Investigations into Modeling Online Brand Equity

THESIS

Submitted in partial fulfillment
of the requirements for the degree of
DOCTOR OF PHILOSOPHY
by

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BIRLA INSTITUTE OF TECHNOLOGY AND SCIENCE, PILANI
2016

Acknowledgement

I am profoundly grateful to my supervisor Prof. Anil Bhat for his valuable guidance, encouragement, and inspiration whenever it was required. I am also thankful to my co-supervisor, Dr. Leela Rani for her help, support and motivation. It was a pleasure working with both of them and this PhD journey would not have been possible without their support.

I would also like to thank my advisory committee members, Dr. Rajesh Matai and Dr. Arun Agariya for their time, effort and important comments.

I am thankful to the BITS Pilani Family for providing an enabling environment for the research work. My special thanks to Prof. Souvik Bhattacharyya, Vice Chancellor BITS Pilani, Prof. A. K.Sarkar, Director BITS Pilani, Prof. S.K.Verma, Dean ARD, and Prof. Hemant Yadav, Associate Dean, ARD. I would also like to thank Prof. Niranjana Swain and Prof. Kanan for their guidance and encouragement during the course work.

This journey would not have been possible without the help of a caring & patient family. I would like to express my sincerest gratitude and appreciation to my precious family members. My dear father and mother encouraged, urged and supported me throughout the process. I owe big thanks to both of them. I am thankful to my elder sister, Ms. Moumita Rana for being a patient listener and a motivator all this while. My special thanks to friends Ms. Sonia Antil and Mr. Souradip Adak. Both of them believed in me and helped in rising against the odds. I also thank all the great friends earned during this PhD who made this journey memorable.

Lastly, I am grateful to the very dynamic and thriving Department of Management, BITS Pilani. I would like to show my appreciation to all the faculty members of the department, the research scholar group and office staff for their support.

Abstract

Brand Equity is one of the central marketing concepts. It is built over time and is created through brand identity and brand-image (Biel, 1993). In the online context, the digital retail brands are just a click away from each other and the success or failure of a retail brand is dependent on how they survive the competition. The better the impression of the brand in the mind of the customer the better is the probability of an increase in its website traffic and sales.

Online shopping is now dominant in the lives of many consumers. The e-commerce industry in India is experiencing a remarkable growth, but creating and maintaining brands in the online environment is an under-researched area. Though the similarities between offline and online marketing have been emphasized from time to time but there are still some notable differences (Tulin Erdem, Keller, Kuksov, & Pieters, 2016). This research examines one such difference i.e. creating and maintaining Brand Equity for digital retailers.

Brand Equity is created through Brand Awareness, Brand Association, Perceived Quality, and Brand Loyalty (D. A. Aaker, 1991b; D. a Aaker, 1996). It is important for a brand to be at the top of the mind of a customer. Also, the number of associations or cues make it easy for the brand to enter the choice set of a potential customer (Farquhar, Herr, Aaker, & Biel, 1993). Perceived Quality and Brand Trust are a special type of strong and favorable associations that generate a differential effect on a customer's behavior and therefore keep a brand ahead of its competition. Likability towards a brand is a strong predictor of the behavioral component i.e. Brand Loyalty. These dimensions are also called the sources of Brand Equity.

The antecedents to these sources of Brand Equity are marketing actions, also termed as marketing mix elements (B. Yoo, Donthu, & Lee, 2000). Other than product, price, place and promotion, marketing actions in the online context could be security-reliability, website content, website characteristics etc. related elements. A few marketing mix frameworks (Kirthi & Mclntyre, 2002) have been proposed for the online context.

Brand Equity, therefore, has two set of building blocks. The first block consists of marketing mix elements (product, price, security-reliability etc.) and the other block is the sources of Brand Equity (i.e. Brand Awareness, Brand Association etc.). The first block elements act as antecedents to the second block i.e. sources of Brand Equity. The literature pertaining to Brand Equity in the

online context (i.e. online Brand Equity or OBE) is rather limited. Few of the studies have attempted to replicate and test the offline models of Brand Equity in the online context (Rios & Riquelme, 2008a, 2010). As there is no definitive list of antecedents to the sources of OBE, that is our first research gap. A systematic approach to study the complete process of building online Brand Equity is our second research gap.

In our study, we have taken both exploratory as well as a descriptive research design approaches to study the process of creating OBE. A definitive list of marketing mix elements for the online context (i.e. e-marketing mix elements) has been generated from an exhaustive literature search (Rana, Bhat, & Rani, 2015). The association of these e-marketing mix elements with the sources of OBE is then statistically tested. Additionally, we have also tried to investigate the consumer decision journey in an online shopping context using primarily exploratory research techniques.

The scope of this study was limited to prominent online-retail brands and travel-ticket web based brands. The survey-based research was carried out from a homogenous population of tech savvy respondents. This population had the characteristic of an average online shopper. Techniques like content analysis (used for the systematic literature review), structure equation modelling/SEM (for generating and confirming the relationships between the e-marketing mix variables and sources of OBE and OBE), multi-dimensional scaling (MDS) and decision net approach (for mapping the consumer decision journey) were used in this research to carry out investigations into modelling online Brand Equity.

Finally, we have proposed an overarching framework of six e-marketing mix elements, which are customer-value & benefit, customer care and relationship, the content of the website, interactivity feature of the website, speed of service and security-reliability. The centrality of these e-marketing mix elements towards creating OBE is one of the major outcomes of this research. In addition, the consumer decision journey identified in our research is very informative and insightful. The relationships identified can also be further tested for other categories of web-based services. The practitioners can use our findings in planning marketing programs/actions to create online Brand Equity of their brands and by academicians in understanding Brand Equity dynamics in the online context.

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Brand Awareness (BA)

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Chapter 1: Research Introduction

1.1 Introduction

Creating and maintaining Brand Equity of e-commerce companies is driven by marketing actions. Brand Equity (BE) accumulates over time and is a reflection of the marketing actions. Though there are many models proposed for building Customer-Based Brand Equity but Brand Equity in the online context is an under-researched area. Our research investigates the antecedents of online Brand Equity and studies the effect of these on Brand Equity.

This Chapter introduces the research context. It also highlights the research gaps and research contribution. The structure of the thesis is presented at the end of this Chapter.

1.2 Research Context

With the evolution of Web 2.0, the business arena was divided into the physical, offline world and the online, cyber world. The division has given rise to the concept of online consumer behavior. It is important to understand for marketers as to, how customers make their purchase decision online and are affected by social media, online advertising, brand communities etc. Many new and existing businesses are trying to enter this space, because of its huge potential. This new media has the capability to communicate the marketer's messages to more number of people at more locations than any previous communication channel ever could.

Nevertheless, the survival of businesses in this new space is a challenging task. While Brand Equity perhaps helps in the growth of the business via trust and loyalty in the online space, the companies need to proactively determine the factors that affect online Brand Equity. According to Bryan Eisenberg, (A professional marketing speaker for corporate events and conferences on search engine strategies, direct marketing, etc.) "97% of clickers consist of the disqualified traffic and potential buyers which, if captured, can generate huge revenues[1]". Understanding those potential buyers and factors affecting their behavior has to be examined actively to generate sustainable revenue.

[1] Eisenberg Bryan., editor. *Is your traffic mix efficient?* [Monograph on the Internet]. Cited 2012 May 8. Available from: http://www.bryaneisenberg.com/is-your-traffic-mix-efficient/

1.2.1 Electronic Commerce and its Status in India

Indian e-commerce is a thriving and a fast growing sector, providing opportunities to many small and large-scale businesses. India where the concept of shopping malls became popular only in the last decade, it is interesting to observe the consumers migrating to online consumption[2].

Electronic commerce (e-commerce) is defined as buying and selling of goods and services using an electronic system like the internet or any other computer network. A broader definition could be buying and selling of information, products and services via computer networks today and in the future via any one of the myriads of networks that make up the information superhighway (Kalakota & Whinston, 1996). Other definitions suggest it is the business conducted using computers, telephones, fax machines, barcode readers, credit cards, automated teller machines (ATM) or other electronic appliances without the exchange of paper-based documents. It includes activities such as procurement, order entry, transaction processing, payment, inventory control, order fulfillment, and customer support. When a buyer pays with a bankcard swiped through a magnetic-stripe-reader, he or she is participating in e-commerce[3]. To many people till date "electronic commerce" is simply an activity that is equivalent to shopping on the internet using the world wide web.

If we talk about its history, the mid 1990s is when it came into existence and grew rapidly until 2000s. Due to a major downturn, the dot-com-boom turned into dot-com-bust for many companies between 2000-2003. The rebirth of e-commerce occurred in 2003 and since then sales, as well as the profit, have increased. There are three major categories of electronic commerce; business to consumer, business to business and business processes. Business to consumer is the consumer shopping on the web, business-to-business is the transactions pursued between two business and business processes are the support selling and purchasing activities that use internet technology. We have limited our scope to business to consumer category in the present study.

Though the electronic commerce phenomenon existed since the 1990s but it entered India only in 1999. Now e-commerce in India is set to play an important role in the economy. The evolution of

[2] IBEF Report on Retail Industry in India (December 2016), Retrieved from http://www.ibef.org/industry/retail-india.aspx

[3]Retrieved from http://www.businessdictionary.com/definition/electronic-commerce-E-Commerce.html

major e-commerce companies and important events is given in figure 1. Internet and Mobile Association of India (IMAI) reported that the e-commerce market of the country is growing at the rate of 70 percent annually and has grown over 500 percent in the past three years alone (Gangeshwer, 2013). According to a recent study by Google & A T Kearney, the number of online shoppers is going to increase from 50 million (2015) to 175 million by 2020. It also suggests that product assortment and convenience of ordering and delivery are the two important reasons other than discount offers, which are going to boost e-commerce. One of the important finding by this report is that the current shopping done through mobile is going to increase significantly from 50% to 70% by 2020.

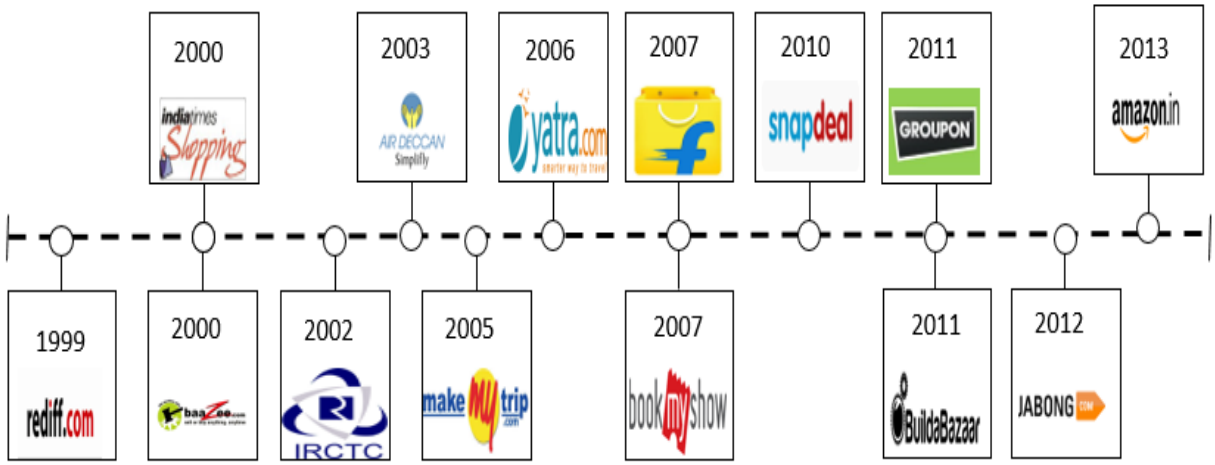


Figure 1: Evolution of Indian E-commerce Landscape

There is still a huge scope for this industry. Many businesses are joining this platform to grow and generate profit. The credit of this growth can be given to the favorable demographics, increasing the level of education standards, rising internet use, the proliferation of mobile phones, shifting lifestyle, and the existence of a supportive government/ regulatory bodies etc. Competition among the online businesses is fierce and creating online Brand Equity through appropriate marketing actions is going to be a differentiator. Creating and maintaining Brand Equity also helps in delivering value to the customers. Hence the importance of carrying out investigations in this space.

1.2.2 Online Branding

The concept of Brand Equity has interested academics and the practitioners for a long time now, primarily due to its importance, in today's marketplace, of building, maintaining and using brands to obtain a strategic advantage. The concept Refers to the basic idea that a product's value to consumers, trade and firm is enhanced when it is associated or identified over time with a set of unique elements, which in turn define the brand. Different definitions of Brand Equity have been offered in the literature. Aaker (1991) defined Brand Equity as *"**a set of brand assets and liabilities linked to a brand, its name and symbol that add to or subtract from the value provided by a product or service to a firm and/or to the firm's customer"***. Keller (1993) offered a cognitive psychology perspective, defining customer-based Brand Equity as "***the differential effect that brand knowledge has on consumer response to the marketing of that brand***".

