJQSS-07-2015-0054.

BL Mumbai Bureau. (2022, March). Online retail in India forecast to grow at a CAGR of 19.8% to reach $85.5 billion by 2025: Report. Retrieved from The Hindu Business Line: https://www.thehindubusinessline.com/info-tech/online-retail-in-india-forecast-to-grow-at-a-cagr-of-198-to-reach-855-billion-by-2025-report/article65245418.ece

Blackwell, D. R., Miniard, P. W., & Engel, J. F. (2005). Consumer Behaviour. Cincinnati: Western College Publishing.

Bone, P. (1995). "Word-of-mouth effects on short-term and long-term product judgments". *Journal of Business Research*. 32(3), 213-223. doi:https://doi.org/10.1016/0148-2963(94)00047-I

Bonnice, C. J. (1985). "An Application of The Engel, Kollat And Blackwell Model To Consumers Of Automobile Insurance". *The Journal of Insurance and Practices*, 23-41.

Brehm, J. W. (1956). "Post-decision changes in desirability of alternatives". *Journal of Abnormal and Social Psychology*, 52, 384-389.

Brownstein, A. L. (2003). "Biased Pre decision processing". *American Psychological Association*, 129(3), 545-568.

Brunner, M., & Martin SÜβ, H. (2005). "Analyzing the Reliability of Multidimensional Measures: An Example from Intelligence Research". *Educational and Psychological Measurement*, 65(2), 227-240.

Bulsara, H. P., & Vaghela, P. S. (2020). “Examination of Online Purchase Intention towards Consumer Electronics Products”. *International Journal of Research in Social Sciences*, 147-154.

Businesswire. (2019). ndia Online Retailing in the Consumer Electronics & Appliances (CEA) Market, 2019-2026 - ResearchAndMarkets.com. Dublin: Businesswire a Berkshire Hathway Company. Retrieved from https://www.businesswire.com/news/home/20191024005881/en/India-Online-Retailing-in-the-Consumer-Electronics-Appliances-CEA-Market-2019-2026---ResearchAndMarkets.com

Byrne, B. M. (2010). Structural Equation Modeling with AMOS: Basic Concepts, Applications and programming (2nd ed). New York: Routledge.

Cao, Y., Ajjan, H., & Hong, P. (2018). “Post-purchase shipping and customer service experiences in online shopping and their impact on customer satisfaction: An empirical study with comparison”. *Asia Pacific Journal of Marketing and Logistics*, 30(2), 400-416.

Cappelletti, D., Güth, W., & Ploner, M. (2011). “Being of two minds: Ultimatum offers under cognitive constraints.” *Journal of Economic Psychology*, 32(6), 940-950.

Carlson, D. K., & Herdman, O. A. (2010). “Understanding the Impact of Convergent Validity on Research Results”. *Organizational Research Methods*, 15(1), 17-32.

Carpenter, J. M., & Balija, V. (2010). “Retail format choice in the US consumer electronics market”. *International Journal of Retail & Distribution Management*, 38(4), 258-274.

Cases, A.-S. (2002). “Perceived risk and risk-reduction strategies in Internet shopping”. *The International Review of Retail, Distribution and Consumer Research*, 12(4), 375-394.

Celsi, R. L., & Olson, C. J. (1988). “The Role of Involvement in Attention and Comprehension Processes”. *Journal of Consumer Research*, 210-224.

Chang, H. H., & Chen, S. W. (2008). “The impact of online store environment cues on purchase intention: Trust and Perceived Risk as Mediator”. *Online Information Review*, 818-841.

Chang, M. K., Cheung, W., & Lai, V. S. (2005). “Literature derived reference models for the adoption of online shopping”. *Information & Management*, 42(4), 543-559.

Chen, Y.-H., & Barnes, S. (2007). “Initial trust and online buyer behavior”. *Industrial Management & Data Systems*, 21-36. doi:https://doi.org/10.1108/02635570710719034

Chen, Y., & Yang, Z. (2020). “The behavioral analysis of choice difficulty states during clothing online shopping”. *International Journal of Clothing Science and Technology*, 33(4), 577-589.DOI://doi.org/10.1108/IJCST-12-2019-0189.

Chen, Y.-Y. (2012). “Why Do Consumers Go Internet Shopping Again? Understanding the antecedents of Repurchase Intention”. *Journal of Organizational Computing and Electronic Commerce*, 22(1), 38-63.

Cheung, C. M., Lee, M. K., & Thadani, D. R. (2009). The Impact of Positive Electronic Word-of-Mouth on Consumer Online Purchasing Decision. Visioning and Engineering the Knowledge Society. A Web Science Perspective. WSKS 2009.Lecture Notes in Computer Science (pp. 501-510). Berlin, Heidelberg: Springer.

Chiang, K.-P., & Dholakia, R.-R. (2003). “Factors Driving Consumer Intention to Shop Online: An Empirical Investigation”. *Journal of Consumer Psychology*, 13(1-2), 177-183.

Childers, T. L., Carr, L. C., Peck, J., & Carson, S. (2001). “Hedonic and Utilitarian Motivations for Online Shopping Behaviour”. *Journal of Retailing*, 77(4), 511-535.

Chin, W. (1998). The partial least squares approach to structural equation modeling. In W. Chin, Modern methods for business research (pp. 295-358). Lawrence Erlbaum Associates Publishers.

Chiu, H.-C., Hsieh, Y.-C., Roan, J., JenTseng, K., & Kuei Hsieh, J. (2011). "The challenge for multichannel services: Cross-channel free-riding behavior". *Electronic Commerce Research and Applications*, 10(2), 268-277.

Chung, H., & Zhao, X. (2015). "Humour effect on memory and attitude: moderating role of product involvement". *International Journal of Advertising*, 117-144.

Churchill, G. A. (1979). "A Paradigm for Developing Better Measures of Marketing Constructs". *Journal of Marketing Research*, 64-73.

Clark, P. W., & Das, N. (2009). "Exploring the use of E-CRM elements and effective website design as tools for reducing consumer post purchase". *Journal of Technology Research*, 1, 1-8.

Conway, J. M., & Huffcutt, A. I. (2003). Organizational Research Methods. Organizational Research Methods, 6(2), 147-168.

Cooper, J., & Fazio, R. H. (1984). A New Look at Dissonance Theory. Advances in Experimental Social Psychology, 17, 229-266.

Coppola, D. (2021, April). E-commerce worldwide - Statistics & Facts. Retrieved from Statista: https://www.statista.com/topics/871/online-shopping/

Costanzo, P. J. (2013). "Revisiting Cognitive Dissonance Theory: Pre-Decisional Influences and the Relationship to the Consumer Decision-Making Model". *Atlantic Marketing Journal*, 2(1), 42-49.

Costanzo, P. J. (2013). "Revisiting Cognitive Dissonance Theory: Pre-Decisional Influences and the Relationship to the Consumer Decision-Making Model". *Atlantic Marketing Journal*, 2(1), 42-49.

Credence Research. (2018). https://www.businesswire.com/news/home/20191024005881/en/India-Online-Retailing-in-the-Consumer-Electronics-Appliances-CEA-Market-2019-2026. Credence Research. Retrieved from https://www.credenceresearch.com/report/consumer-electronic-accessories-market

Crespo, H. A., Bosque, I. R., & Sanchez, M. d. (2009). "The influence of perceived risk on Internet shopping behavior: a multidimensional perspective." *Journal of Risk Research*, 12(2), 259-277.

Creswell, J. (2007). Qualitative Inquiry and Research Design: Choosing Among Five Approaches. Thousand Oaks: SAGE PUBLICATIONS.

Creswell, J. W., & Clark, V. L. (2017). Designing and Conducting Mixed Methods Research. Los Angeles: Sage.

Crotty, M. (2003). The foundations of social research: Meaning and perspective in the research process. Thousand Oaks, CA: Sage.

Cummings, W. H., & Venkatesan, M. (1976). "Cognitive Dissonance and Consumer Behaviour: A review of the evidence." *Journal of Marketing Research,* 13(3), 303-308.

Dahlén, M., Ekborn, Y., & Mörner, N. (2000). "To click or not to click: An empirical study of response to banner ads for high and low involvement products." *Consumption Markets & Culture*, 57-76.

Darley, W., Blankson, C., & Luethge, D. J. (2010). "Toward an Integrated Framework for Online Consumer Behavior and Decision Making Process: A review. Psychology & Marketing," 94-116.

Daryl, J. B. (1972). "Self-Perception Theory. Advances in Experimental and Social Psychology", 2-62.

Davis, F., Gnanasekar, M. B., & Parayitam, S. (2021). Trust and product as moderators in online shopping behavior: evidence from India. South Asian Journal of Marketing, 2(1), 28-50.

Day, G. S. (1970). "Buyer Attitudes and Brand Choice Behavior." *American Behavioural Scientist*, 14(1).

Dayal, S., & Palsapure, D. (2020). "A study on the individual's online shopping continuance intention on Amazon.in for consumer electronics." *International Journal of Business and Globalisation*, 24(2), 241-255.

De Vaus, D. (2002). Surveys in Social Research. Routledge.

Delafrooz, N., Paim, H. L., Haron, S. A., Sidin, M. S., & Khatibi, A. (2009). "Factors affecting students' attitude toward online shopping". *African Journal of Business Management*, 200-209.