There are two sets of antecedents to Brand Equity. One is marketing mix elements and the other is sources of Brand Equity. In the online context, we can term these as e-marketing mix elements and sources of online Brand Equity (OBE) respectively. Marketing mix elements or the marketing activities of a firm are the basis for creating Brand Equity. These elements help customers in forming a perception about a brand. The perception is formed at different levels; awareness association, trust, and loyalty (these are termed as sources of Brand Equity). As the online market place is different from the traditional market place, a different set of marketing mix elements or marketing activities replaces traditional marketing elements. The sources of online Brand Equity are the individual perceptual measures that help a consumer to assess the brands. Therefore, we can say that concept of online Brand Equity (BE) is built on the pillars of e-marketing mix elements and sources of online Brand Equity (Refer figure 2).

Figure 2: Block Diagram representing Antecedents of Online BE

Although many research studies have been conducted to understand how brands create revenue for companies in the packaged goods industry, little is known about the way in which Brand Equity

is created and measured on the internet (Rios & Riquelme, 2010). A few researchers have tried to extend the model of packaged goods Brand Equity from offline to the online space while still fewer researchers have investigated how internet marketing activities affect online Brand Equity. The available list of internet marketing activities or e-marketing mix elements is not exhaustive and robust. Also, a systematic approach to identify and understand sources of Brand Equity is largely lacking. Exploration of the antecedents of Brand Equity and their relationship with the sources of Brand Equity is also one of the unexplored areas in the online context. There is also a gap in understanding consumer brand choices in the online context.

1.3 Research Objectives

The objectives of the present research are identified as follows:

Objective 1: To establish a definitive list of antecedents (e-marketing mix elements) of sources of online Brand Equity.

Objective 2: To investigate and characterize the relationships between antecedents (e-marketing mix elements), sources of Brand Equity and Brand Equity in the online context.

Objective 3: To explore the consumer brand choice in the online context.

1.4 Thesis Structure and Organisation

In the process of investigation of online Brand Equity, we adopted three major steps.

First, we carried out extensive examination of scholarly articles and professional literature on branding, digital branding, internet marketing and online consumer behavior. This literature analysis served as a background for the generation of ideas, a general understanding of the marketing concepts in the online context and a basis for further identification of issues. This literature review was explored systematically with the help of content analysis as well as exploratory factor analysis (EFA) to arrive at definitive list of e-marketing mix elements. The second stage comprised of proposing a model for online Brand Equity and deriving the related hypotheses. The third stage of the research consisted of empirically testing the relationships i.e.

relationships between e-marketing mix elements & sources of online Brand Equity and sources of online Brand Equity & Online Brand Equity respectively.

In Chapter 2 we have broadly discussed the review of Brand Equity literature. All the sources of online Brand Equity; Brand Awareness, Brand Association, Brand Loyalty, and Perceived Quality are studied from the traditional as well as in the online context. Later part of this Chapter discusses the e-marketing mix elements identified from the literature. In the end, we conclude the Chapter with the research gaps and the proposed model.

Chapter 3 is the methodology Chapter that outlines the whole process of the work being carried out. The scope of the study, sample size, techniques etc. are given in detail. A diagrammatic representation of the research process is also given at the end of this Chapter.

Chapter 4 address the first objective of our study, which is to establish the antecedents to the sources of online Brand Equity. In this Chapter, a systematic review of the literature using content analysis and then further reduction of the variables using Exploratory factor analysis have been presented.

Chapter 5 clearly outlines the evolution of our proposed model. In the later part of the Chapter we develop the hypotheses associated with our second objective.

In Chapter 6 Results and Analysis of the hypotheses formed in Chapter 5 are discussed. The results were obtained using structural equation modelling (SEM). Our tested model is presented in this Chapter.

Chapter 7 we deal with the objective no 3. This is another exploratory part of our study, which focuses on identifying the consumer decision journey. Multi-dimensional scaling and decision net approach are used to meet this objective.

In Chapter 8 we discuss the identified e-marketing mix elements, the general overarching framework proposed, theoretical meaningfulness of e-marketing mix framework in building online Brand Equity and the consumer heuristics for online brand choice. The Chapter is concluded discussing the micro and macro perspective, managerial implications, limitations and future research scope.

Chapter 2: Review of Literature

In this Chapter, we review and discuss the literature on Brand Equity and its sources in the traditional as well as in the online context. This Chapter is divided into 5 sections. Section 2.1 is a detailed overview of the Indian e-commerce industry. In section 2.2 we discuss e-marketing mix frameworks and also outline the marketing mix elements discussed in the online literature. In section 2.3 we review the literature on Brand Equity and sources of Brand Equity. Offline Brand Equity models are discussed in section 2.4. In section 2.5 and 2.6 we discuss the relationships between e-marketing mix variables, sources of OBE and OBE. In section 2.8 we outline the research gaps and finally, in section 2.9 we briefly describe our proposed model and the objectives of the research study (Refer figure 3).

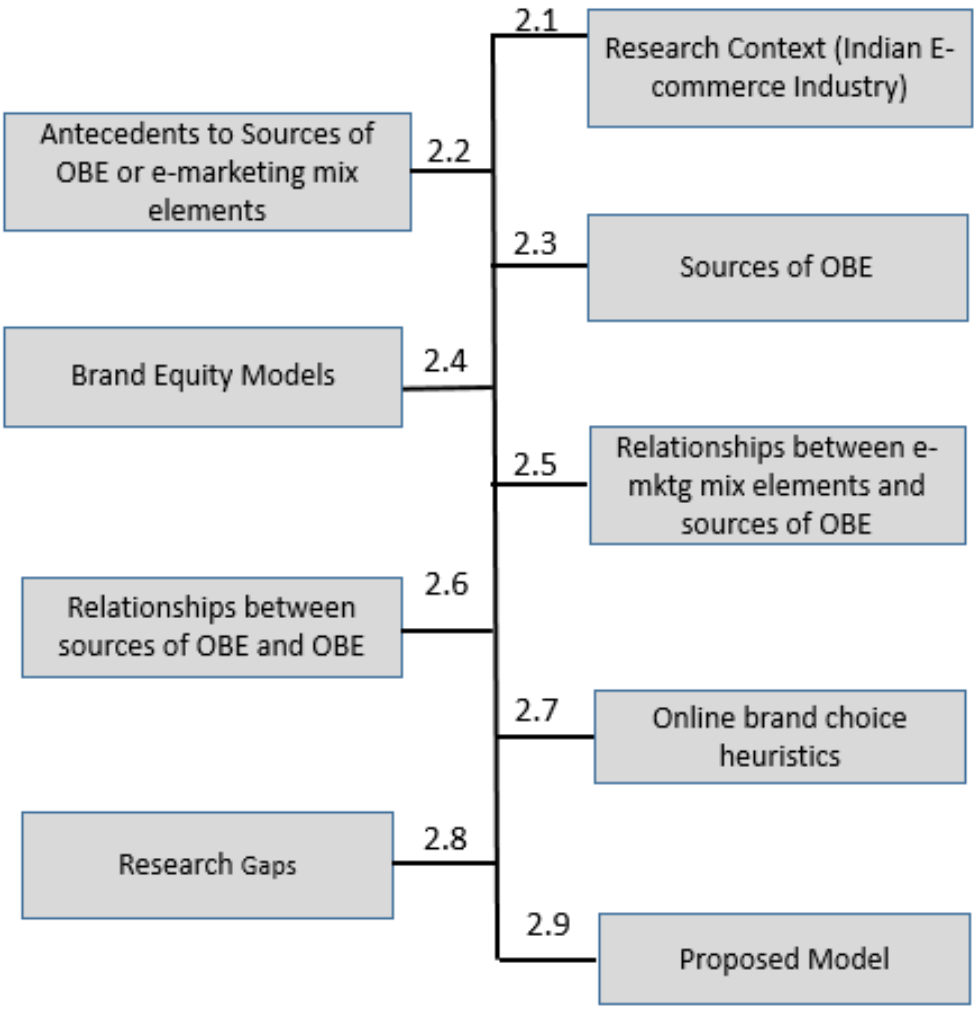


Figure 3: Chapter Schema

2.1 Indian E-commerce Industry

In a competitive environment of online retailing, the need to differentiate the business is a fundamental strategy. Building tangible and intangible assets is one of the ways to excel in businesses. Intangible assets like Brand Equity and customer relationships are developed to create value. The online space is also one of the most active areas of mergers and acquisitions (M&As) (Zmuda & Patel, 2011) where intangible assets play a major role in brand valuation. Creation and maintenance of Brand Equity in the online space are important because customers are otherwise unwilling to pay a brand premium in the online domain (J. G. Lynch & Ariely, 2000). Many companies in the early 2000s failed, as they were unable to create enough brand value to attract investors (Refer table 1). During dot.com bust, poor marketing strategies of such companies contributed to their failure as well.

Table 1: List of e-commerce failures and major marketing reasons

S. No	Company	Year	Reasons from Marketing Perspective
1	*Webvan.com*	1999-2001	Wrong target audience segmentation and pricing[4]
2	*Pets.com*	1998-2000	Despite a strong brand recognition, it failed. Over spend on advertisement and extra discount to maintain customer base[5]
3	*eToys.com*	1997-2001	Unplanned price promotions, over spend on advertisement, failed to turn site visitors into buyers[6]
4	*Boo.com*	1998-2000	Due to browsing difficulty faced by the users, it failed to gain popularity[7]
5	*Go.com*	1998-2001	Go.com which was an initiative by Disney internet group failed because of poor content and services[8]
6	*Kibu.com*	1999-2000	Low Brand Awareness[9]

[4] Retrieved from: http://techcrunch.com/2013/09/27/why-webvan-failed-and-how-home-delivery-2-0-is-addressing-the-problems/

[5] Retrieved from: http://en.wikipedia.org/wiki/Pets.com

[6] Retrieved from http://www.businessweek.com/stories/2001-02-08/how-etoys-could-have-made-it

[7] Retrieved from http://www.theguardian.com/technology/2005/may/16/media.business

[8] Retrieved from http://articles.latimes.com/2001/jan/30/business/fi-18700

[9]Retrieved from http://www.sfweekly.com/sanfrancisco/generation-excess/Content?oid=2140399, http://news.cnet.com/2100-1017-246440.html

7	*GovWorks.com*	1999-2000	website functionality was not at a superior level[10]
8	*egghead.com*	1997-2001	lost customer while transiting from offline to online[11]
9	*garden.com*	1995-2001	Neglected brand recognition and customer loyalty in the process of acquiring new customers
10	*spiralfrog.com*	2007-2009	Music offering was chargeable and not supported by various devices. Product designing was not adequate[12]

The trade-offs symmetry and the balance between offline and online marketing stimuli/activities were where companies failed to understand the transition process to the online environment. While companies like egghead.com lost their customers while transiting from offline to online, some other companies like EToys.com failed due to unplanned price promotions and over-spend on advertisements. Moreover, companies which started online or migrated from offline failed due to the lack of understanding of e-marketing mix stimuli. There were companies, which did not succeed because of low Brand Awareness. Brands with strong recognition too did not do well, as they over spent on one or the other marketing stimuli. A representative list of such companies is given in Table 1. It is evident that the absence of alignment between marketing mix elements and sources of BE is a major threat to companies. Therefore, the study of marketing stimuli in the form of e-marketing mix elements and marketing outcomes i.e. OBE is extremely important.

Next, we discuss growth in India's e-tail segment, the reasons behind this growth and how it is helping the Indian economy as well as the opportunities and challenges ahead.

Indian e-Retail Segment

Indian e-retail segment is a fast growing segment and it is expected to be 10-20 billion USD industry by 2017-2020[13]. As per IBEF report, Indian e-commerce is enormously contributing to the country's economic growth. The e-commerce industry is expected to contribute 4 percent to

[10]Retrieved from DIT startup.com paper
[11]Retrieved from http://www.geek.com/news/egghead-going-down-ugly-547145/
[12]Retrieved from http://blogs.telegraph.co.uk/technology/shanerichmond/9334737/spiral_frog_and_ruckus_were_bound_to_fail/
[13] Source: Crisil, IAMAI, PwC analysis and Industry experts

the GDP by 2020[14]. This sector had grown by 34% (CAGR) since 2009 to 16.4 billion USD in 2014. As of 2015, the e-commerce sales were 0.9 percent of total retail sales in India, but this total is likely to increase in the near future and could reach 4 percent in 2018[15]. The maximum growth of e-commerce can be seen in tier 2 and tier 3 cities, due to inaccessibility of branded product categories. In terms of orders per month, the figure is estimated to be 12 million per month in the year 2016[16].