Dennis, C., Merrilees, B., Jayawardhena, C., & Wright, T. L. (2009). "E-Consumer Behaviour". *European Journal of Marketing*, 43(9/10), 1121-1139.

Dens, N., & De Pelsmacker, P. (2010). "Advertising for extensions: Moderating effects of extension type, advertising strategy, and product category involvement on extension evaluation". *Marketing Letters*, 21, 175-189.

DeVellis, R. F. (2005). Inter-Rater Reliability. In K. Kempf-Leonard, Encyclopedia of Social Measurement (pp. 317-322). Elsevier.

Dewey, J. (1910). How we think? Boston, New York, Chicago: D. C. HEATH & CO., PUBLISHERS.

Diamantopoulos, A., & Siguaw, J. (2000). Introducing Lisrel. London: Sage Publications.

Dickinson, D. L., & Oxoby, R. J. (2011). "Cognitive dissonance, pessimism, and behavioral spillover effects". *American Psychological Association*, 32(3), 295-306.

Donthu, N., & Garicia, A. (1999). "The Internet Shopper". *Journal of Advertising Research*, 39(3), 52.

Doolin, B., Dillon, S., & Corner, J. L. (2006). Determinants of online purchasing behaviour In Advanced Topics in Global Information Management. Retrieved from Idea group.

Dulock, H. L. (1993). "Research Design: Descriptive Research". *Journal of Pediatric Hematology/Oncology Nursing*, 10(4), 154-157.

Ecommerce Guide. (2020). Top 10 Ecommerce Sites in India 2020. Retrieved from Ecommerce guide: https://ecommerceguide.com/top/top-10-ecommerce-sites-in-india/

Ehrlich, D., Guttman, I., Peter , S., & Mills, J. (1957). "Post decision exposure to relevant information". *The Journal of Abnormal and Social Psychology*, 54(1), 98-102

Eiser, J. R., Sutton, S. R., & Wober, M. (1978). ""Consonant" and "dissonant" smokers and the self-attribution of addiction". *Addictive Behaviours*, 3(2), 99-106.

Elliot, A. J., & Devine, P. G. (1994). "On the motivational nature of cognitive dissonance: Dissonance as psychological discomfort". *Journal of Personality and Social Psychology*, 382-394.

Engel, J. F. (1963). "Are Automobile Purchasers Dissonant Consumers?" *American Marketing Association*, 27(2).

Engel, J. F., Kollat, D. T., & Blackwell, R. D. (1968). Consumer Behavior. New York: New York, Holt, Rinehart, and Winston.

Fasolo, B., Hertwig, R., & Huber, M. (2009). Size, Entropy, and Density: What is the difference that makes the difference between small and large real world assortments. Psychology & Marketing, 254-279. DOI: https://doi.org/10.1002/mar.20272.

Festinger, L. (1957). A Theory of Cognitive Dissonance. Palo Alto: Stanford University Press.

Festinger, L., & Carlsmith, J. M. (1959). "Cognitive Consequences of Forced Compliance". *The Journal of Abnormal and Social Psychology*, 58(2), 113-122.

Festinger, L., Riecken, H. W., & Schnachter, S. (1956). Reactions to disconfirmation. When Prophecy Fails, 193-215.

Field, A. (2005). Discovering Statistics Using SPSS (Second Edition ed.). Sage Publications.

Flanagin, A., Metzger, M., Pure, R., Markov, A., & Hartsell, E. (2014). "Mitigating risk in ecommerce transactions: perceptions of information credibility and the role of user-generated ratings in product quality and purchase intention". *Electronic Commerce Research*, 14, 1-23.

Flavian, C., Gurrea, R., & Carlos, O. (2020). "Combining channels to make smart purchases: The role of webrooming and showrooming". *Journal of Retailing and Consumer Services*. 52,1-11. doi:https://doi.org/10.1016/j.jretconser.2019.101923

Fornell, C., & Larcker, D. (1981). "Evaluating structural equation models with unobservable variables and measurement error". *Journal of Marketing Research*, 18(1), 39-50.

Forsythe, S., Liu, C., & Gardner, C. L. (2006). "Development of a scale to measure the perceived benefits and risks of online shopping". *Journal of Interactive Marketing*, 20(2), 55-75.

Frey, B. B. (2018). The SAGE Encyclopedia of Educational Research, Measurement, and Evaluation. Thousand Oaks: Sage Publications inc.

Gall, M. D., Borg, W. R., & Gall, J. P. (1996). Educational research: An introduction (6th Edition ed.). Longman Publishing.

Ganjoo, S. (2021, March). How Covid-19 changed consumption of home appliances, electronic devices in India. Retrieved from HITech: https://tech.hindustantimes.com/tech/news/how-covid-19-changed-consumption-of-home-appliances-electronic-devices-in-india-71617189275249.html

Garbarino, E., & Strahilevitz, M. (2004). "Gender Differences in the Perceived Risk of Buying Online and the Effects of Receiving a Site Recommendation". *Journal of Business Research*, 57(7), 768-775.

Gbadamosi, A. (2009). "Cognitive dissonance: The implicit explication in low-income consumers' shopping behaviour for "low-involvement" grocery products." *International Journal of Retail & Distribution Management*, 1077-1095.

Gefen, D. (2000). "E-commerce: the role of familiarity and trust". *Omega*, 28(6), 725-737. doi:https://doi.org/10.1016/S0305-0483(00)00021-9

Gefen, D., & Straub, D. (1997). "Gender differences in the perception and use of e-mail: An extension to the technology acceptance model". *MIS Quarterly*, 21(4), 389-400.

Gefen, D., Karahanna, E., & Straub, D. W. (2003). "Trust and TAM in Online Shopping: An Integrated Model". *MIS Quarterly*, 51-90.

Gehrt, C. K., Rajan, N. M., Shainesh, G., Czerwinski, D., & O'Brien, M. (2012). "Emergence of online shopping in India: shopping orientation segments". *International Journal of Retail & Distribution Management*, 40(10), 742-758.

George, B. P., & Edward, M. (2009). "Cognitive Dissonance and Purchase Involvement in the Consumer Behaviour Context". *The IUP Journal of Marketing Management*, VIII (3&4), 1-19.

Gerard, H. B. (1967). "Choice difficulty, dissonance, and the decision sequence". *Journal of Personality*, 91-108.

GfK Futurebuy. (2015). Channel collision: drivers of online and in-store shopping are not as sharply divided as you think. Nuremberg: Growth for future Knowledge (GfK).

Gilly, C. M., & Wolfinbarger, M. (2000). “A comparison of consumer experiences with online and offline shopping”. *Consumption Markets & Culture,* 4(2),187-205,DOI: 10.1080/10253866.2000.9670355.

Gliner, J. A., Morgan, A. G., & Leech, L. N. (2016). Research Methods in Applied Settings. New York: Routledge. Retrieved from https://doi.org/10.4324/9781315723082

Goldsmith, R. E., & Horowitz, D. (2013). “Measuring Motivations for Online Opinion Seeking”. *Journal of Interactive Advertising*, 6(2), 2-14.

Goldstein Market Intelligence. (2020). India Consumer Electronics Industry Analysis: Market Share, Scope, Key Drivers, Trends, Opportunity Assessment, Demand, Outlook, Research Report, & Forecast 2017-2025. Noida: Goldstein Market Intelligence. Retrieved from https://www.goldsteinresearch.com/report/india-consumer-electronic-industry

Government of India. (2008). Report of the Sixth Central Pay Commission. New Delhi: Government of India. Retrieved from https://pensionersportal.gov.in/sixthcpc/paycommissionreport.pdf

Goyette, I., Ricard, L., Bergeron, J., & Marticotte, F. (2010). “e-WOM Scale: word-of-mouth measurement scale for e-services context”. *Canadian Journal of Administrative Services*, 27(1), 5-23.

Graff, J., & Kittipong, S. (2012). “Post-purchase cognitive dissonance – evidence from the mobile phone marketing.” *International Journal of Technology Marketing*, 32-45.

Grazioli, S., & Jarvenpaa, S. L. (2000). “Perils of Internet fraud: an empirical investigation of deception and trust with experienced Internet consumers”. *IEEE Transactions on Systems, Man, and Cybernetics - Part A: Systems and Humans*, 30(4), 395-410. doi:10.1109/3468.852434

Greenwald, A. G., & Leavitt, C. (1984). “Audience Involvement in Advertising: Four Levels”. *Journal of Consumer Research*, 11(1), 581-592.

Gregory-Smith, D., Smith, A., & Winklhofer, H. (2013). “Emotions and dissonance in ‘ethical’ consumption choices”. *Journal of Marketing Management*, 29(11-12), 1021-1223.

Grix, J. (2004). The Foundations of Research. New York: Palgrave Macmillan.

Gu, B., Park, J., & Konana, P. (2012). Research Note: The Impact of External Word-of-Mouth Sources on Retailer Sales of High-Involvement Products. Information Systems Research, 23(1), 182-196. Retrieved from https://www.jstor.org/stable/23207880?seq=1

Gunzler, D. D., & Morris, N. (2015). “A tutorial on structural equation modeling for analysis of overlapping symptoms in co-occurring conditions using MPlus”. *Tutorial in Biostatistics*, 34(24), 3246-3280.

Guru, S., Nenavani, J., Patel, V., & Bhatt, N. (2020). “Ranking of perceived risks in online shopping”. *Decision*, 47, 137-152.