The e-commerce ecosystem can be classified into five subcategories: Online travel/ticketing, online retail, an online marketplace, online deals and online portals classified. Online travel/ticketing, an online marketplace and online retails are dominating the Indian e-commerce industry. The online market place is the platform where buyers and sellers come together for a transaction. Online retailers sell their products directly to customers using online routes and are inventory based. Examples of each type of online model are given in table 2. E-travel constitutes 70 % of the total e-commerce industry. The e-tail sector has grown at the rate of 56% from 2009 to 2014. Products, which are largest selling online, are books, apparel & accessories, and electronic products.

Table 2: Various Business Models and Examples

S. No	Type of Model	Examples
1.	Inventory Model	Shopper Stop, Croma etc.
2.	Social Networks	Trip Advisor
3.	Aggregator Models	Ola Cabs
4.	e-Marketplace	Flipkart, Snapdeal etc.
5.	Transaction broker	IRCTC
6.	Click and Collect service	Amazon

The credit for the growth of Indian e-commerce can be given to India's favorable demographics, increasing level of education standards, rising internet use, the proliferation of mobile phones,

[14] D&B, Technopak; KPMG in India analysis

[15] Statista website accessed on 8th December, 2015

[16] Technopak, Accel Partners.

shifting lifestyles, growth in GDP and supportive government and regulatory bodies. Where demographic profiles are concerned, 75% of online shoppers are in 15-34 years age group[17]. Presently India's literacy rate is 74.4%[18] . Though the English-speaking population is 30% but the use of 'Hinglish' has evolved and is a boon to the society and specifically for the businesses as well. The changing lifestyle of the Indian youth demands a fast and easy life, which has become possible partly by the extended use of mobile phones for shopping/browsing as well as because of increased broadband speed. The living standard of the upwardly moving middle class, as well as their disposable income, is going up. The Indian Government is driving many campaigns like "digital India", "make in India", "skill India" and has loosened the FDI policies for better investments in the e-commerce sector. EBay and Amazon are few of the companies, which entered the Indian online space and are now among the top players in the industry

E-commerce is here to stay and will only grow stronger as it offers multiple benefits for multiple stakeholders. E-commerce brings a wide range of products to the customers in comparison to the traditional retailers. It also provides products in lower prices, which is an attraction for the Indian consumers who always tend to go for value buying (Rau, 2011). Moreover, the reviews available for various products are easy to access and, therefore, help in the purchase process. E-commerce is helping the small and medium scale industry of India to thrive. SME's in India is expected to contribute 22 percent of the GDP and 27 percent of them use e-commerce today. E-commerce is a boon to them as they can save 60-80 percent of their marketing and distribution costs. SME's are also expected to export twice with the help of Internet[19].

The online marketplace is dynamic in nature. Understanding the market is an important challenge for the companies. One of the important adaptation which has gained popularity is offering cash on delivery (COD) option to the customers who are conservative and believe online payments to be risky (IBEF, 2013). Delivering products to distant places thereby making those areas accessible

[17] Statista website accessed on 9th December, 2014.

[19] Impact of e-commerce on SMEs in India: Report by SNAPDEAL and KPMG, 2015

is helping the concept to gain popularity. Special offerings during weekends, festivals and wedding seasons are other extensions.

Though Indian e-commerce is currently behind many in the developed countries and various emerging markets, there is a huge scope for this industry to grow and capture the untapped market. The need for on-the-go shopping and mobile penetration both, are giving rise to m-commerce that is an advanced form of e-commerce. As a hundred million users are expected to use 3G & 4G smart phones, mobile shopping is evolving as an upward trend. The focus is now on increasing the market access by FDI inflows and strengthening the online presence of brick and mortar companies. To increase profitability, Brand Loyalty of customers is of utmost importance. Adopting new sustainable and strategic business models can be a game changer too. Some of the key challenges which are to be addressed are related to customer experience, technological advancements, the convergence of online and offline channels, delivery experience, payment and transactions, tax and regulatory environment, operational framework, customer acquisition, digital infrastructure and addressable markets etc.

Among the key challenges discussed above, we are going to specifically elaborate on the marketing mix elements in the next section.

2.2 Review of E-Marketing Mix literature

McCarthy proposed the concept of four P's in the year 1960 (McCathy, 1960). The prime marketing classificatory schemata have since been revisited from time to time. With the evolution of the Internet and its unique characteristics, that are different from the conventional setup, the traditional marketing methods are being stretched. Various authors have attempted to define e-marketing and its activities. All the "revisionist" literature of the e-marketing mix has demanded a holistic view of the network system (Constantinides, 2002; Dennis, Fenech, & Merrilees, 2005; Kirthi & Mclntyre, 2002).

Most of the authors have used four P's in their marketing mix models, with small or no change. Kirthi and Mclntyre (2002) proposed an e-marketing mix model that has been defined as 4Ps+P2C2S3. The first 4 Ps stands for product, price, place and promotion, the next 2Ps stands for personalization and privacy, 2Cs stand for customer service, community and 3Ss for the website, security and sales promotion respectively. Promotion, as defined in this model, is online

advertisements like a banner ad, Google ad etc. and sales promotion is defined as the special e-coupons which are sent to customers occasionally for establishing a better relationship (Kirthi & Mclntyre, 2002). Similarly, a few other studies have attempted to classify marketing mix variables with a nomenclature. Chen summarized e-marketing mix variables into 8 Ps. The first four are traditional whereas the next four P's are precision, payment systems, personalization, and push & pull. Precision Refers to a well-maintained data base management system so that the search function works accurately. By push & pull, Chen Referred to the communication system that an online business should follow. The 3 Cs model given by Prandelli and Verona (2006) comprises of content, community and commerce is the most generic and parsimonious one. The website information or content, which is available to the customers, is its first dimension. The second dimension describes the platform that should be available for interaction and building relationships. The third dimension commerce includes all the four Ps of marketing (Prandelli & Verona, 2006). Yet another e-marketing mix variables framework viz. the '7 Cs' framework for e-tail mix or e-marketing mix includes convenience, customer value and benefit, the cost to the customer, computing and category management, customer franchise, customer care and service and communication & customer relationships (Dennis et al., 2005). A view of e-marketing mix variable's framework 4Ss extends it to the strategic and business level. The 4S are scope, site, synergy and system. The scope dimension accounts for the strategic role of any e-commerce company, site dimension discusses the interface of the e-commerce website, synergy depicts the integration of the offline and the online activities and system Refers mainly to the data base management system and the security features (Constantinides, 2002).

The above-discussed e-marketing mix frameworks indicate that there are overlaps as well as differences in the frameworks given. Additionally, the marketing activities or marketing mix elements used are diverse with minimal uniformity. However, a broad e-marketing mix elements classification is available but various studies related to consumer behavior and attitude formation in the context of online shopping have not used the same set. Information search, website related factors, privacy and security, delivery related factors, CRM, personalization, the word of mouth factor (WOM) are applied with little uniformity in these studies. The next section is an attempt to discuss traditional marketing mix elements adopted in the online context and other major e-marketing mix elements.

2.2.1 Traditional marketing mix elements in Online Context

This section focusses on the literature available on the traditional marketing mix elements; product, price, place and promotion as adopted in the online context. Any other marketing activity pertaining to product, price, place and promotion required for online marketing have also been listed.

The e-marketing literature review indicates that the marketing functions related to product, price, place and promotion have undergone a major change. The concept of the product is now transformed into virtual product, which is a combination of both tangible and intangible features (Pastore and Vernuccio, 2004). Emphasis is given on the personalization of the product as well as on the information search (Dominici, 2009). The search options have divided product categories into two, namely, the "search products" and the "experienced products" (Andreini, 2005). Search products and experienced products are purchased on the ground of data gathered and on the experience of the consumer, respectively. While searching for a product, customers look for wide assortments along with quality. The concern of customers while buying a product is the risk associated with purchase quality as well as getting the requisite product (Lepkowska-white, 2004; Page & Lepkowska-White, 2002; J. Sinha, 2010). Secondly, provision for product comparison as a pre-purchase activity has also been discussed by a few authors (Croome, Lawley, & Sharma, 2010; Hyun, Min, & Hie, 2006; Otim & Grover, 2006; S. S. Srinivasan, Anderson, & Ponnavolu, 2002). Also, a three-factor product classification based on cost, value proposition and degree of differentiation are discussed in the literature (Peterson, Balasubramanian, & Bronnenberg, 1997).

The pricing function of the Internet space has evolved into a crucial activity, as there is cut-throat competition among the Internet players (Allen & Fjermestad, 2001). The price comparison is readily available over the Internet so the consumers are able to gain more transparency (Bhatt & Emdad, 2005). The availability of information and price are the two crucial elements for the buying decision process while shopping online (Petrescu, 2011). The difference in online and offline choices is studied with respect to factors like price sensitivity, brand name and other search attributes (Degeratu, Rangaswamy, & Wu, 2000a; Kuttainen, Pitt, & Spyropoulou, 2005). The factors stimulating the tradeoff between choosing online and offline platform are under-researched. E-retailers use various modifications in their prices and other e-marketing mix variables to capture the attention of consumers. Low price offerings, as well as bundle pricing, are

some of the examples of such modifications (Hofacker, 2008). Customized pricing is another strategy that e-retailers follow based on the purchase history of the consumers (Acquisti & Varian, 2005).

The third component of the traditional marketing mix "place" facilitates the purchase procedure. The technical aspects of a Web site like the ease of navigation, speed and the format make the exchange processes easier for the customers. It is likewise important to send the information and other significant details about the product and services to the consumers.

Literature pertaining to promotion is fragmented into word-of-mouth, customer relationship management, discounts-offers, emails and product reviews. A recent review paper (Yadav & Pavlou, 2014) discusses various aspects of marketing in a computer-mediated environment. The variable "promotion" in the form of e-mails and personalized communication seems to increase the click through rate. This variable though appeared in the initial marketing models for e-business but was later assumed to be less appealing than the offline promotion (Mahajan & Venkatesh, 2000). Currently, the scenario seems to have changed and customized promotion of online stores has been adopted as new practice (M. Park & Lennon, 2009; Zhang & Krishnamurthi, 2004).

As discussed, various marketing activities are discussed in the internet marketing literature that are different from the traditional marketing mix. Data search, Web site-related factors, privacy and security, delivery-related factors, CRM, personalization and the word of mouth factor (WOM) are few of them and are used with little uniformity in these subject areas. Various marketing concepts viz. purchase intention; customer satisfaction, service quality etc have used different e-marketing mix elements within a new context and with changed sets of meanings or composition of variables. For example, the variable 'website interactivity' used in terms of downloads, 'keyword search' in one of the studies of online Brand Equity (Christodoulides & Chernatony, 2010) and 'easy to give feedback' feature is used in a study of e-loyalty (Fan & Su, 2011). Similarly, many such instances of differences and overlaps in terms of context, meaning and definition of e-marketing mix variables are available. The next section throws lights on such new e-marketing mix elements.

2.2.2 E-marketing mix elements

The main objective of listing these variables is to reduce generate a list of variables with minimal overlap and uniformity with the help of expert opinion. There are total of thirteen distinct e-marketing mix elements discussed other than the 4 Ps of traditional marketing (see figure 4). We

reduce this list with the mutual concurrence of experts (using content analysis) which is given in detail in Chapter 4.

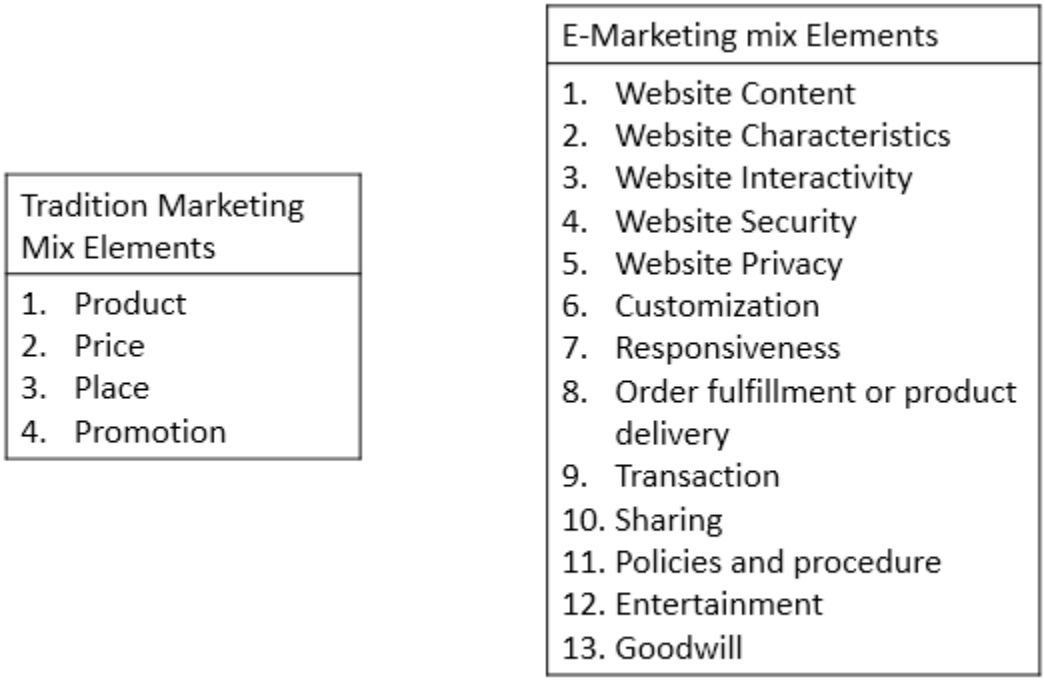


Figure 4: Distinctive Marketing mix elements of block 1

We next discuss these e-marketing mix elements in terms of their definitions, association with other marketing variables and their operational measurement issues.

i. Website Content

E-marketing mix variable related to information has been discussed by several authors who have emphasized upon the availability, relevance and transparency of information (Anderson & Swaminathan, 2011; Gao & Koufaris, 2006; Leelakulthanit& Hongcharu, 2010.). Accurate and current form of information has been claimed to be essential for online service quality, online satisfaction(Chung & Shin, 2010a; Kabadayi & Gupta, 2011; Khare, 2010; Liu, He, Gao, & Xie, 2008; Rod, Ashill, Shao, & Carruthers, 2009; Wigand, 2012) and e-loyalty (Hyun et al., 2006). Also, a current, relevant and accurate form of information available related to the products helps in product comparisons and thus builds online trust (Croome et al., 2010). High-quality information has been reported to have an effect on online purchase intention (Bigné-Alcañiz, Ruiz-

Mafé, Aldás-Manzano, & Sanz-Blas, 2008) as well. E-marketing mix variables related to information available on the website can be measured in terms of accuracy, searchability, completeness, and relevancy, being update and being understandable.