GVU. (1998). GVU's 10th WWW User survey. Georgia Tech. GVU. Retrieved from http://www.gvu.gatech.edu/

Hair, F. J., William, C. B., Barry, J. B., & Rolph, E. A. (2010). Multivariate Data Analysis A Global Perspective. Pearson.

Hair, J. F., Hult, T. M., M., C., & Sarstedt, M. (2016). A Primer on Partial Least Squares Structural Equation Modeling. Newbury Park, CA: Sage Publications, Inc.

Hair, J. F., Rolph, E. A., Ronald, L., & William, C. B. (1998). Multivariate Data Analysis: With Readings. Prentice Hall.

Hair, J. F., Sarstedt, M., Ringle, C. M., & Gudergan, S. P. (2018). Advanced Issues in Partial Least Squares Structural Equation Modeling (PLS-SEM). California: Sage.

Hair, J., Volker, K., & Marko, S. (2014). “Partial Least Squares Structural Equation Modeling (PLS-SEM): An Emerging Tool for Business Research.” *European Business Review*, 26(2), 106-121.

Han, C. M., & Kim, Y. (2017). “Why Consumers Hesitate to Shop Online: Perceived Risk and Product Involvement on Taobao.com”. *Journal of Promotion Management*, 24-44.

Harmon-Jones, E. (2019). “An Introduction to Cognitive Dissonance Theory and an Overview of Current Perspectives on the Theory. In E. Harmon-Jones, & J. Mills, Cognitive Dissonance, Second Edition: Reexamining a Pivotal Theory in Psychology “. American Psychological Association. 3-23

Harmon-Jones, E., & Harmon-Jones, C. (2015). “An Action-Based Model of Cognitive Dissonance Processes”. *Current directions in Psychological Science*, 184-189.

Harmon-Jones, E., Harmon-Jones, C., Meghan, F., Sigelman, J. D., & Peter, J. (2008). “Left frontal cortical activation and spreading of alternatives: Tests of the action-based model of dissonance”. *Journal of Personality and Social Psychology*, 94, 1-15.

Harmon-Jones, E., & Judson, M. (1999). “Cognitive Dissonance: Progress on a pivotal theory in social psychology”. *American Psychological Association*.

Harris, P., Riley, F. D., & Hand, C. (2018). “Understanding multichannel shopper journey configuration: An application of goal theory”. *Journal of Retailing and Consumer Services*, 44, 108-117.

Hashim, H. N., & Murphie, J. (2007). “Branding on the web: Evolving domain name usage among Malaysian hotels”. *Tourism Management*, 621-624.

Hastie, R. (2001). “Problems for Judgment and Decision Making”. *Annual Review of Psychology*, 52, 653-683.

Haubl, G., & Murray, B. K. (2003). “Preference Construction and Persistence in Digital Marketplaces: The Role of Electronic Recommendation Agents”. *Journal of Consumer Psychology*, 13(1-2), 75-91.

Häubl, G., & Trifts, V. (2000). “Consumer Decision Making in Online Shopping Environments: The Effects of Interactive Decision Aids.” *Marketing Science*, 19(1), 4-21.

Hausknecht, D. R., Sweeney, J. C., Soutar, N. G., & Johnson, L. W. (1998). After I Had Made the Decision, I ..." Toward a Scale to Measure Cognitive Dissonance. Journal of Consumer Satisfaction Dissatisfaction and Complaining Behavior, 119-127.

Hawkins, D. I. (1972). “Reported Cognitive Dissonance and Anxiety: Some Additional Findings”. *Journal of Marketing*, 63-66.

Hawkins, D., Best, I., & Coney, R. (2004). Consumer Behavior: Building Marketing Strategy. Boston: McGrawHill.

Hennig-Thurau, T., Gwinner, K. P., Walsh, G., & Gremler, D. D. (2004). “Electronic word-of-mouth via consumer-opinion platforms: What motivates consumers to articulate themselves on the Internet?”. *Journal of Interactive Marketing*, 18(1), 38-52.

Hisrich, R. D., Dornoff, R. J., & Kernan, J. B. (1972). “Perceived Risk in Store Selection”. *Journal of Marketing Research*, 435-439.

Hoffman, L. D., Novak, T. P., & Peralta, M. (1999). “Building consumer trust online”. *Communications of the ACM*, 42(4), 80-85.

Hofstede, G. (2019). Compare Countries. Retrieved from Hofstede Insights: https://www.hofstede-insights.com/product/compare-countries/

Holmes, A., Byrne, A., & Rowley, J. (2014). “Mobile shopping behaviour: insights into attitudes, shopping process involvement and location”. *International Journal of Retail & Distribution Management*, 42(1), 25-39.

Hong, I. (2015). “Understanding the consumer’s online merchant selection process: The roles of product involvement, perceived risk, and trust expectation”. *International Journal of Information Management*, 35, 322-336. doi:https://doi.org/10.1016/j.ijinfomgt.2015.01.003

Horton, R. L. (1976). “The Structure of Perceived Risk: Some Further Progress”. *Journal of Academy of Marketing Science*, 694-709.

Hou, J. (2020). “Online Shopping Patronage: Do Demographics and Psychographics Really Matter?” *Journal of Marketing Development and Competitiveness*, 14(5), 9-19.

Howard, J. A., & Sheth, J. N. (1969). The Theory of Buyer Behaviour. New York: John Wiley & Sons.

Hoyer, D. W. (1984). “An Examination of Consumer Decision Making for a Common Repeat Purchase Product”. *Journal of Consumer Research*, 11(3), 822-829.

Hu, L.-t., & Bentler, M. P. (1999). “Cutoff criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives. Structural Equation Modeling:” *A Multidisciplinary Journal*, 6(1), 1-55.

Hu, L.-t., & Bentler, P. M. (1998). “Fit Indices in Covariance Structure Modeling: Sensitivity to under parameterized Model Misspecification”. *Psychological Methods*, 424-453.

Hu, N., Pavlou, P., & Zhang, J. (2013). “Overcoming the J-Shaped Distribution of Product Reviews*”. Communications of the ACM*, 52(10).

Hunt, S. D. (1970). “Post-transaction Communications and Dissonance Reduction”. *Journal of Marketing*, 34(3).

Hutcheson , G. D., & Sofroniou, N. (1999). The Multivariate Social Scientist Introductory Statistics Using Generalized Linear Models. Sage Publications.

Hwang, H., & Takane, Y. (2014). Generalized Structured Component Analysis. New York. Chapman & Hall.

IAMAI & IMRB Kantar. (2016). Internet in India. Bengaluru: IAMAI & IMRB Kantar.

IANS. (2021, April 12). E-commerce growth in tier-2, 3 cities outpace tier-1 Indian cities. Retrieved from ETRetail.com: https://retail.economictimes.indiatimes.com/news/industry/e-commerce-growth-in-tier-2-3-cities-outpace-tier-1-indian-cities/82024142

IBEF. (2020). Indian E-commerce Industry Analysis. New Delhi: Indian Brand Equity Foundation. Retrieved from https://www.ibef.org/archives/industry/ecommerce-reports/indian-ecommerce-industry-analysis-november-2020

IBEF. (2020). Indian E-Commerce Industry Report. New Delhi: Indian Brand Equity Foundation.

IBEF. (2021). Indian E-commerce Industry Analysis. New Delhi: Indian Brand Equity Foundation.

Iyengar, S. S., & Lepper, M. R. (2000). "When Choice is Demotivating: Can One Desire Too Much of a Good thing". *Journal of Personality and Social Psychology*, 75(6), 995-1006.

Jarvenpaa, S. L., Tractinsky, N., & Saarinen, L. (1999). "Consumer Trust in an Internet Store: A Cross-Cultural Validation". *Journal of Computer-Mediated Communication*, 5(2). Retrieved from https://doi.org/10.1111/j.1083-6101.1999.tb00337.x

Jarvenpaa, S., Knoll, K., & Leidner, D. (1998). "Is Anybody out There? Antecedents of Trust in Global Virtual Teams". *Journal of Management Information Systems*, 14(4), 29-64.

Javed, M. K., & Wu, M. (2020). "Effects of online retailer after delivery services on repurchase intention: An empirical analysis of customers' past experience and future confidence with the retailer". *Journal of Retailing and Consumer Services*, 54, 1-7.

Jeffrey, S. A., & Hodge, R. (2007). “Factors influencing impulse buying during an online purchase”. *Electronic Commerce Research*, 7, 367-379.

Jiang, P., & Rosenblom, B. (2005). “Customer intention to return online: price perception, attribute-level performance, and satisfaction unfolding over time”. *European Journal of Marketing*, 150-174.

Jing, B. (2018). “Showrooming and webrooming: Information externalities between online and offline sellers”. *Marketing Science*, 37(3), 469-483.

Kaish, S. (1967). “Cognitive Dissonance and the Classification of Consumer Goods”. *Journal of Marketing*, 31(4), 28-31.

Kandulapati, S., & Bellamkonda, R. (2014). “E-service quality: a study of online shoppers in India”. *American Journal of Business*, 29(2), 178-188.

Kassarjian, H. H. (1981). “Low Involvement: a Second Look”. *Advances in Consumer Research*,8, 31-34.