Table 3: Sub-elements and relationship summary of e-mix variable Website Content

E-marketing mix element	**Sub-elements**	**Relationship with marketing concepts**
• E-marketing mix element related to "Information/Website Content"	• Availability • Search-ability • Relevance • Completeness • Transparent • Relevancy • Accuracy • Updated • Understandable	• Online service quality • Online satisfaction • e-loyalty • Online purchase intention • Online trust

ii. Website characteristics

Technology acceptance model (TAM) (Davis, 1985) states that the design features of a website determine the attitude of a customer towards website usage, which is a function of its perceived usefulness and perceived ease-of-use. The 'ease of use' characteristics as suggested by Davis (1985) appears in the e-marketing mix variables literature repetitively (Bansal, McDougall, Dikolli, & Sedatole, 2004; Chiou & Pan, 2009; Christodoulides, De Chernatony, Furrer, Shiu, & Abimbola, 2006; Ganguly, Dash, & Cyr, 2009; Liu et al., 2008; Ribbink, Riel, Liljander, & Streukens, 2004; Rod et al., 2009; Silva & Alwi, 2008a). Website characteristics can be divided into three features namely website format, website speed and website navigation. Website format is associated with the layout and color scheme of a website. Similarly, uploading and loading speed of a website are represented by 'website speed'. Website navigation is the overall browsing experience of a user while navigating a product catalog or transaction process. User-friendly websites have easy search paths and logical structures (Fan & Su, 2011; Szymanski & Hise, 2000). These above-discussed characteristics help in making a website efficient and reliable (Wigand, 2012).

Studies carried out on online satisfaction, e-loyalty, online service quality, online brand image, website attitude, online trust and online Brand Equity have often considered the e-marketing mix variables related to website characteristics as antecedents. The efficiency of a website has been discussed with respect to the online service quality and e-loyalty (Hyun et al., 2006; Sheng & Liu, 2010). The visual appealing feature of a website can contribute to customer satisfaction and online trust (Chung & Shin, 2010b; Ganguly et al., 2009; Rod et al., 2009; Wolfinbarger & Gilly, 2003).

Table 4: Sub-elements and relationship summary of e-mix variable Website Characteristics

E-marketing mix element	Sub-elements	Relationship with marketing concepts
• E-marketing mix element related to "Website Characteristics"	• Website format • Website speed • Website navigation	• Online satisfaction • Online brand image • e-loyalty • Website attitude • Online service quality • Online trust, online Brand Equity

iii. Website interactivity

In terms of consumer interactivity, the uncertainty about the web is inevitable (Hoffman, Novak, & Chatterjee, 2000). Researchers have used interactivity feature as an antecedent to various major marketing variables but with little uniformity. In the year 2011, Fan & Su considered interactivity as the means of giving feedback and as a point of contact (Fan & Su, 2011). Lawson-body and Willoughby associated it with security and transaction safe environment (Lawson-Body, Assion;Willoughby, Lori;Logossah, 2010). Another study characterized an interactive feature of a website that is dynamic and engaging in nature (S. S. Srinivasan et al., 2002). Most of the studies that talked about interactivity feature are related to e-loyalty. A summary of its sub-elements and various relationships is given in table 5.

Table 5: Sub-elements and relationship summary of e-mix variable Website Interactivity

E-marketing mix element	Sub-elements	Relationship with marketing concepts
• E-marketing mix element related to "Website Interactivity"	• Giving feedback • Security and safe transaction • Dynamic & engaging website	• e-loyalty

iv. Website's security & Website privacy[20]

To increase the level of trust, e-marketing mix variables related to security and privacy play a significant role (Wolfinbarger & Gilly, 2003). Security in terms of financial details of credit cards/debit cards/bank account etc. and privacy in terms of personal details are of crucial concern for customers when they initiate a transaction. As these two e-marketing mix variables can impact the purchase intention (Salisbury, Pearson, Pearson, & Miller, 2003) therefore their effect with respect to online satisfaction, e-loyalty, online trust, online service quality, online brand image and online Brand Equity has also been studied. While a few researchers have termed it as financial risk (J. Sinha, 2010), others have pReferred measuring both security risk of credit card information as well as privacy of personal information (Carlson & O'Cass, 2010; Christodoulides et al., 2006; Chung & Shin, 2010a; Ganguly et al., 2009; H.-Y. Ha, 2004a; Julie, 2002; Liu et al., 2008; Rod et al., 2009; Sheng & Liu, 2010; Silva & Alwi, 2008a; Szymanski & Hise, 2000; Wolfinbarger & Gilly, 2003). The more one is familiar with the website, the more risk-free his/her attitude while making a transaction online (J.-H. Kim, Kim, & Kandampully, 2009).

[20] Website security and website privacy have been discussed combinedly.

Table 6: Sub-elements and relationship summary of e-mix variable Website Security-Privacy

E-marketing mix element	Sub-elements	Relationship with marketing concepts
• E-marketing mix element related to "Website's Security & Privacy"	• Privacy of personal information • Security risk of financial information	• e-loyalty • Online trust • Online satisfaction • Online service quality • Purchase intention • Online Brand Equity • Online brand image

v. Customization

This e-marketing mix variable means customization of the information available on the website as well as for the products (Christodoulides, 2009). Customization is done in terms of any purchase recommendation, tailor-made products and personalization of advertisement as per feelings and needs of a unique customer (S. S. Srinivasan et al., 2002). Along with catering to needs (Kabadayi & Gupta, 2011), if personal attention is given, it can result in the perception of good service quality (Wigand, 2012). Customization could be carried on at the level of designing personalized website (Rose, Clark, Samouel, & Hair, 2012). A general understanding of the e-marketing mix variable "customization or personalization" is that of availability of tailor-made products that cater to specific needs of customers. There is an experimental evidence that the level of satisfaction increases if customers are allowed to give their pReferred choice of attributes of the product while selecting a product (Huffman & Kahn, 1998).

Table 7: Sub-elements and relationship summary of e-mix variable Customization

E-marketing mix element	Sub-elements	Relationship with marketing concepts
• E-marketing mix element related to "Customization"	• Purchase recommendation • Tailor made products • Personalization wrt advertisements	• Online service quality • Online satisfaction

vi. Responsiveness

According to the SERVQUAL model "Responsiveness" is defined as the willingness to help customers and provide prompt services (A. Parasuraman, Zeithaml, & Berry, 1988). E-marketing

mix variable related to responsiveness has been used as one of the items for developing a multi-item scale for measuring service quality of online firms. In the E-S-Qual scale, 'responsiveness' is defined as the quick response and the ability to get help if there is a problem or question (A. Parasuraman, 2005). Yoo and Donthu defined 'responsiveness' as the speed with which the online processes take place and interactive responsiveness to the customer request by the customer relationship officers (Boonghee Yoo & Donthu, 2001a). Commitment towards addressing consumers' problems, concerns and complaints is critical for customer satisfaction (Anderson & Swaminathan, 2011; Bansal et al., 2004; Khare, 2010; Liu et al., 2008; Ribbink et al., 2004) as well as loyalty (Anderson & Swaminathan, 2011; Otim & Grover, 2006). A few authors have studied responsiveness in terms of care provided by the websites to their customers in terms of pre-and-post purchase activities (S. S. Srinivasan et al., 2002). Responsiveness has also been featured as an important variable while assessing online brand image (Christodoulides & Chernatony, 2004; Silva & Alwi, 2008a). A summary of sub-elements and various relationships is given in table 8.

Table 8: Sub-elements and relationship summary of e-mix variable Responsiveness

E-marketing mix element	**Sub-elements**	**Relationship with marketing concepts**
• E-marketing mix element related to "Responsiveness"	• Help customer with prompt service • Quick ability and response to solve problem • Commitments towards solving customer's problems	• Online service quality • Online satisfaction • e-loyalty • Online brand image • Pre-post purchase behavior

vii. Order fulfillment and product delivery

E-marketing mix variable related to delivery and responsiveness affect satisfaction and e-loyalty and are a part of the post-purchase behavior of an online shopper (Croome et al., 2010; Otim & Grover, 2006). E-marketing mix variable related to delivery or order fulfillment have been included in the studies related to website performance (Carlson & O'Cass, 2011). E-marketing mix variable 'delivery' has been studied independently in very few studies. Delivery of products includes timely delivery of the right product at a convenient time (Julie, 2002). Delivery of product also means that the product should reach the customer undamaged(Fan & Su, 2011). As timely

delivery of a product has become mandatory, the main focus is on delivering the right product (Z. C. Lee, 2010). A Few authors have also included the packaging aspect of the product in the delivery process (Liu et al., 2008). A summary of sub-elements and various relationships is given in table 9.

Table 9: Sub-elements and relationship summary of e-mix variable Order fulfillment & Product Delivery

E-marketing mix element	**Sub-elements**	**Relationship with marketing concepts**
• E-marketing mix element related to "Product Delivery /Order Fulfillment"	• Timely delivery • Delivering right product • Delivery at a convenient time • Delivering undamaged product • Good packaging	• Online satisfaction • e-loyalty • Post purchase behavior • Online brand image • Pre-post purchase behavior

viii. Transaction

There is no unanimity among the authors who have discussed e-marketing mix variables related to "transaction" in the online marketing literature. While a few have emphasized security of payment during the transaction process (Rachjaibun, 2007), others have stressed on easy navigation and the time saved during a transaction process because of the easy navigation (Anderson & Swaminathan, 2011; Bansal et al., 2004; Liu et al., 2008). The definition that we have used in our research about this e-marketing mix variable is flawless and hassle free transaction process along with smooth billing. A summary of sub-elements and various relationships is given in table 10.

Table 10: Sub-elements and relationship summary of e-mix variable Transaction

E-marketing mix element	**Sub-elements**	**Relationship with marketing concepts**
• E-marketing mix element related to "Transaction"	• Payment security during transaction process • Easy navigation • Time saving process	• Online satisfaction

ix. Sharing

The term 'sharing' in the online environment can be used with respect to various concepts like information or personal details, but for our purposes sharing means the exchange of information (i.e. product/service feedback or experience) which takes place between customers either using a community forum, social networking websites or an e-retailer's platform. With the evolution of social networking websites in the recent years, practitioners/marketers realized the importance of the e-marketing mix variables related to sharing. The concept of online communities or virtual communities which are the platforms where people with common interest and goals come together and share their views was first introduced in the year 1993 (Rheingold, 1993). Businesses use opinion leaders to affect the rate of innovation diffusion. Exchange of information which revolves around the products and services helps to create a community (Tolba & Mourad, 2011). Thus encouraging opinion leaders to share their views helps in creating word-of-mouth. Sharing and word-of-mouth, both are part of online promotion. The content that has been shared and to the degree it has been shared are some of the important checks that businesses use (Zhu & Chang, 2009). The e-marketing mix variable related to sharing drives e-loyalty when consumers share their experience online (S. S. Srinivasan et al., 2002). The loyalty programs are affected first by making the community share and participate and then using it as a tool for community promotion (Koh & Kim, 2004). A summary of sub-elements and various relationships is given in table 11.