Keenan, M. (2021, May 13). Global Ecommerce Explained: Stats and Trends to Watch in 2021. Retrieved from Shopify: https://www.shopify.com/enterprise/global-ecommerce-statistics

Keeney, R. L. (1982). “Decision Analysis an Overview”. *Operations Research*, 30(5), 803-838.

Kemp, S. (2020, February). DIGITAL 2020: THE UNITED STATES OF AMERICA. Retrieved from Datareportal: https://datareportal.com/reports/digital-2020-united-states-of-america

Keng, C.-J., & Liao, T.-H. (2009). “Consequences of Postpurchase Dissonance: The Mediating Role of an External Information Search”. *Social Behavior and Personality: An International Journal*, 13(10), 1327-1339.

Keng, C.-J., & Liao, T.-H. (2013). “Self-confidence, anxiety, and post-purchase dissonance: a panel study”. *Journal of Applied Social Psychology*, 43, 1636-1647.

Khalifa, M., & Liu, V. (2007). “Online consumer retention: contingent effects of online shopping habit and online shopping experience”. *European Journal of Information Systems,*16,780-792. doi:https://link.springer.com/article/10.1057/palgrave.ejis.3000711

Khan, S., & Babar, K. (2020). Amazon, Flipkart to increase warehouses. Retrieved from Economic Times: https://economictimes.indiatimes.com/industry/services/retail/amazon-flipkart-to-increase-warehouses/articleshow/75523490.cms?from=mdr

Khraim, H. (2020). “An exploratory study on factors associated with consumers post purchase dissonance of electric vehicles”. *Innovative marketing*, 16(4), 13-23.

Kim, D. J., Ferrin, L. D., & Rao, R. H. (2008). “A trust-based consumer decision-making model in electronic commerce: The role of trust, perceived risk, and their antecedents”. *Decision Support Systems*, 44(2), 544-564.

Kim, J. D., Ferrin, L. D., & Rao, R. H. (2008). “A trust-based consumer decision-making model in electronic commerce: The role of trust, perceived risk and their antecedents”. *Decision Support Systems*, 44, 544-564.

Kim, S. Y. (2011). “Application of the Cognitive Dissonance Theory to the Service Industry”. *Services Marketing Quarterly*, 32:2, 96-112.

Koller, M., & Salzberger, T. (2007). “Cognitive dissonance as a relevant construct throughout the decision-making and consumption process - an empirical investigation related to a package tour”. *Journal of Customer Behaviour*, 11, 217-227.

Koller, M., & Salzberger, T. (2009). “Benchmarking in service marketing - a longitudinal analysis of the customer”. *Benchmarking: An International Journal,* 16(3), 401-414.

Koller, M., Salzberger, T., & Strief, G. (2008).” Cognitive Dissonance in Retail versus E-commerce – First Findings and Implications”. *Proceedings of Australian and New Zealand Market Academy.*

Korgaonkar, P. K., & Moschis, G. P. (1982). “An Experimental Study of Cognitive Dissonance,Product Involvement, Expectations, Performance and Consumer Judgement of Product Performance”. *Journal of Advertising* (11:3), 32-44. doi:10.1080/00913367.1982.10672810

Kotler, P., & Keller, K. L. (2012). Marketing Management (14 ed.). Pearson Education.

Koufaris, M., & Hampton-Sosa, W. (2004). “The development of initial trust in an online company by new customers”. *Information & Management*, 377-397.

KPMG & CII Institute of Logistics. (2018). E-Commerce Retail Logistics in India. Mumbai: KPMG. Retrieved from https://assets.kpmg/content/dam/kpmg/in/pdf/2018/05/e-commerce-retail-logistics.pdf

Kudeshia, C., & Kumar, A. (2017). “Social eWOM: does it affect the brand attitude and purchase intention of brands?”. *Management Research Review*, 40(3), 310-330.

Kuhn, T. S. (1962). “Historical Structure of Scientific Discovery”. *Science*, 136(3518), 760-764.

Kwon, W.-S., & J.Lennon, S. (2009). “What induces online loyalty? Online versus offline brand images”. *Journal of Business Research*, 62(5), 557-564.

Tucker. L.R., & Lewis, Charles (1973).” The reliability coefficient for maximum likelihood factor analysis”. *Psychometrika*, 38, 1-10.

Lake, L. (2009). Consumer Behaviour for Dummies. New Jersey: Wiley Publisher.

Larson, D. (2001). An Empirical Investigation of the Relationship Between Perceived Risk, Information Search, And Cognitive Dissonance: A Closer Look At The Differences Between In-Home And In-Store Shopping. Mississippi State University.

Lastovicka, J. L. (1979). “Questioning the Concept of Involvement Defined Product Classes”. *Advances in Consumer Research*, 174-179.

Laurent, G., & Kapferer, J.-N. (1985). “Measuring Consumer Involvement Profiles”. *Journal of Marketing Research*, 22(1), 44-53. doi:https://doi.org/10.2307/3151549

Lee, M., & Turban, E. (2001). “A Trust Model for Consumer Internet Shopping”. *International Journal of Electronic Commerce*, 6(1), 75-91. Retrieved from https://www.jstor.org/stable/27751003

Lennon, S. J., Kim, M., Johnson, K. K., Jolly, L. D., & Damhorst, M. L. (2007). “A Longitudinal Look at Rural Consumer Adoption of Online Shopping”. *Psychology & Marketing*, 375-401.

Levin, A. M., Levin, I. P., & Weller, A. J. (2005). “A Multi-Attribute Analysis of Preferences for Online And Offline Shopping: Differences Across Products, Consumers and Shopping Stages”. *Journal of Electronic Commerce Research*, 6(4), 281-290.

Lewicki, J. R., McAllister, D. J., & Bies, R. J. (1998). “Trust And Distrust: New Relationships and Realities”. *Academy of Management*, 23(3).

Lewis, R. B., Snyder, A. C., & Rainer Jr, K. (1995). “An Empirical Assessment of the Information Resource Management Construct”. *Journal of Management Information Systems*, 12(1), 199-223.

Li, M., & Chaudhary, A. H. (2020). “Using website information to reduce postpurchase dissonance: A mediated moderating role of perceived risk”. *Psychology and Marketing*, 1-14.https://doi.org/10.1002/mar.21409.

Lian, J.-W., & Yen, D. (2014).” Online shopping drivers *and barriers for older adults: Age and gender differences”. Computers* in Human Behavior, 133-143.

Liao, T.-H. (2017). “Online shopping post-payment dissonance: Dissonance reduction strategy using online consumer social experiences”. *International Journal of Information Management*, 520-538.

Lin, C. T., Chen, C. W., Wang, S. J., & Lin, C. C. (2018). “The influence of impulse buying toward consumer loyalty in online shopping: a regulatory focus theory perspective”. *Journal of Ambient Intelligence and Humanized Computing*, https://doi.org/10.1007/s12652-018-0935-8.

Lin, X., Featherman, M., Brooks, L. S., & Hajli, N. (2019). “Exploring Gender Differences in Online Consumer Purchase Decision Making: An Online Product Presentation Perspective”. *Information System Frontiers*, 1187-1201.

Lincoln, Y., & Guba, E. (2005). Paradigms and perspectives in contention. In N. K. Denzin, & S. Y. Lincoln, The SAGE Handbook of Qualitative Research (pp. 163-188). Thousand Oaks CA:Sage.

Mackenzie, N., & Knipe, S. (2006). Research dilemmas: Paradigms, methods and methodology. Issues in Educational Research, 16.

Malhotra, N., Hall, J., Shaw, M., & Peter, O. (2004). Essentials of Marketing Research: An Applied Orientation. Pearson Education Australia.

Mao, W., & Oppewal, H. (2010). “Did I choose the right university? How post-purchase information affects cognitive dissonance, satisfaction and perceived service quality”. *Australasian Marketing Journal*, 18(1), 28-35.

Marikyan, D., Papagiannidis, S., & Eleftherios, A. (2020). “Cognitive Dissonance in Technology Adoption: A Study of Smart Home Users. Information Systems” *Frontiers*, 1-23. Retrieved from https://link.springer.com/article/10.1007/s10796-020-10042-3

Martínez-López, F. J., Pla-García, C., Gázquez-Abad, J. C., & Rodríguez-Ardura, I. (2014). "Utilitarian motivations in online consumption: Dimensional structure and scales". *Electronic Commerce Research and Applications*, 13(3), 188-204.

McDonald, R., & Ho, M.-H. (2002). Principles and practice in reporting structural equation analyses. Psychological Methods.

Medda, S. (2021, February). Future of E-retailing in India: Growth and Challenges. Retrieved from Indian retailer.com: https://www.indianretailer.com/article/multi-channel/eretail/future-of-e-retailing-in-india-growth-and-challenges.a6856/

Melović, B., Šehović, D., Karadžić, V., Dabić, M., & Ćirović, D. (2021). "Determinants of Millennials' behavior in online shopping – Implications on consumers' satisfaction and e-business development". *Technology in Society*, 1-14.

Menasco, M. B., & Hawkins, D. I. (1978). "A Field Test of the Relationship between Cognitive Dissonance and State Anxiety". *Journal of Marketing Research*, 15(4), 650-655.

Mertens, D. (2005). Research methods in education and psychology: Integrating diversity with quantitative and qualitative approaches. Thousand Oaks: Sage.

Mills, J., Bonner, A., & Francis, K. (2006). "The Development of Constructivist Grounded Theory". *International Journal of Qualitative Methods*, 5(1), 25-35.