Table 11: Sub-elements and relationship summary of e-mix variable Sharing

E-marketing mix element	**Sub-elements**	**Relationship with marketing concepts**
• E-marketing mix element related to "Sharing"	• Sharing common interest & goals • Revolves around the product • Tool to promotion	• E-loyalty

x. Policies and procedure

Businesses which opt for transparent privacy policies generate better trust among the consumers (Chung & Shin, 2010b; P. Gupta, Yadav, & Varadarajan, 2009; Lauer & Deng, 2007; Y. J. Wang,

Minor, & Wei, 2011; Winch & Joyce, 2006). Return policies can affect the purchase intent of a customer towards online shopping (J.-H. Kim & Lennon, 2010). There are studies that indicate that return policies can also affect online satisfaction (Anderson & Swaminathan, 2011) and e-loyalty (J. Sinha, 2010). A few of authors have studied return policies as a part of order fulfillment that includes timely delivery and easy transaction process(Bart, Shankar, Sultan, & Urban, 2005b). Other studies have researched as to how return policies are associated with customer motivation to shop, consumer intention, web equity and e-marketing strategy formulation (Jiang & Rosenbloom, 2005; Page & Lepkowska-White, 2002; C.-H. Park & Kim, 2003; Rajamma, Paswan, & Ganesh, 2007; Shabazz, 2008). A summary of sub-elements and various relationships is given in table 12.

Table 12: Sub-elements and relationship summary of e-mix variable Firm's Policies

E-marketing mix element	**Sub-elements**	**Relationship with marketing concepts viz.**
• E-marketing mix element related to "Firm's Policies"	• Return policies related to order fulfillment	• Online satisfaction • Purchase intention • Online Brand Equity

xi. Entertainment

An individual's internet shopping experience is moderated through a pleasurable shopping experience, social interaction and one to one interaction with the company representatives (Barlow, Siddiqui, & Mannion, 2004). This experience also depends on the hedonic and utilitarian motives of an individual which is evoked by a website, leading to a successful business transaction (Treise, Walsh-Childers, Weigold, & Friedman, 2003). Many studies have attempted to understand the hedonic factors like presence of 'Avatars" to map the influence of entertainment on the online shopping behavior (Holzwarth, Janiszewski, & Neumann, 2006). There are studies that have recognized the second world-virtual world as one of the important factors in brand building and revenue generation (Barnes & Mattsson, 2011; Spaulding, 2010). The attribute of entertainment is also used as a variable in some studies of online satisfaction (J.-H. Kim et al., 2009), branding (Carlson & O'Cass, 2011), online trust (Bart, Shankar, Sultan, & Urban, 2005a; Urban, Amyx, &

Lorenzon, 2009), consumer attitude towards online shopping (Z. C. Lee, 2010) and relationship quality (Chung & Shin, 2010b). Product virtualization technology allows customers to interact and examine the products more closely (J. Kim & Forsythe, 2010). The feeling of virtual-real is another variable that has gained importance in the recent past. A summary of sub-elements and various relationships is given in table 13.

Table 13: Sub-elements and relationship summary of e-mix variable Entertainment

E-marketing mix element	**Sub-elements**	**Relationship with marketing concepts viz.**
• E-marketing mix element related to "Entertainment"	• Pleasurable shopping experience • Social interaction • Feeling of virtual-real	• Online satisfaction • Online trust • Consumer's attitude

xii. Goodwill

Goodwill of a company is an intangible asset which is built over time between an organization and its customers (Otim & Grover, 2010). It facilitates the trust of the consumers and makes the exchange process safer. Goodwill of a company is also important because it provides a platform to launch promotional activities and various campaigns to introduce new concepts and product ideas (Constantinides, 2002).

2.3 Review of Literature for Sources of Brand Equity

The term "brand" appeared in the literature in the fifth century A.D, and thus it was used for fifteen centuries before it entered marketing in the year 1922 (Stern, 2006). Several authors have defined brand Equity from time to time. In the year 1992, David Ogilvy defined Brand Equity as "a consumer's idea of a product" (Blacksto, 1992). Fournier called it "consumer's collection of perception" (Fournier, 1998). As defined by American Marketing Association (AMA), the brand is a name, term, sign, symbol or design or a union of them, meant to classify the goods or services

of one seller or group of sellers and to distinguish them from those of competitors. It is also suggested that the "meaning" of a brand resides in the minds of consumers, based on what they have learnt, felt, seen, and heard over time (Homer, 2008). Financial motivation drives investors whereas manufacturers & resellers use brands as their strategic tool. Good Brand Equity makes it easy for a company to extend its product line and introduce new product under the same brand name. However, the actual value of a brand is in the mind of the consumers, and it drives the consumption behavior (Crescitelli, 2009). It is evident that while the brand is an identity for a product the concept of Brand Equity goes beyond the functional aspect of product and services.

Farquhar describes Brand Equity as the added value to a product (Farquhar, 1989). According to him, there are three perspectives of Brand Equity; financial, customer-based and brand extension. Brand Equity enables a company to charge a premium for the generic product. Also, various product categories are launched leveraging the established brand name. Moreover, Brand Equity helps in differentiation and therefore develops a competitive advantage. He also suggests that the Brand Equity can be measured using incremental cash flows (Farquhar, 1989).

Aaker further defined Brand Equity from a marketing perspective. He outlined it as a set of brand assets and liabilities associated with a brand that adds to or undermines the value provided by a product or service to a firm or customers (D. A. Aaker, 1991a).

Like Farquhar, Simon and Sullivan (1993) also focused on the future cash flows of a company to measure Brand Equity. Their macro approach of measuring Brand Equity estimates Brand Equity at the firm level. Based on the market capitalization, their estimation method obtains the worth of Brand Equity from the value of the firm's other assets. Whereas, the micro approach determines Brand Equity at the individual brand level so that the marketing decisions related to Brand Equity formation can be tracked and assessed. The study emphasizes on the long-run impact of marketing decisions in the form of brand investments on Brand Equity (Simon & Sullivan, 1993).

Kamakura & Russell (1993) defined Brand Equity in terms of brand value. They divided brand value into two parts: brand tangible value (BTV) and brand intangible value (BIV). The Brand tangible value represents the product features whereas brand intangible value is the component not accounted by the physical features but by the evaluative perception of consumers. The study claims that brand value and brand tangible value are strongly related whereas there is no relationship between brand tangible value and brand intangible value. Thus, the brand intangible value is the

difference between brand value and brand tangible value. The high brand intangible value indicates high brand value, but high brand value does not always mean high intangible value. They also suggested that a new entrant always has positive brand intangible value (Kamakura & Russell, 1993).

Park and Srinivasan (1994), unlike the other studies, attempted to study the sources of Brand Equity from the attributes and non-attributes perspective. In addition, the relationship of Brand Equity with market share and price premium has been established (C. S. Park & Srinivasan, 1994). In the year 2005, they refined the Brand Equity definition and suggested that it is the incremental value, recorded every year by the brand when compared to an unbranded product/service of the same price. This incremental value depends on the choice probability of consumers, who choose branded over the unbranded product. The three sources of Brand Equity which have been used in this approach are; Brand Awareness, attribute related component and non-attribute pReference (A. V Srinivasan, Park, Chang, & Park, 2005).

Kevin Lane Keller (1993) defined Brand Equity from an individual consumer's perspective and called it customer-based Brand Equity (CBBE). CBBE is the differential effect of brand knowledge on consumer response to the marketing of the brand. A brand is said to have positive (negative) customer-based Brand Equity when consumers react more (less) favourably to an element of the marketing mix for the brand than they do to the same marketing mix element when it is attributed to a fictitiously named or unnamed version of the product or service (Keller, 1993).

Based on the above available perspectives and definitions we can say that Brand Equity has two perspectives: financial and consumer based. Financial perspective in important from the point of view of an organization (Bahadir, Bharadwaj, & Srivastava, 2008; Tulin Erdem & Swait, 1998; Simon & Sullivan, 1993) and consumer perspective defines consumer choice and perception (D. A. Aaker & Keller, 1990; D. A. Aaker, 1992; D. a Aaker, 1996; Keller, Sternthal, & Tybout, 2002; Keller, 1993, 2001, 2010; C. S. Park & Srinivasan, 1994; Boonghee Yoo & Donthu, 2001b).

Brand Equity for Online Companies

Brand Equity for online companies is a new concept and the importance of brand in the online space has been challenged from time to time. In the early 2000s, it had been proposed that brands are irrelevant in the online space. Because of the information available and cost transparency, it is difficult for the companies to do branding and charge an extra premium (Sinha, 2000; Chen, 2001;

Dussart, 2001). The traditional concept of Brand Equity still holds true for online brands, and consumers are ready to pay a premium when they buy from the popular retail stores like Amazon and eBay. Various authors have emphasized the importance of Brand Equity for online companies, but the process of building online Brand Equity is still under-researched.

In the year 2002, Christine and White proposed that a website has equity if it can differentiate itself based on the marketer and non-marketer communication, site design, vendor characteristics and product & service characteristics. Web equity or Brand Equity of online retailer is defined in terms of web awareness and web image and that finally leading to loyalty (Page & Lepkowska-White, 2002). In the later years, many studies started focusing on Brand Loyalty or Brand Image like constructs (Silva & Alwi, 2008; Thorbjornsen, 2004). One important conceptual study (Christodoulides & Chernatony, 2004) suggested two baskets of measures for online Brand Equity: traditional and internet specific measures. The traditional measures include price premium, satisfaction/loyalty, Perceived Quality, leadership/popularity, perceived value, brand personality, organizational associations, Brand Awareness, market share and market price & distribution coverage. The measures, which are called internet specific measures, are online brand experience, interactivity, customization, relevance, site design, customer service, order fulfillment, quality of brand relationships, communities and website logos (Christodoulides & Chernatony, 2004). The major drawback of this study is that it did not talk about objective measures and perceptual measures of online Brand Equity separately. There are studies that discussed perceptual measures (Brand Image, Brand Trust etc.) and objective measures (site design, order fulfillment etc.) separately. The next paragraph lists few such studies. But none of them has studied them under the one roof with respect to building online Brand Equity.

Online corporate image/ brand image and their interaction gained importance because despite being popular, brands like Amazon and eBay were unable to generate profit in their beginning year. Therefore, the role of functional and emotional attributes and their impact on brand value and brand image were investigated (Silva & Alwi, 2008). As far as the nomenclature is concerned, online Brand Equity has been termed as web-equity or e-tail Brand Equity. The definitions also varied from one study to another based on the constructs. E-tail Brand Equity was defined as the differential weight of brand knowledge of e-tail on consumer reaction to the marketing of e-tail brand (Guan, Zhang, & Dong, 2007). Brand and its value to the customer have been measured in

terms of Brand Awareness, Brand Association, Brand Trust and Brand Loyalty. Attempts to identify if offline and online Brand Equity measures are same and the process of creating it is same has been made by Rios and Riquelme (Rios & Riquelme, 2008). Brand Trust and its antecedents have been studied with respect to various e-marketing mix elements (Ruparelia, White, & Hughes, 2010).

In the next section, various sources of Brand Equity have been discussed for offline and online Brand Equity. The sources of online Brand Equity (OBE) will be discussed in the same sequence as given in figure 5.

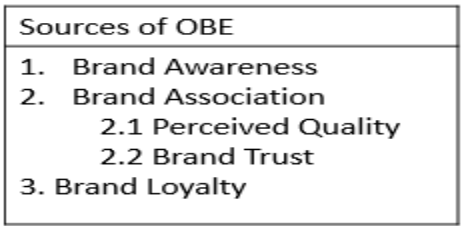


Figure 5: Block 2 of sources of OBE

i. Brand Awareness

The following sub-section focusses on the importance of Brand Awareness, discusses important definitions & measures of Brand Awareness. In addition, important studies related to the association of Brand Awareness with Brand Equity are included. At the end, studies pertaining to Brand Awareness for online retailers are discussed.

Brand Awareness (BA) is defined as the perceptual frequency of the name regardless of the product class (Hellofs & Jacobson, 1999). Brand Awareness has been understood in the most fundamental form, from the set of related constructs, for example, as Keller's (1993) work establishes that BA is the first component of brand knowledge, followed by Brand Image (Keller, 1993). Awareness indicates quality and commitment of a brand and, therefore, consumers consider the brand while making the purchase decision (D. A. Aaker, 1991a).

Brand Awareness is an important component of marketing strategy so it is important to know the level of Brand Awareness of the consumers. Several brand choice studies signal the importance of Brand Awareness (Heilman et al., 2000; Hoyer & Brown, 1990; Macdonald & Sharp, 2000). It has been observed that consumers are more likely to choose familiar and popular brands and it is one

of the most common decision rule available (Jacoby, Szybillo, & Busato-Schach, 1977; Roselius, 1971). In a low-involvement situation where an attitude towards purchase is missing, Brand Awareness is sufficient to influence the choice of purchase (Bettman & Park, 1980; Hoyer & Brown, 1990). Brand Awareness is also important because an easy recall goes into the consideration set and the probability of choice increases (Ballantyne et al., 2006). Brand Awareness is composed of several levels of sub-constructs such as; recognition, recall, top of the mind, brand dominance, brand knowledge and brand opinion (Aaker, 1996). These constructs are also used to determine BA. Laurent et al in the year 1995 proposed spontaneous-awareness, top-of-the mind awareness and aided-awareness as the three important measures of BA (Laurent, Kapferer, & Roussel, 1995).