Milner, T., & Rosentreich, D. (2013). "A review of consumer decision-making models and development of a new model for financial services". *Journal of Financial Services Marketing*, 106-120.

Minemma, A., Bijmolt, T., Petersen, J., & Shulman, J. (2018). "Managing Product Returns Within the Customer Value Framework". In A. Minemma, T. H. Bijmolt, J. A. Petersen, & J. D. Shulman, Customer Engagement and Marketing (95-118). Springer.

Mittal, B. (1995). “A comparative analysis of four scales of consumer involvement”. *Psychology & Marketing*, 663-682.

MK Marketing. (2020, April). 7 Proven Methods for Reducing Shopping Cart Abandonment for E-commerce Players. Retrieved from MattsenKumar: https://www.mattsenkumar.com/ecommerce-cart-abandonment-rate/

Montgomery, C., & Barnes, J. H. (1993). “POSTDIS: A short rating scale for measuring post purchase dissonance”. *Journal of Consumer Satisfaction, dissatisfaction and complaining behaviour*, 6, 204-216.

Moorman, C., Zaltman, G., & Deshpande, R. (1992). “Relationships between Providers and Users of Market Research: The Dynamics of Trust within and between Organizations”. *Journal of Marketing Research*, 314-328.

Morgan, R. M., & Hunt, S. D. (1994). “The Commitment-Trust Theory of Relationship Marketing”. *Journal of Marketing*, 20-38.

Mousavi, R., Hazarika, B., Chen, K., & Rienzo, T. (2020). “The role of dissonance reduction and co-creation strategies in shaping smart service satisfaction- the case of Uber”. *Behaviour and Information Technology*, 1-21.DOI:https://doi.org/10.1080/0144929X.2020.1795258. doi:https://doi.org/10.1080/0144929X.2020.1795258

Mowen, J. C. (1995). Consumer Behavior. Engelwoods NJ: Prentice-Hall.

Mukherjee, W. (2017, October). Paytm Mall says FMCG has become the highest selling product by volume. Retrieved from The Economic Times: https://economictimes.indiatimes.com/industry/cons-products/fmcg/paytm-mall-says-fmcg-has-become-the-highest-selling-product-by-volume/articleshow/61024288.cms?from=mdr

Nguyen, N. M., & Nguyen, H. (2020). “How do product involvement and prestige sensitivity affect price acceptance on the mobile phone market in Vietnam?”

Journal of Asia Business Studies, 14(3.https://doi.org/10.1108/JABS-07-2017-0096), 379-398.

Nielsen Report. (2017). What's next in E-commerce understanding the omni channel consumer. Nielsen. Retrieved from https://www.nielsen.com/content/dam/nielsenglobal/de/docs/Nielsen_Whats-next-in ecommerce_2017

Nordvall, A.-C. (2014). "Consumer Cognitive Dissonance Behavior in Grocery Shopping". *International Journal of Psychology and Behavioral Sciences*, 128-135.

Nunnally, J. (1978). Psychometric Theory. New York: McGraw-Hill.

Nunnally, J. C. (1967). Psychometric Theory. New York: McGraw-Hill.

O'Cass, A. (2004). "Fashion clothing consumption: antecedents and consequences of Fashion clothing involvement". *European Journal of Marketing*, 38(7), 869-881. doi:10.1108/03090560410539294

Oghazi, P., Karlsson, S., Hellströmb, D., & Hjort, K. (2018). "Online purchase return policy leniency and purchase decision: Mediating role of consumer trust". *Journal of Retailing and Consumer Services*, 41, 190-200.

Oliver, R. L. (1980). "A Cognitive Model of the Antecedents and Consequences of Satisfaction Decisions". *Journal of Marketing Research*, 17(4), 460-469.

Oliver, R. L. (1997). Satisfaction: A Behavioral Perspective on the Consumer (Second ed.). New York: Routledge. doi:https://doi.org/10.4324/9781315700892

Oloveze, A. O., Ogbonna, C., Ahaiwe, E., & Ugwu, P. A. (2021). "From offline shopping to online shopping in Nigeria: evidence from African emerging economy". *IIM Ranchi Journal of Management Studies*, 1(1), 55-68.

Olshavsky, R. W., & Rosen, D. L. (1985). "Use of Product-Testing Organizations' Recommendations as a Strategy for Choice Simplification". *The Journal of Consumer Affairs*, 19(1), 118-139.

Oshikawa, S. (1969). “Can Cognitive Dissonance Theory Explain Consumer Behavior”. *Journal of Marketing*, 33(4), 44-49.

Oshikawa, S. (1972). “The Measurement of Cognitive Dissonance: Some Experimental Findings”. *Journal of Marketing,* 36(1).

Özyörük, H. E. (2021). “What’s going on in my mind? The effects of cognitive differences on buying impulsiveness, cognitive dissonance and price consciousness”. *International Journal of Consumer Studies*, 46(3), 1-18.

Pandey, A. C., & Jamwal, M. (2015). “Realizing the Impact of Cognitive Dissonance in Predicting Consumer Behavior”. *Journal of Social Sciences*, 36-41.

Pappas, I. O., Pateli, A. G., Giannakos, M. N., & Chrissikopoulos, V. (2014). “Moderating effects of online shopping experience on customer satisfaction and repurchase intentions.” *International Journal of Retail & Distribution Management*, 42(3), 187-204.

Park, D-H., & Kim, S. (2008). “The effects of consumer knowledge on message processing of electronic word-of-mouth via online consumer reviews”. *Electronic Commerce and Research Applications.*7(4), 399-410.

Park, E., Kim, K., & Kwon, S. (2017). “Corporate social responsibility as a determinant of consumer loyalty: An examination of ethical standard, satisfaction, and trust”. *Journal of Business Research*, 8-13.

Park, I., Cho, J., & Rao, H. R., (2015). “The Dynamics of Pre- and Post-purchase Service and Consumer Evaluation of Online Retailers: A comparative analysis of Dissonance and Disconfirmation Models”. *Decision Sciences,* 1109-1140.

Park, I., Cho, J., & Rao, H. R. (2012). “The effect of pre- and post-service performance on consumer evaluation of online retailers”. *Decision Support Systems*, 52(2), 415-426. DOI:https://doi.org/10.1016/j.dss.2011.10.001.

Pei, Z. (2013). “Rational decision making models with incomplete weight information for production line assessment”. *Information Sciences*, 222(10), 696-716.

Peterson, R. A., & Merunka, D. R. (2014). “Convenience samples of college students and research reproducibility”. *Journal of Business Research*, 67(5), 1035-1041.

Phang, C., Kankanhalli, A., Ramakrishnan, K., & Raman, S. K. (2010). “Customers’ preference of online store visit strategies: an investigation of demographic variables”. *European Journal of Information Systems*, 344-358.

Phelps, J., Nowak, G., & Ferrel, E. (2000). “Privacy Concerns and Consumer Willingness to Provide Personal Information”. *Public policy & Marketing*, 19(1), 27-41.

Pinto, V. S. (2020). Covid-19 lockdown effect: Every second Indian now on internet in cities. Retrieved from Business Standard: https://www.business-standard.com/article/economy-policy/covid-19-lockdown-effect-every-second-indian-now-on-internet-in-cities-120050801805_1.html

Polit, D., & Beck, C. (2017). Nursing Research: Generating and Assessing Evidence for Nursing Practice. Philadelphia PA: Wolters Kluwer/Lippincott Williams & Wilkins.

Pourfakhimi, S., Duncan, T., & Coetzee, W. (2020). “Electronic word of mouth in tourism and hospitality consumer behavior: state of art”. *Tourism review*, 75(4), 637-661.

Powers, T. L., & Jack, P. E. (2015). “Understanding the causes of retail product returns”. *International Journal of Retail & Distribution and Management*, 43(12), 1182-1202.

PTI. (2020, December). Flipkart narrows loss to Rs 3,150.6 crore in FY20. Retrieved from The Economic Times: https://economictimes.indiatimes.com/industry/services/retail/flipkart-narrows-loss-to-rs-3150-6-crore-in-fy20/articleshow/79515483.cms?from=mdr

PTI. (2020, July 25). Government notifies new rules for e-commerce entities. Retrieved from ETretail.com: https://retail.economictimes.indiatimes.com/news/e-commerce/e-tailing/why-e-tailers-are-upset-over-indias-new-draft-e-commerce-rules/83772441

Punj, G. (2012). “Consumer Decision Making on the Web: A Theoretical Analysis and Research Guidelines”. *Psychology & Marketing*, 791-803.

Rajamma, R. K., Paswan, A. K., & Hossain, M. M. (2009). “Why do shoppers abandon shopping cart? Perceived waiting time, risk and transaction inconvenience”. *Journal of Product and Brand Management*, 18(3), 188-197.

Rassuli, K. M., & Harrell, G. D. (1990). A New Perspective on Choice. Advances in Consumer Research, 17, 737-744.

Rasty, F., Mirghafoori, S. H., Ardekani, S. S., & Ajdari, P. (2020). “Trust barriers to online shopping: Investigating and prioritizing trust barriers in an intuitionistic fuzzy environment”. *International Journal of Consumer Studies*, 45(5), 1030-1046.

Reichheld, F. E., & Schefter, P. (2000, July-August). E-Loyalty: Your Secret Weapon on the Web. Harvard Business Review, pp. 105-113.