Managing different stages of a product life cycle require different measures. A well-known brand thrives on the top-of-the mind recall whereas a new brand looks for recognition (D. A. Aaker, 1996). However, in a matured market where consumers are aware of all the brands, Brand Awareness is not a good indicator of brand choice (Mackay, 2001). Unaided-recall and familiarity are the composites of awareness and liking, according to Agarwal and Rao (Agarwal & Rao, 1996). Anything which helps consumers to experience the brand creates Brand Awareness, like promotion, social activities, public relations and lately through social media and the extensive use of word of mouth (Hutter, Hautz, Dennhardt, & Füller, 2013)

Brand Awareness is associated with the quality perception of a brand and price fairness (Oh, 2000). The positive association between market outcomes, Brand Awareness and Brand Equity has been tested (Huang & Sarigöllü, 2012). An attempt has also been made to study the relationship between the country of origin and top-of-the mind awareness (TOMA) of a brand (Hakala, Svensson, & Vincze, 2012). Brand Awareness is a major contribution towards creating customer-based Brand Equity (CBBE) as high CBBE brands also have high-level consumer awareness along with strong and unique associations (Keller, 1993).

Brand Awareness studies pertaining to online brands are limited and a few of the related studies are discussed here. Brand Awareness studies for online brands have been carried out for various sectors. One such study in tourism industry suggests that Brand Awareness helps in decreasing the perceived risk associated with the decision (Bertea, 2010). As it is not possible to examine products online, consumers use other cues like brand name, store image etc. to determine the value of the

purchase (Huang, Schrank, & Dubinsky, 2004; J. Park & Stoel, 2005). Another important cue, which plays a bigger role in the online space, is a promotion. Consumers while purchasing online tend to believe that online prices are lower than the physical store prices (Grewal, Krishnan, Baker, & Borin, 1998). Therefore, awareness with respect to discounts and other promotions affect the purchase intention (M. Park & Lennon, 2009). One of the recent studies indicated a positive relationship between e-commerce shopping and Brand Awareness (Al-fawwaz, Al-shatnawi, & Alsharafat, 2015).

It seems there is a limited understanding of the relationship between Brand Awareness and Brand Equity in the online context. Later in Chapter 5, we hypothesize a positive relationship between Brand Awareness and Brand Equity for online retailers and online travel-ticket booking portals.

ii. Brand Association

Brand Association is a central concept of Brand Equity. This section focusses on the definition and the complex processes of Brand Association. Brand Association with respect to Perceived Quality and Brand Trust is also discussed in some detail.

Brand Association is the central concept behind Customer Based Brand Equity (Christodoulides & Chernatony, 2010) and is part of brand knowledge, which a consumer gathers (J. Anderson, 1983). There are nodes in the memory of a consumer, which have various associative links (Aaker, 1991).

Associations with a product can be linked with many attributes of the product like the price of the product or its appearance (Keller, 1993). In addition, the association can take the form of a feeling or one's attitude towards the brand (Broniarczyk & Alba, 1994). The association is either related to functional benefit or related to soft or emotional attributes (Biel, 1993). Authors have found that more the number of associations greater will be the Brand Equity associated with a brand (Chen & Cheng-Hsui, 2001). The Brand Association has also been studied with respect to product and services. Feelings of a consumer and self-image congruence are unique to products whereas services are linked to the word-of-mouth and employees (Grace & O'Cass, 2002). In the later years, Aaker also associated it with personality. Consumers associate a brand with human-like personality or characteristics (J. L. Aaker, 1997). The neuroscientific method determined that whenever a consumer is thinking about a brand, relationship between brand personality and brain activity is established (Chen, Nelson, & Hsu, 2015). Refer table 14.

Reference to Self-Congruence theory is too important to be left out while discussing Brand Associations. The image association is built when the consumer compares the product user image and self-concept (M Joseph Sirgy, 1982; M. J. Sirgy et al., 1997). Methods like conceptual maps have been developed using brand concept mapping (BCM) approach (John, Loken, Kim, & Monga, 2006). The number of associations, the strength of the associations and the structure are used as the indicators to map the brands (French & Smith, 2013). Unique perception has to be created with a brand so that it can be associated with a particular characteristic and, therefore, a source of differentiation (Pechmann & Ratneshwar, 1991). As the brand name is the first point of association, high and low frequency words are used to help in building association (Meyers-Levy, 1989). The effort is always towards generating unique association as it helps in the consumer decision process (Tversky, 1972). It has been observed that creating unique associations became important with the increase in competition and it deviated some marketers from expressing that attribute which fulfilled the actual need (Keller, Sternthal, & Tybout, 2002). It is also true that when the competition increases and there are too many brands in the market, the level of uniqueness decreases (Romaniuk & Gaillard, 2007).

Table 14: List of Brand Association types given by various authors

S. No	**Authors**	**Types of Association**
1.	(Aaker, 1991)	Product attributes intangibles, customer benefit, relative price, use, user, celebrity, lifestyle, product class, competitors, and country-geographic area.
2.	(Biel, 1993)	Corporate image, product image, user image
3.	(Farquhar et al., 1993)	Product category, usage situation, product attribute, and customer benefit.
4.	(Keller, 1993)	Attribute, attitude, and benefits.
5.	(T. J. Brown & Dacin, 1997)	Organizational association
6.	(Chen & Cheng-Hsui, 2001)	Product Association (functional and non-functional attribute associations) and Organizational Association (corporate ability associations and corporate social responsibility associations)

Perceived Quality and Brand Trust are two forms of associations. We next discuss both these sources in some detail.

a. Perceived Quality

This sub-section lists various definitions of Perceived Quality and discusses its importance and relationship with Brand Equity. Also, we classify various measures of Perceived Quality and in the end focus on Perceived Quality for online retailers.

Perceived Quality is a special type of association as it influences Brand Associations in many contexts and also it affects profitability (D. A. Aaker, 2000). The most compehensive definition of perceived value has been given by Kotler (2000., it can be written in the form of the following equation:

Value= Benefits (Functional benefits +emotional benefits)/ Cost (monetary costs + time cost + energy cost + Psychic cost).

Perceived Quality is also about the consumer's judgment about a product's overall excellence or superiority (Zeithaml, 1988). Thus, it directly affects the choice and consumer behavior. It is customer's perception of the overall quality or superiority of the product or service with respect to its intended purpose is relative to alternatives (D. A. Aaker, 1991b). Before purchasing any product every customer sets some standards about the superiority of the product, when not found, they shift to a different brand (Saleem, Ghafar, Ibrahim, Yousuf, & Ahmed, 2015). It has been indicated by various studies that consumers of both developed and emerging economies tend to purchase products of higher quality (Batra, Ramaswamy, Alden, Steenkamp, & Ramachander, 2000; Bhardwaj, Kumar, & Kim, 2010; Sze et al., 2000). Perceived Quality has also been studied from the purchase intention and overall satisfaction perspective (E. J. Choi & Kim, 2013; Malik, 2012). Literature suggests that communication and information plays an important stimulus to the value structure of a consumer decision. Perceived product quality is important to develop a good brand image and ultimately thus increase the market share (Tsiotsou, 2005). Along with building good Brand Equity (D. a Aaker, 1996), Perceived Quality is one of the underlying dimensions for long term success of any company (Mitra & Golder, 2006). Perceived Quality is often judged by price when consumers are not aware of the quality. Higher the price better is the Perceived Quality (Riesz, 1980). Another set of authors has marked pereived value or quality as a complex construct, comprising of quality, price, benefits and sacrifice(Bolton, R.N., and Drew, 1991; Holbrook,

1994). The multidimensional nature of perceived value which changes with product category has been modelled with the help of VALUEMAP (I. Sinha & DeSarbo, 1998). Percieved quality and Brand Loyalty relationship is the other important relationship examined from time to time by various authors (Auka, Bosire, & Matern, 2013; Caruana, 2002; Ruyter, Wetzels, & Bloemer, 1998). The relationships are further discussed in Chapter 4. Advertising spending is one of the marketing activities which can increase the consumer's perception of quality (Moorthy & Zhao, 2000). In our research, we have taken Value Association instead of only Perceived Quality as given by Aaker. There is literature that says that distinction between value and quality is difficult.

Regardless of a large body of research on the customer-perceived value in traditional offline space, much less is known about perceived value in the online context. E-commerce researchers define customer-perceived value as "a consumer's perception of the net benefits earned in return for the costs incurred in attaining the desired benefits (Z. Chen & Dubinsky, 2003). Perceived value has been positively related to online buying intention and Brand Trust (Bonsón Ponte, Carvajal-Trujillo, & Escobar-Rodríguez, 2015; H. Chen, 2012; Ho, Lin, & Lu, 2014). E-service quality and perceived value also affect loyalty and online shopping behavior (Chang & Wang, 2011). Perceived Quality of products and services are also affected by the information given by users and companies (D. Choi & Shah, 2014). There are various scales available for measuring perceived value in the literature, one such scale is PERVAL scale (Sweeney & Soutar, 2001). Quality, price, and social factors are significant when Sweeny and Soutar's PERVAL scale is applied in the online context except for emotional factors (Eng, Sereikhuoch Proceedings for the Northeast Region Decision Sciences Institute 2011, p1019).

b. Brand Trust

Brand Trust is a special type of Brand Association. In this subsection definition of a brand, Trust are discussed along with its relationship to major constructs like customer satisfaction and Brand Equity. Also, the importance of Brand Trust in the online context has been discussed at the end.

Brand Trust is built when consumers experience and evaluate it with any direct or indirect contact. Direct contact is experienced during the consumption process. Advertisement or any word of mouth or brand reputation are the part of indirect contact (Keller, 1993; Krishnan, 1996). The literature states that overall satisfaction leads to trust as it indicates that consistency in the

fulfillment of its commercial promise and that the brand also takes care of the individual's well-being and interest (Ganesan, 2015; Selnes, 1998). All the definitions of trust, share the same idea that it is a feeling of security based on faith that his/her behavior is conducted and motivated by positive objectives towards the well-being and interests of the customer. When applied to the brand domain, trust is a feeling of security perceived by the customers that brand will meet her/his expectation related to the consumption of the product/services (Delgado-Ballester & Munuera-Alemán, 2001). Trust is a part of consumer relationship which is built over time and can be carried forward and hence it creates Brand Equity (Ambler, Ambler, & Johnson, 1997). Brand Trust has been studied with respect to Brand Loyalty widely (Delgado-Ballester & Munuera-Alemán, 2001, 2005; Matzler, Grabner-Kräuter, & Bidmon, 2006).

Trust is important for both offline and online shopping and it is built primarily between a person and website mediated through technology (Bart et al., 2005b; Winch & Joyce, 2006). Trust is more important in the online environment as the perceived risks like product risk and privacy & security are involved (Bart et al., 2005b; Li & Zhang, 2002; Winch & Joyce, 2006). There are studies that suggest that trust of brick-and-mortar companies or offline companies can be transferred to online retail stores (Li & Zhang, 2002; J. Park & Stoel, 2005). In other words, offline Brand Trust increases perceived internet confidence and search intention in the online environment (Hahn & Kim, 2009). A vast literature is available based on the antecedents to build trust (Alam & Yasin, 2010; Bart et al., 2005b; Doney & Cannon, 1997; H.-Y. Ha, 2004b; M. K. O. Lee & Turban, 2001; Salo & Karjaluoto, 2007; Sultan, Urban, Shankar, & Bart, 2002).

iii. Brand Loyalty

This section deals with definitions and various antecedents of Brand Loyalty. It also talks about its importance with respect to Brand Equity. Classifications based on loyalty have been discussed in brief followed by literature that elaborates Brand Loyalty in the online context.