Reuters. (2021, June). India's new e-commerce rules that could jolt foreign, local players. Retrieved from Economic Times: https://retail.economictimes.indiatimes.com/news/e-commerce/e-tailing/indias-new-e-commerce-rules-that-could-jolt-foreign-local-players/83767066

Reutskaja, E., & Hogarth, R. M. (2005). Satisfaction in choice as a function of the number of alternatives: When "goods satiate" but "bads escalate". Barcelona: Working paper ref. 903,Universitat Pompeu Fabra, Department of Economics and Business.

Reyes-Mercado, P., Karthik, M., Mishra, R. K., & Rajagopal. (2017). “Drivers of consumer attitudes towards online shopping in the Indian market: analysis through an

extended TAM model". *International Journal of Business Innovation and Research*, 326-343.

Richards, K. (2003). Qualitative inquiry in TESOL. Palgrave Macmillan.

Robbins, S. P., & Judge, T. (2009). Organizational Behaviour. South Africa: Pearson.

Rubin, D., Martins, C., Ilyuk, V., & Hildebrand, D. (2020). "Online shopping cart abandonment: a consumer mindset perspective". *Journal of Consumer Marketing*, 37(5), 487-499.

Saleh, K. (2021, April). E-commerce Product Return Rate – Statistics and Trends [Infographic]. Retrieved from INVESP: https://www.invespcro.com/blog/ecommerce-product-return-rate-statistics/

Salman, S. H. (2018, June 8th). Online retail sales in India seen growing to $32.7 billion this year. Retrieved from Livemint: https://www.livemint.com/Industry/7ahYCsvi9A99lznYTi0VFP/Online-retail-sales-in-India-seen-growing-to-327-billion-t.html

Salzberger, T., & Koller, M. (2010). "Investigating the Impact of Cognitive Dissonance and Customer Satisfaction on Loyalty and Complaint Behavior". *Brazilian Journal of Marketing*, 9(1).

Salzberger, T., & Koller, M. (2005). "Cognitive dissonance - reconsidering an important and wellestablished phenomenon in consumer behaviour research". Proceedings of the Anzmac Conference 2005, (290-296).

San Martin, S., Camarero, C., & Jose, S. R. (2011). "Does involvement matter in online shopping satisfaction and trust?" *Psychology & Marketing*, 145-167.

Saunders, M. N., Lewis, D., & Thornhill, A. (2015). Research Methods for Business Students, 7th Edition. Pearson.

Saunders, M. N., Lewis, P., & Thornhill, A. (2019). Research Methods for Business Students. Pearson Publication.

Schibrowsky, J. A., Peltier, J. W., & Nill, A. (2007). “The state of internet marketing research: A review of the literature and future research directions”. *European Journal of Marketing*, 41(7/8), 722-733.https://doi.org/10.1108/03090560710752366.

Schiffman, L. G., & Kanuk, L. L. (2007). Consumer Behavior (9th Edition ed.). Upper Saddle River, N.J: Pearson Prentice Hall.

Schwartz, B., Ward, A., Monterosso, J., Lyubomirsky, S., White, K., & Lehman, D. (2002). “Maximizing Versus Satisficing: Happiness Is a Matter of Choice”. *Journal of Personality and Social Psychology*, 83(5), 1178-1197.

Sekaran, U., & Bougie, R. (2016). Research Methods For Business: A Skill Building Approach, 7th Edition. Wiley.

Sen, S., & Lerman, D. (2007). “Why are You Telling me This? An Examination into Negative Consumers Reviews on the Web”. *Journal of Interactive Marketing*, 21(4), 76-94.

Seo, J.-I., Hathcote, J.-M., & Sweaney, A.-L. (2001). “Casualwear shopping behaviour of college men in Georgia, USA”. *Journal of Fashion Marketing and Management, 208-222.*

Shang, B., & Bao, Z. (2020). “How Repurchase Intention Is Affected in Social Commerce? An Empirical Study”. *Journal of Computer Information Systems*, 1-12.

Sharifi, S., & Esfidani, M. (2014). “The impacts of relationship marketing on cognitive dissonance, satisfaction, and loyalty”. *International Journal of Retail & Distribution Management*, 42(6), 553-575.

Sheth, A., Unnikrishnan, S., Bhasin, M., & Raj, A. (2021). How India Shops Online 2021. Bain & Company. Retrieved from https://www.bain.com/insights/how-india-shops-online-2021/

Sheth, J. N., Newman, B., & Gross, B. (1991). “Why we buy what we buy: A theory of consumption values”. *Journal of Business Research*, 22(2), 159-170.

Shultz, T., & Lepper, M. R. (1996). “Cognitive dissonance reduction as constraint satisfaction”. *Psychological Review*, 103(2), 219-240.

Simon, H. A. (1960). The New Science of Management Decision. New York: Harper and Row.

Singh, M. (2021, July). How Offline Retail Stores Are Focusing On the Hybrid Business Model. Retrieved from IndianRetailer.com: https://www.indianretailer.com/article/whats-hot/retail-trends/how-offline-retail-stores-are-focusing-on-the-hybrid-business-model.a7219/

Smith, A. D., & Rupp, W. T. (2003). “Strategic online customer decision making: leveraging the transformational power of the internet”. *Online Information Review*, 27(6), 418-432.DOI:10.1108/14684520310510055.

Solomon, R. M. (1986). “The Missing Link: Surrogate Consumers in the Marketing Chain”. *Journal of Marketing*, 50(4), 208-218.

Soutar, G., & Sweeney, J. (2003). “Are There Cognitive Dissonance Segments?” *Australian Journal of Management*, 28(3), 227-249.

Spiggle, S., & Sewall, A. M. (1987). “A Choice Sets Model of Retail Selection”. *Journal of Marketing*, 51(2), 97-111.

Srinivasan, R. (2015). “Exploring the Impact of Social Norms and Online Shopping Anxiety in the Adoption of Online Apparel Shopping by Indian Consumers”. *Journal of Internet Commerce*, 177-199.

Statista. (2022). Consumer Electronics. Retrieved from Statista: https://www.statista.com/markets/418/topic/485/consumer-electronics/#overview

Statista. (2022, April). Share of online shoppers who made purchases on social media worldwide as of April 2021, by age group. Retrieved from Statista:

https://www.statista.com/statistics/1273928/share-social-buyers-age-group-worldwide/

Steele, C. M. (1988). “The Psychology of Self-Affirmation: Sustaining the Integrity of the Self”. *Advances in Experimental Social Psychology*, 21, 261-302.

Strubel, J., & Petrie, T. A. (2016). “The clothes make the man: The relation of sociocultural factors and sexual orientation to appearance and product involvement”. *Journal of Retailing and Consumer Services,* 1-7.

Sujan, H. (2001). “The 3M Model of Motivation and Personality: Theory and Empirical Applications to Consumer Behavior”. *Journal of Marketing Research*, 38(3), 396-397.

Sullivan, W. Y., & Kim, J. D. (2018). “Assessing the effects of consumers’ product evaluations and trust on repurchase intention in e-commerce environments.” *International Journal of Information Management*, 199-219.

Sweeney, J. C., Hausknecht, D., Soutar, G. N., & Johnson, L. W. (2000). “Cognitive dissonance after purchase: A multidimensional scale”. *Psychology & Marketing*, 17(5), 369-385.

Sweeney, J., & Mukhopadhyay, T. (2004). “Cognitive Dissonance after Purchase: A Comparison of Bricks and Mortar and Online Retail Purchase Situations”. 15. San Antonio, Texas: American Marketing Association.

Swinyard, W., & Smith, S. (2003). “Why people (don't) shop online: A lifestyle study of the internet consumer”. *Psychology & Marketing*, 20(7), 567-597.

Szymanski, D. M., & Henard, H. D. (2001). “Customer satisfaction: A meta-analysis of the empirical evidence”. *Journal of the Academy of the Marketing Science*, 29(16), https://doi.org/10.1177/0092070301291002.

Tan, S. (1999). “Strategies for reducing consumers’ risk aversion in Internet shopping”. *Journal of Consumer Marketing*, 16(2), 163-180.

Tandon, U. (2021). “Predictors of Online Shopping in India: an empirical investigation”. *Journal of Marketing Analytics*, 9, 65-79.

Tandon, U., & Sakshi. (2020). “An empirical investigation of pay-on-delivery mode of payment and social media constructs as predictors for online purchase inentions”. *Journal of Public Affairs*, 22(2), 1-10.

Tandon, U., Kiran, R., & Sah, A. (2018). “The influence of website functionality, drivers and perceived risk on customer satisfaction in online shopping: an emerging economy case”. *Information Systems and e-Business Management volume*, 57-91.

Tandon, U., Kiran, R., & Sah, A. N. (2017). “Understanding barriers and drivers to online shopping: an emerging economy case”. *International Journal of Electronic Business*, 13(2/3), 216-243. doi:DOI: 10.1504/IJEB.2017.083326

Tandon, U., Mittal, A., & Manohar, S. (2020). “Examining the impact of intangible product features and e-commerce institutional mechanics on consumer trust and repurchase intention”. *Electronic Markets*. 31, 945-964, Retrieved from https://link.springer.com/article/10.1007/s12525-020-00436-1

Tanford, S., & Montgomery, R. (2014). “The Effects of Social Influence and Cognitive Dissonance on Travel Purchase Decisions”. *Journal of Travel Research*, 54(5), 596-610.

Tedeschi, J. T., Schenkler, B. R., & Bonoma, T. V. (1971). “Cognitive dissonance: Private ratiocination or public spectacle?”. *American Psychologist*, 26(8), 685-695.

Telci, E. E., Maden, C., & Kantur, D. (2011). “The theory of cognitive dissonance: a marketing and management perspective”. *Procedia Social and Behavioural Sciences*, 24, 378-386.

Tiwari, M. (2020, September). Rising Trend Of Online Retailing In Consumer Electronics & Appliances Segment In India. Retrieved from IndianRetailer.com: https://www.indianretailer.com/article/whats-hot/trends/rising-trend-of-online-

retailing-in-consumer-electronics-appliances-segment-in-india.a6682/#:~:text=The%20online%20consumer%20electronics%20and,study%20conducted%20by%20Frost%20%26%20Sullivan.

Tomar, V. S., Tomar, R. S., & Khattri, V. (2020). "Moderating Role of Brand Trust on Offline vs Online Shoppers and its Impact on Cognitive Dissonance". *Indian Journal of Marketing*, 50(8-9), 66-79.

Tyebjee, T. T. (1979). "Response Time, Conflict, and Involvement in Brand Choice". *Journal of Consumer Research*, 295-304.

Ufford, L. (2017, May). 6 Examples of Retail Gamification to Boost Engagement and Sales. Retrieved from Shopify: https://www.shopify.in/retail/6-examples-of-retail-gamification-to-boost-engagement-and-sales

United Nations. (2021, May 3). Global e-commerce jumps to $26.7 trillion, fuelled by COVID-19. Retrieved from UN News: https://news.un.org/en/story/2021/05/1091182

Vance, A., Elie-Dit,-Cosaque, C., & Straub, D. W. (2014). "Examining Trust in Information Technology Artifacts: The Effects of System Quality and Culture". *Journal of Management Information Systems*, 73-100.

Vandenberg, W. L., Vandenberg, R. J., & Edwards, J. R. (2009). "Structural equation modeling in management research: A guide for improved analysis". *The Academy of Management Annals*, 3(1), 543-604.

Vollero, A., Sardanelli, D., & Siano, A. (2020). "Exploring the role of the Amazon effect on customer expectations: An analysis of user-generated content in consumer electronics retailing". *Journal of Consumer Behavior*. doi:https://doi.org/10.1002/cb.1969

Voramontri, D., & Klieb , L. (2019). "Impact of social media on consumer behavior". *International Journal of Information and Decision Sciences*, 209-233.

Westbrook, R. A. (1987). “Product/Consumption-Based Affective Responses and Postpurchase Processes”. *Journal of Marketing Research*, 24(3), 258-270.

Wilkins, S., Beckenuyte, C., & Butt, M. M. (2016). “Consumers’ behavioural intentions after experiencing deception or cognitive dissonance caused by deceptive packaging, package downsizing or slack filling”. *European Journal of Marketing*, 50(1/2), 213-235.

Wilkins, S., Butt, M. M., & Heffernan, T. (2017).” International brand alliances and co-branding: antecedents of cognitive dissonance and student satisfaction with co-branded higher education programs”. *Journal of Marketing for Higher Education*, 28(1), 32-50.

Willemsen, M. C., Graus, M. P., & Knijnenburg, B. P. (2016). “Understanding the role of latent feature diversification on choice difficulty and satisfaction”. *User Modeling and User-Adapted Interaction*, 26, 347-389.

Winter, S., Metzger, J. M., & Flanagin, J. A. (2016). “Selective Use of News Cues: A Multiple-Motive Perspective on Information Selection in Social Media Environments”. *Journal of Communication*, 66(4), 669-693. https://doi.org/10.1111/jcom.12241.

Wong, R. M., Wong, S. C., & Ke, G. N. (2018). “Exploring online and offline shopping motivational values in Malaysia”. *Asia Pacific Journal of Marketing and Logistics*, 30(2), 352-379.

Workman, J. E., & Lee, S.-H. (2019). “Fashion trendsetting, attitudes toward money, and tendency to regret”. *International Journal of Retail & Distribution Management*, 47(11), 1203-1222.

Wu, I.-C., & Yu, H.-K. (2020). “Sequential analysis and clustering to investigate users’ online shopping behaviors based on need-states”. *Information Process & Management*, 57(6), 1-18.

Wu, W.-Y., Quyen, P., & Rivas, A. A. (2017). “How e-service scapes affect customer online shopping intention: the moderating effects of gender and online purchasing experience”. *Information Systems and e-Business Management*, 689-715.

Xiao, B., & Benbasat, I. (2014). Research on the Use, Characteristics, and Impact of e-Commerce Product Recommendation Agents: A Review and Update for 2007–2012. Springer.

Xu, Y., & Huang, J. (2015). “Factors influencing cart abandonment in the online shopping process”. *Social Behaviour and Personality: An International Journal*, 43(10), 1617-1627.

Yamaguchi, K., & Abe, M. (2016). “Analyzing Antecedent Factors of Cognitive Dissonance Using E-Commerce Data”. *Advances in Consumer Research*, 44, 369-374.

Yap, S.-F., & Gaur, S. (2014). “Consumer Dissonance in the Context of Online Consumer Behavior: A Review and Research Agenda”. *Journal of Internet Commerce*, 13(2), 116-137.

Zikmund, W. G., Babin, B. J., Carr, J. C., & Griffin, M. (2013). Business Research Methods (9th Edition ed.). Canada: South Western Cengage.

Zhou, T., Lu, Y., & Wang, B. (2009). “Service Quality in Determining Consumers’ Online Repurchase Behavior”. *Information Systems Management*, 26(4), 327-337.

APPENDIX

APPENDIX

QUESTIONNAIRE

Dear Respondent,

I am Mrs. Haritha S, pursuing my doctoral research at National Institute of Technology Surathkal. As a part of my ongoing research, I am conducting a survey to determine cognitive dissonance in online shopping with reference to select product categories of Electronic devices and Electronic accessories. I hereby request you to kindly spend about 15 minutes in providing your valuable responses. Please note the responses will be solely used for the purpose of research. Confidentiality will be maintained. Thank you.

SECTION I (SOCIO DEMOGRAPHIC INFORMATION)

Tick the most relevant option for each of the questions below.

1. Age:
   1. 18-24 years ☐ 2. 25-34 years ☐ 3. 35-44 years ☐
   4. 45-54 years ☐ 5. 55-64 years ☐ 6. 65 years and above ☐
2. Gender:
   1. Male ☐ 2. Female ☐ 3. Transgender ☐
3. Highest Educational Qualification:
   1. Xth pass ☐ 2. XIIth pass ☐ 3. Graduate ☐ 4. Post Graduate ☐
   5. Doctoral ☐ 6. If others please specify _____
4. Family Monthly income (In Rs):
   1) Less than 30,000 ₹ ☐ 2) 30,001-60,000 ₹ ☐ 3) 60,001- 90,000 ₹ ☐
   4) 90,001-1,20,000 ₹ ☐ 5) Above 1,20,000 ₹ ☐
5. Marital Status:
   1. Married ☐ 2. Unmarried ☐ 3. Others ☐
6. Employment Status/ Occupation:
   1. Salaried ☐ 2. Self employed ☐
7. If you are wage employed professional, please select the appropriate type of wage employment
   1. Government employee ☐ 2. Private employee ☐

8. If you are self-employed professional, please select the appropriate type of self-employment

   1. Homemaker ☐ 2. Business ☐ 3. Freelancer ☐ 4. If others please specify

9. Employment status of the spouse:

   1. Employed ☐ 2. Unemployed ☐ 3. Not applicable ☐

10. Residing city:

    1) Delhi ☐ 2) Mumbai ☐ 3) Bengaluru ☐ 4) Hyderabad ☐ 5) Kolkata ☐

11. Internet experience in years:

    1) 2-4 years ☐ 2) 4-8 years ☐ 3) 8-12 years ☐

    4) More than 12 years ☐

SECTION II

12. Have you made an online purchase in the past 1 year? Tick the appropriate option. If yes please continue answering the questionnaire

    a) Yes ☐ b) No ☐

Electronic devices & Appliances: Mobiles, laptops, computers, cameras, smart home automation, home entertainment, smart wearable tech, televisions, tablets, computer peripherals, washing machines, refrigerators, air conditioners, kitchen appliances like ovens coffee makers, sandwich makers, electric cookers, food processors.
Electronic accessories: Mobile case covers, screen guards, power banks, data cables, printers, ink, mobile chargers, headphones and headsets, hard drives, pen drives, mobile holders, laptop skin decals, mouse, laptop, refrigerator covers, kitchen appliance covers, Mobile batteries, selfie sticks, OTG adapters.

13. Tick the product category from which you have made an online purchase in the past 6 months

    1. Electronic device/appliances ☐ 2. Electronic accessories ☐
    2. Both 1) and 2) ☐

14. How many times have you purchased products from online shopping portals from the specified categories in the past 6 months (Electronic devices/appliances & Electronic accessories)?