Brand Loyalty is one of the core dimensions of Brand Equity (Bennett & Rundle-Thiele, 2005). The attachment is represented by the loyalty of the customers towards the brand (D. A. Aaker, 1991b). Loyalty is defined as "a deeply held commitment to rebuy or re-patronize a favored product/service regularly in the future, thereby instigating repetitive same brand or same brand set purchasing, regardless of situational influences and marketing efforts having the potential to cause switching behavior (L. R. Oliver, 1997). Brand Loyalty has been divided into attitudinal loyalty,

cognitive loyalty, emotional loyalty and behavioral loyalty. Oliver for the first time explored the three dimension of Brand Loyalty: cognitive, affective and conative. Cognitive loyalty is the loyalty generated built on information such as price and features (R. Oliver, 1999). Further, this definition extended to positive beliefs and thoughts about a brand while repurchasing (Härtel & Russell-Bennett, 2010). Affective loyalty is the emotional attachment with the brand when re-purchased, therefore, it is called emotional loyalty. The positive feelings aroused while purchasing in the next occasion (Härtel & Russell-Bennett, 2010; R. Oliver, 1999). Behavioral loyalty is the actual purchase of a brand and can be measured with the help of sales. Behavioral loyalty, cognitive loyalty, and emotional loyalty are interdependent on each other. Based on these three dimensions there are frameworks given to capture the right market segment. The consumers can be classified as stable loyal, passionate loyal, hot potential, hopefuls, vulnerable, functional loyal, cold potential and disloyal (Worthington, Russell-Bennett, & Härtel, 2009)

Loyalty is important because it increases the cash flow of an organization and decreases the customer defection (Reichheld, 1993, 1996; Schlesinger & Heskett, 1991). A loyal customer not only goes for repeat purchase but they also Refer new customers to the firm and mentor inexperienced customers, which is also called the ripple effect of loyalty (Gremler, Brown, & Brown, 1999). There are studies that claim that loyalty is directly related to price (Chaudhuri & Holbrook, 2001) and others that redirect it to brand attitude and habitual behavior (Chaudhuri, 1999).

Various studies have considered each of the dimensions independently and given various antecedents of loyalty. Theory of reasoned action binds all three dimension of loyalty under one roof. The attitudinal aspect and the subjective norm combined to give rise to a buying behavior which can also be called the repeat purchase or behavioral loyalty (C. L. Ha, 2011). One classification of Brand Loyalty is based on utilities and awareness. Inertial Brand Loyalty is when there is no intertemporal dependence but purely based on consumer awareness. Whereas cost-based Brand Loyalty has intertemporal interdependence and the positive utilities are the results of past purchase (Wernerfelt, 2013). Searching information is an important aspect for the consumer for being loyal. A search of information and price sensitivity are the crucial decisions for consumers, and an ideal combination of these two makes them loyal and disloyal (Krishnamurthi & Raj, 1991).

Traditional Brand Loyalty which was majorly product driven and market controlled is now consumer controlled, a distribution based and technology enabled concept (Schultz & Bailey, 2000).

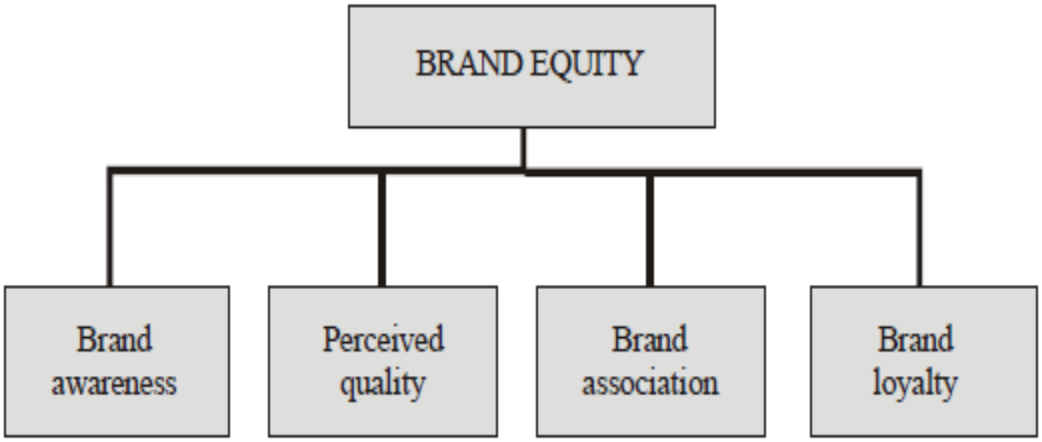
A parallel line can be drawn between e-loyalty/online Brand Loyalty and store loyalty as the idea is to increase the repeat purchase and visit the websites (Corstjens & Lal, 2000). The e-loyalty framework (Fig 2.) developed by Gommans et al. outlines value proposition, website and technology, brand building, customer service and trust-security as a major contributor to e-loyalty (Gommans, Krishnan, & Scheffold, 2001). Gommans et. al has proposed brand image and brand building as one of the antecedents of e-loyalty whereas the available literature on Brand Equity suggests that loyalty is a source or an antecedent to Brand Equity. Other research which focuses on e-loyalty, discusses the intention to revisit, the frequency of visits and the duration of a visit (Thorbjornsen, 2004). When customers trust an online vendor, they will share and communicate strategic information and that electronic communication enables the company to form a more intimate relationship with customers. By offering products and services tailored to their pReferences, strengthens their loyalty (Palvia, 2009; Riemenschneider, Jones, & Leonard, 2009).

2.4 Brand Equity Models

The models of Brand Equity began to be used widely in the 1980s by advertising experts and was then simplified and promoted by David A. Aaker through his bestselling book– "Managing Brand Equity" (1991). Other important academic contributions and advertising agencies continued to explore the concept and developed their own meaning, characterization and measurement methods. We discuss three important Brand Equity models by Aaker, Keller and Kapferer Respectively

i. Aaker's Model

David A. Aaker defined Brand Equity as "a set of brand assets and liabilities linked to a brand, its name and symbol that add to or subtract from the value provided by a product or service to a firm/or to that firm's customers (D. Aaker, 1991). The assets and liabilities on which Brand Equity is created differ from context to context, but they can be usefully grouped into four categories: Brand Loyalty, Brand Awareness, Perceived Quality, and Brand Associations. Aaker's concept is summarized in figure 6.



Source: Aaker and Joachimsthaler (2000, p. 31).

Figure 6: Aaker's Brand Equity Model

These four set of asset and liabilities are also called sources of Brand Equity (BE). Since we have adopted Aaker's model in our research, these sources of Brand Equity have already been discussed in the previous sections. Aaker suggested that these BE assets or sources generally add or subtract value for customers. They help them interpret, process, and store huge quantities of information about products and brands (Aaker, Managing Brand Equity, 1991, Pg-16).

ii. Keller's Model

Kevin Lane Keller defined Brand Equity from a customer-based view as "the differential effect of brand knowledge on consumer response to the marketing of the brand (Keller 1998).

To understand how customer-based Brand Equity can be built, measured, and managed, Keller described a detailed creation of brand knowledge. According to Keller, brand knowledge is defined in terms of two components, Brand Awareness and brand image. Brand Awareness is the consumers' capability to recognize the brand under different circumstances and comprises of brand recognition and brand recall. The perceptions about a brand as reflected by the Brand Associations alleged in consumer's memory is called brand image. Keller classified associations into three major categories: attributes, benefits, and attitudes. These associations can vary according to their favorability, strength, and uniqueness. Considering these aspects, a brand may have a positive Customer Based Brand Equity when consumers are more accepting of a new brand extension, less

sensitive to price increases and withdrawal of advertising support or more willing to seek the brand in a new distribution channel etc. That means they react favorably to marketing activity of the brand as compared to an unnamed or fictitiously named version of the product, or a negative Customer Based Brand Equity when consumers react less favorably to marketing activity for the brand in the same comparison context.

Keller considers that building a strong brand implies a series of four steps, where each step is contingent on successfully achieving the previous one: establish the proper brand identity, create the appropriate brand meaning, elicit the right brand responses, and forge appropriate brand relationships with customers. Keller divides these four steps into six brand-building blocks: salience, performance, imagery, judgments, feelings, and resonance. Refer figure no 7.

Considering the dimensions of Brand Equity described above, both Aaker's and Keller's views are very customer oriented and emphasize the importance of Brand Awareness and associations. Despite this commonality, some important differences exist. The primary difference is that the customer-based Brand Equity framework of Keller is based on a more detailed conceptual foundation. A much stronger focus on consumers and their brand knowledge structures can be seen in customer-based Brand Equity model when compared to Aaker's model. In spite of the differences, Aaker's model seems to complement customer-based Brand Equity quite well, because it considers the Perceived Quality aspect. When considering the benefits of Brand Equity, the opinions of Aaker and Keller concerning this topic are very similar. The difference is in the accuracy of details. Aaker is the one who classified customer's and firm's benefits of Brand Equity. Aaker outlines general guidance for each dimension of Brand Equity, while Keller suggests a four-step process of building strong equity. Both authors suggest clear advice for building Brand Equity, but the concept of Keller is more detailed and therefore perhaps more useful. Nevertheless, both have outlined the need to understand how customers respond to the brands and its marketing activity so that brand-building strategies can develop into the desired direction.

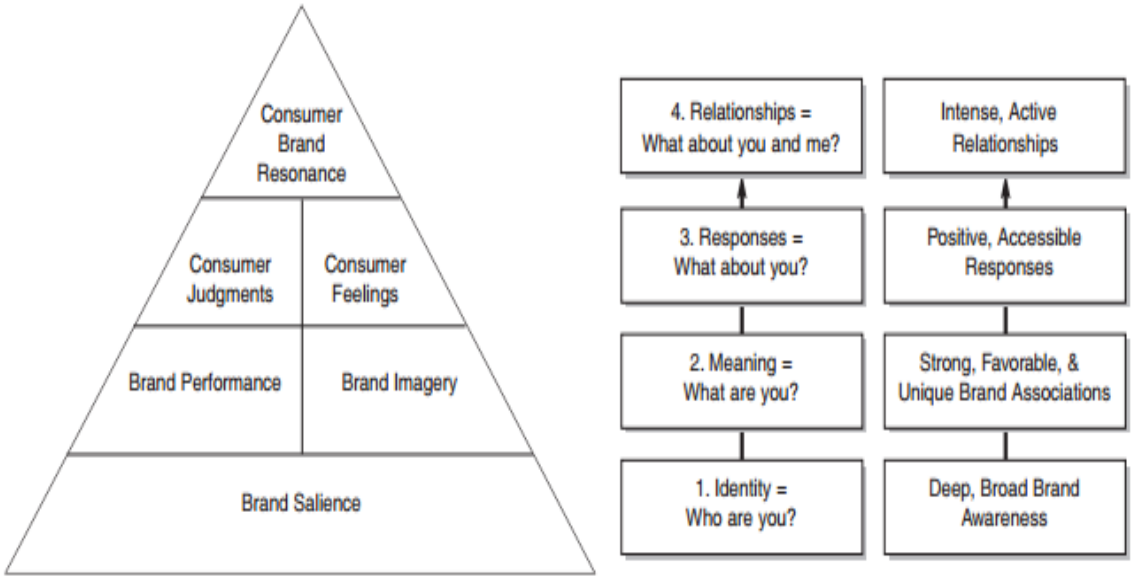


Figure 7: Keller's Customer-based Brand Equity Pyramid

iii. Kapferer Model of Brand

Jean-Noël Kapferer in his book "The New Strategic Management" (5th Edition) has given a balanced approach to brand management by comparing advanced theories and cases. It also affirms that the perspective on the brand has changed.

He argues that the definition of brand given by Keller (1998), the concept of "product" itself is left behind because it only focuses on the gain in perceived value brought by the brand. According to him, Brand management starts with the product and service as the prime vector of perceived value, while communication is there to structure, to orient tangible perceptions and to add intangible ones. He also pointed that Keller's definition focuses on the "cognition" and ignores the "emotional" component. Therefore, he proposed a brand system which has three poles (Refer fig 8).

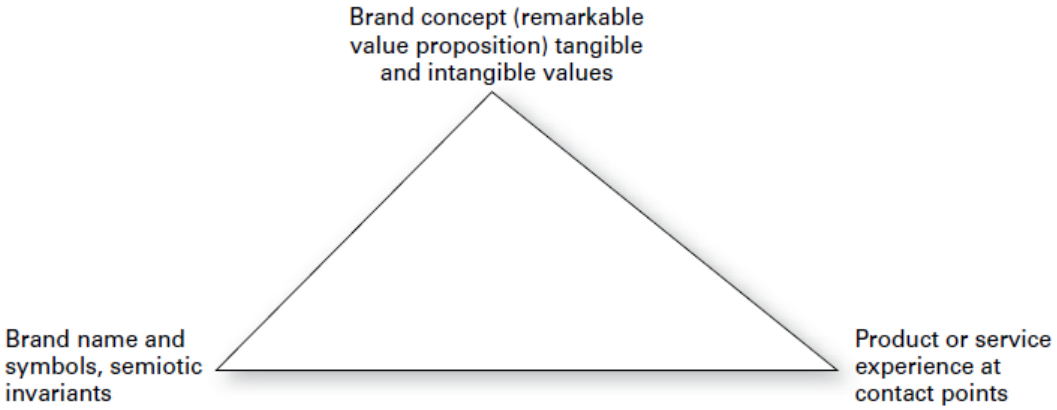


Figure 8: Brand System by Kapferer

According to Kapferer, the minimum four indicators of Brand Equity are:

- Aided Brand Awareness. This measures whether the brand has a minimal resonance.
- Spontaneous Brand Awareness. This is a measure of saliency, of a share of mind when cued by the product.
- Evoked set, also called consideration set. Does the brand belong to the shortlist of two or three brands that one would surely consider buying?
- Has the brand been already consumed or not?