    1. 1-2 times ☐ 2. 3-4 times ☐ 3. 5-6 times ☐

    4. 7-8 times ☐ 5. 9-10 times ☐ 6. More than 10 times ☐

15. Kindly rank the below online shopping portals in the order of your preference for electronic devices and appliances . Rank 1 being given to the most preferred online shopping portal

1. Amazon India ☐ 2. Flipkart ☐ 3. Paytm Mall ☐
4. Snapdeal ☐ 5. If any other please specify _____ ☐

16. Kindly rank the below online shopping portals in the order of your preference for electronic accessories. Rank 1 being given to the most preferred online shopping portal.

1. Amazon India ☐ 2. Flipkart ☐ 3. Paytm Mall ☐
4. Snapdeal ☐ 5. If any other please specify _____ ☐

Please express your agreement by marking a tick (✓) in the column for each of the statements below that best indicate your response. Please ensure your responses are based on the preferred online shopping portals for each of the specified category.

No	Statement	Strongly Disagree 1	Disagree 2	Neutral 3	Agree 4	Strongly Agree 5
17.	The online shopping portal has reliable information					
18.	The preferred online shopping portal/portals is/are trustworthy					
19.	The online shopping portal has enough security to make me feel comfortable while using it					
20.	The infrastructure of this website is dependable					
21.	The preferred online shopping portal/portals are known to keep promises and commitments.					
Category: Electronic devices/Appliances (If you haven't made a purchase in Electronic devices/Appliances skip the statements from 24-38)						
No	Statement	Strongly Disagree 1	Disagree 2	Neutral 3	Agree 4	Strongly Agree 5

22.	I consider Electronic devices/appliances to be an important part of my life					
23.	I am very much interested in online shopping of Electronic devices/appliances					
24.	My level of expertise regarding online shopping for Electronic devices/appliances is high					
25.	I feel involved while purchasing Electronic devices/appliances through online shopping portal					
26.	I feel electronic devices/appliances is central to my identity as a person					
27.	I find electronic devices/appliances to be a very relevant product in my life					
28.	After I bought a product, I felt disappointed atleast once in the past 6 months.					
29.	After I bought a product, I felt depressed atleast once in the past 6 months.					
30.	After I bought a product, I was angry atleast once in the past 6 months.					
31.	After I bought a product, I was in pain atleast once in the past 6 months.					
32.	I wonder if I really needed the product for atleast one of the purchases in the past 6 months.					
33.	I wonder if I should have bought anything at all atleast once in the past 6 months on online shopping portal.					
34.	I wonder if I have made the right choice atleast once while buying a product on online shopping portal					
35.	After I bought a product, I wondered if I have been fooled by the deal provided atleast once in the past 6 months.					
36.	After I bought the product, I wonder if there was something wrong with the offer/deal atleast once in the past 6 months.					

Category: Electronic Accessories (If you haven't made a purchase in Electronic accessories skip the statements from 39-53)						
No	Statement	Strongly Disagree 1	Disagree 2	Neutral 3	Agree 4	Strongly Agree 5
37.	I consider Electronic accessories to be an important part of my life					
38.	I am very much interested in online shopping of Electronic accessories					
39.	My level of expertise regarding online shopping for Electronic accessories is high					
40.	I feel involved while purchasing Electronic accessories through online shopping portal					
41.	I feel electronic accessories is central to my identity as a person					
42.	I find electronic accessories to be a very relevant product in my life					
43.	After I bought a product, I felt disappointed atleast once in the past 6 months.					
44.	After I bought a product, I felt depressed atleast once in the past 6 months.					
45.	After I bought a product, I was angry atleast once in the past 6 months.					
46.	After I bought a product, I was in pain atleast once in the past 6 months.					
47.	I wonder if I really needed the product for atleast one of the purchase in the past 6 months.					
48.	I wonder if I should have bought anything at all atleast once in the past 6 months on online shopping portal.					
49.	I wonder if I have made the right choice atleast once while buying a product on online shopping portal					
50.	After I bought a product, I wondered if I have been fooled by the deal provided atleast once in the past 6 months.					

51.	After I bought the product, I wonder if there was something wrong with the offer/deal atleast once in the past 6 months.					

No	Statement	Strongly Disagree 1	Disagree 2	Neutral 3	Agree 4	Strongly Agree 5
52.	I do not trust online shopping portals					
53.	I may not get the product/products I ordered from the preferred online shopping portals					
54.	My personal information may not be kept confidential					
55.	I might be overcharged for the products I ordered					
56.	It is a concern for me that I cannot examine the actual product in online shopping					
57.	I get concerned that the delivery of the product may get delayed					
58.	It is too complicated to place order on the online shopping portal					
59.	It is difficult to find appropriate online shopping portals					
60.	It takes too long a time for the online shopping portal to load					
61.	I would find it difficult to choose a product from the specified product categories from the catalogue available on the online shopping portal.					
62.	The task of making a purchase decision for the specified product categories from the available products in the online shopping portal was overwhelming					
63.	Comparing the products in the online shopping portal with respect to the specified product categories took a lot of effort					

64.	It is too much trouble buying products through online shopping					
65.	Except for any unanticipated reasons, I intend to continue using the preferred online shopping portal/portals.					
66.	If possible, I would like to continue using online shopping as much as possible					
67.	It is likely that I will continue to use the preferred online shopping portal/portals to purchase products in the future					
68.	The probability of using the most preferred online shopping portal/portals is high					
No	Statement	Strongly disagree 1	Disagree 2	Neutral 3	Agree 4	Strongly Agree 5
69.	I would recommend the preferred online shopping portal/portals to others.					
70.	I am satisfied with my decision to purchase from the preferred online shopping portal/portals.					
71.	I am satisfied with the online shopping experience across the preferred online shopping portal/portals.					
72.	I am pleased with the online shopping experience in the most preferred online shopping portal/portals.					
73.	My choice to purchase from the preferred online shopping portal/portals was a wise one.					
74.	I have enjoyed purchasing from the preferred online shopping portal/portals.					
No	Statement	Strongly disagree 1	Disagree 2	Neutral 3	Agree 4	Strongly Agree 5
75.	I spoke of the preferred online shopping portal/portals much more					

	frequently than any other shopping portal in the past 6 months					
76.	I spoke of the preferred online shopping portal/portals to many individuals in the past 6 months					
77.	I mostly said positive things about the online shopping portal to others in the past 6 months					
78.	I have spoken favourably of the online shopping portal to others in the past 6 months					
79.	I strongly recommend people buy online products from this company					
80.	I am proud to say to other's that I am this company's customer					

ANNEXURE

BIO-DATA

Haritha S,

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ACADEMIC QUALIFICATIONS

MBA	School of Management, National Institute of Technology, Karnataka, with Marketing and Finance specialization in the academic year 2009-2011, with a CGPA of 8.94
Bachelor of Engineering (BE)	University Visvesvaraya College of Engineering, with specialization in Civil Engineering in the academic year 2004-2008 with a percentage of 71.5%

WORK EXPERIENCE

May 2011-June 2014	Analyst, Sales and Merchandising - Sales planning and Analysis, Homeshop18 Pvt Ltd
June 2014- August 2015	Assistant Manager - Flipkart Internet Pvt. Limited
September 2015- January 2016	Manager, Business Development - Flipkart Internet Pvt. Limited

January 2017 – May 2017	Visiting Faculty – PESIT, Bangalore South Campus
June 2017 - Present	Assistant Professor, Marketing, ISME

WORKSHOPS ATTENDED

- Workshop on "Publishing in Emerald Journals" on 4th April 2022 organized by Symbiosis Institute of Management, Nagpur.
- A five-day workshop on "Multivariate Data Analysis" from December 03rd to December 07th at Indian Institute of Management, Kozhikode

JOURNAL PUBLICATION

- Haritha S and Bijuna C Mohan, "Influence of Involvement on Cognitive Dissonance in Online Shopping – A Critical Literature Review", *International Journal of Applied Business and Economic Research*
- Haritha S and Bijuna C Mohan, "Cognitive Dissonance in Online Shopping in an Emerging E-tailing Market", *Transnational Marketing Journal*

CONFERENCES ATTENDED

- Presented paper titled, "Influence of Involvement on Cognitive Dissonance in Online Shopping – A Critical Literature Review" at 9th International Conference on Applied Economics and Business, 2017, New Delhi.

- Presented paper titled, "Consequences of Cognitive Dissonance in Online Shopping: A Conceptual Framework" at IIM Indore – Nasmei Summer Marketing Information Systems Conference.

- Presented paper titled, "Is Choice a Boon or Bane in the Online Shopping of Electronic Devices?" at 4th International Conference on Marketing, Technology & Society, 2020, IIM Kozhikode

- Presented paper titled, "Investigating Cognitive Dissonance in Online Shopping: A SEM Approach", at the International Conference on Neo Business Practices in the Evolving World –Symbicon -22 organized by Symbiosis Institute of Business Management, Nagpur

CONFERENCE PROCEEDINGS

- Book of Abstracts 2019, IIM-Indore Summer Marketing Information Systems Conference July 26-28, 2019 Summer Marketing in Digital Age published by Emerald publishing house ISBN - 978-1-78635-428-0 paper titled "Consequences of Cognitive Dissonance in Online Shopping: A Conceptual Framework".

- Proceedings of the 4th International Conference on Marketing, Technology & Society, 2020, published by IIM Kozhikode with International Standard Book Number ISBN: 978-93-5419-748-2 paper titled "Is Choice a Boon or Bane in the Online Shopping of Electronic Devices?"