2.5 Relationships between E-Marketing Mix Elements & Sources of Brand Equity

Brand Awareness is one of the focal independent variables of Brand Equity and an important key dimension (D. a Aaker, 1996). It is capable of generating Brand Equity even when the other sources of Brand Equity are absent (Hoyer & Brown, 1990). It is characterized as the process of perceiving a brand based on past encountered experience (Mandler, 1980). Any interaction with the brand can be the experience Reference point and help in the top of the mind recall. Advertising enhances Brand Awareness as a repetitive recall increases the probability of a brand entering the consideration set (Hauser & Wernerfelt, 1990). As advertising is a type of promotion activity, therefore the e-marketing mix element equivalent to promotion i.e interactivity and customer care may also increase the level of Brand Awareness. Availability of a brand or distribution intensity affects Brand Awareness (Smith, 1992). E-marketing mix element, the speed of service, therefore, helps in building Brand Awareness. Awareness also increases along with consumer satisfaction (Farris, Olver, & De Kluyver, 1989). Website content and security-reliability increases the value of offering and therefore may increase Brand Awareness.

Association with the brand in the online context is majorly divided into trust association and Perceived Quality or Value Association. Aaker considers trustworthiness as one of the forms of Brand Association (D. A Aaker, 1996). When online companies are involved, trust can be singled out as the ability to trust a website for online transaction and is of utmost importance. The literature on online Brand Equity suggests that Brand Trust is dependent on the security and privacy of a website (Head & Hassanein, 2002; D. J. Kim, Ferrin, & Rao, 2008; Ratnasingham, 1998; Rios & Riquelme, 2010). Brand Trust is also based on individual's experience and interaction (Garbarino & Johnson, 1999). The experience process develops as a consumer learns over time (Delgado-Ballester & Munuera-Alemán, 2001) and can be termed as an experiential benefit form of Brand Association. Customer value & benefit and customer care & relationship in the online context are important aspects of consumption experience. Also, an interactivity feature of a website enhances the consumer experience and therefore Brand Trust. Perceived Quality or Value Association maintains the uniqueness of a brand and increases the willingness to pay a premium price for a brand. The more the number of cues, the strong is the association with a brand. Both tangible and non-tangible attributes create Value Association. Accurate & reliable information, easy navigation and the interactivity feature of a website also create value to customers (Chiu & Wang, 2000; Chou & Lin, 1998; Trumbull, Gay, & Mazur, 1992). Advertising is an important cue for the quality of a product and a positive relationship has been found out between advertising and Perceived Quality (D. A. Aaker & Jacobson, 1994; Milgrom & Roberts, 1986). As advertising is a promotional activity, therefore, the equivalent e-marketing mix variables may have a positive relationship with the Value Association as well.

The relationship between Brand Loyalty and attributes like physical quality and customer care is discussed in the offline literature (Ekinci, L.Philip, & Massey, 2008; Grönroos, 1984; Nam, Ekinci, & Whyatt, 2011). In the online context Content of a website, navigation speed, interactivity features, security and privacy features of a website are the attributes that facilitate the online purchase. Also, advertising is positively associated with Brand Loyalty according to an extended hierarchy of effects between association and attitude towards the brand (Shimp, 2004)

2.6. Relationships between "Sources of Brand Equity" and "Brand Equity"

Customer base Brand Equity is a multidimensional concept and it has four dimensions; awareness, association, loyalty and Perceived Quality (Pappu, Quester, & Cooksey, 2005a). This is originally

derived from Aaker's Brand Equity model but there are studies that failed to prove awareness and association as two independent variables. These suggested that Brand Awareness and Brand Association act combinedly towards building Brand Equity and therefore Brand Equity is a three dimensional concept combinedly (Washburn & Plank, 2002; Boonghee Yoo & Donthu, 2001b). Therefore, there are two streams of research with respect to sources of Brand Equity. The first stream suggests it to be as four dimensional concept (D. A. Aaker, 1991a; Cobb-Walgren, Ruble, & Donthu, 1995; Pappu, Quester, & Cooksey, 2005b) and the other as three dimensional concept (Washburn & Plank, 2002; Boonghee Yoo & Donthu, 2001a).

The objective behind studying the relationship among the sources of Brand Equity is to find a positive and significant relationship for the process of building Brand Equity. One such study in 2007 suggested that there is a positive and significant relationship between Brand Awareness and Brand Association and Brand Loyalty. They supported the three dimensional concept of Brand Equity and considered Brand Awareness and Brand Association as one construct. They found loyalty and Brand Equity are positively and significantly associated, whereas Perceived Quality has no positive and significant relationship with loyalty or equity (Gil, Andrés, & Salinas, 2007). Brand Loyalty claimed to be closer to the concept of Brand Equity because it involves the commitment to purchase a brand (Yoo et al. 2000; Gil et al. 2007). Yet another study confirmed the significant and positive relationship between Brand Awareness and Brand Association, Brand Awareness and Perceived Quality, Brand Association and Brand Loyalty, Perceived Quality and Brand Equity, and Brand Loyalty and Brand Equity respectively (Buil, Martínez, & Chernatony, 2013). Some authors have divided Brand Loyalty into two parts; past-Brand Loyalty and future-Brand Loyalty. They suggested that the relationship between the sources and Brand Equity and Brand Equity and future Brand Loyalty as an important contribution to the Brand Equity literature (L. Wang & Finn, 2013). A few studies examined the moderating and mediating role of the sources as well as the interactive effect between these sources of Brand Equity. One such study identified four mediating relationships between the sources of Brand Equity. It was found that associations mediate the relationship between awareness and equity, loyalty mediates the relationship between association and equity, brand image mediates the relationship between loyalty and equity and Perceived Quality mediates the relationship between brand image and equity (Severi & Ling, 2013). The shortcoming of this study is that the four relationships are studied independently. The relationships are to be explored in one frame to determine the true mediating effect.

Christine and White in their conceptualization paper suggested Brand Awareness, brand image and Brand Loyalty as the sources of online Brand Equity (Page & Lepkowska-White, 2002). Traditional measures along with internet specific measures were found to be the sources of online Brand Equity (Christodoulides & Chernatony, 2004). Similarly, there are other studies that used various sources as Brand Equity constructs (Ruparelia, White, & Hughes, 2010; Silva & Alwi, 2008b).

To the best of our knowledge, there are only two studies that explored the relationship among the sources of Brand Equity in the online context. Guan and Ma in the year 2009, considered Brand Awareness, experience, quality, trust and loyalty as the sources of online Brand Equity and empirically tested the relationship between awareness and quality, awareness and experience, quality and trust, experience and trust experience and loyalty and trust and loyalty (Guan & Ma, 2009). Another study which is more relevant in this context and follows Aaker's dimensions to discover online Brand Equity is by Rosa & Riquelme (Rios & Riquelme, 2008b, 2010). They adopted Brand Awareness and Brand Loyalty as it is but divided Brand Association into two parts. The first type of association is called Perceived Value (equivalent to Perceived Quality of offline Brand Equity) and the second type of association is called Brand Trust. Positive and significant relationships exist between Brand Awareness and Perceived Quality, Brand Awareness and Brand Trust, Brand Trust and Brand Loyalty, Perceived Quality and Brand Loyalty, Brand Trust and Perceived Quality, Perceived Quality and Brand Equity, and Brand Loyalty and Brand Equity (Rios & Riquelme, 2008a). But they did not explore mediation or moderation effect between these sources of online Brand Equity.

Brand Trust as a source of Brand Equity has been explored from time to time. Trust as a relationship assessment variable and leading indicator of Brand Equity was discussed by Tim Ambler (Ambler et al., 1997). Trust is more important in the online environment as the perceived risks viz: product risk and privacy and security risks are involved (Bart et al., 2005b; Li & Zhang, 2002; Winch & Joyce, 2006). There are studies that suggest that trust of brick-and-mortar companies can be transferred to online retail stores (Li & Zhang, 2002; J. Park & Stoel, 2005). In other words, offline Brand Trust increases perceived internet confidence and search intention in the online environment (Hahn & Kim, 2009). A vast literature is available based on the antecedents

to build trust (Alam & Yasin, 2010; Bart et al., 2005b; Doney & Cannon, 1997; H.-Y. Ha, 2004b; M. K. O. Lee & Turban, 2001; Salo & Karjaluoto, 2007; Sultan et al., 2002).

2.7 Consumer Choice Heuristics

Brand Equity is formed over time through consumer learning and consumer decision making process (Tülin Erdem et al., 1999). The brand is used as a tool in an imperfect and asymmetric situation (Tülin Erdem & Swait, 1998). It is important to understand how brand shapes and drives Brand Equity during the consumer choice process. The buying decision process model given by Kotler et al has five stages. Consumers go through all the stages depending on their need. Sometimes the information search stage is not extensive in daily purchases like commodities. The role of brand appears in the 'evaluation of alternatives' stage. The evaluation of alternative stage is preceded by the information search. As the information and options available to a consumer are abundant, it becomes difficult to scan all of them. Therefore, each consumer goes through a specific selection process. Payne suggested that choice process has multiple stages (Payne, 1976). But later, Lussier and Olshavsky suggested that consumer choice process has only two stages. The first stage consists of general screening, where they go through the descriptive information and enlist various available brands for further consideration. The second stage is particularly used to finalize the purchase. This is also called "Short listing and final choice" (Lussier & Olshavsky, 1979). Though there was empirical evidence that consumer use bi-stage structure for making choices (Biehal & Chakravarti, 1986; Russo & Leclerc, 1994) but it took a while to understand how consumers use the information before making their choice. There is enough evidence available in psychology and marketing that consumer does not use information in its raw form. They have set of rules or heuristics to decide upon the choices (Bettman, 1971b; Hoyer, 1984). Heuristics are of two types; constructive and stored. Buyers use constructive heuristics while shopping for the first time and use stored heuristics when they are already experienced in shopping. The importance of heuristics is also realized when consumers go through the painful process of decision making. Psychological difficulty increases while purchasing online because of the number of variety available (Amir, 2002).

As internet evolved and online retailing boomed, it became clear that acquiring a customer is one of the important criteria for sustaining a business. Marketers and various researchers studied the

factors influencing the choice in the online retail segment. Brand name, sensory and non-sensory search attributes differently affect choices made in online and offline spaces (Degeratu, Rangaswamy, & Wu, 2000b). The low price was determined as one of the important attributes along with the easy search attribute, that help a consumer to pRefer one website over others to facilitate repeat purchase behavior (Reibstein, 2002). Online choice behavior is also classified depending upon hedonic and utilitarian motivation. The attitude towards online shopping is related to ease of use, enjoyment, navigation, convenience (Childers, Carr, Peck, & Carson, 2001). Recently, attributes like online consumer reviews (OCR), have also become important for making a choice online (Kostyra, Reiner, Natter, & Klapper, 2016). One study narrowed down the consumer decision making into a six stage process: consider, evaluate, buy and enjoy, advocate, bond (Edelman C, 2010). The literature review suggests the heuristics i.e. the rules a consumer opts for in different situations while purchasing online is still a grey area. To address this gap, we need to map the sources of online Brand Equity and thus attempt to uncover the hidden rules and information that are used during an online purchase.

2.8 Research Gaps

As discussed in depth in the preceding literature review, antecedents of sources of online Brand Equity (OBE) are broadly the marketing actions termed as e-marketing mix elements. E-marketing mix elements discussed in the literature have overlaps and are used with very little uniformity. For example, a study by Liu et al while studying e-satisfaction (Liu et al., 2008) have taken 9 variables, whereas Michel Rod in the same year has taken 10 antecedents of e-satisfaction (Rod et al., 2008). Liu et al have taken "information quality" as one of the variables whereas Michel Rod has used the term "timeliness" for capturing the same information. The variable 'Information quality' captured understandable, accurate, reliable and relevant information whereas 'timeliness' only captured the up-to-date feature of information. Similarly, there are other differences and discrepancies in the literature pertaining to the study of major e-marketing concepts. Therefore, it is evident that there is no definitive list of antecedents to the sources of OBE. To address this gap we need to generate a definitive list of e-marketing mix elements through extensive literature review and validate it using content analysis and factor analysis. This is our first research gap.

Objective 1: To generate a definitive list of antecedents (e-marketing mix elements) of sources of online Brand Equity.

As discussed in section 2.5 and 2.6, product, price, place, promotion have a positive and significant relationship with the sources of BE but there is little evidence of such relationships in the online context. Other than 4Ps there are other e-marketing mix elements that have been identified. The relationships between these identified e-marketing mix elements and sources of OBE have been rarely investigated in the literature. Similarly, there is also a need to characterize the relationship between sources of OBE and OBE through empirical investigations. The absence of a systematic approach to study the complete process of building online Brand Equity is our second research gap. We need to address this gap by carrying out investigations into modelling online Brand Equity.

Objective 2: To investigate and characterize the relationships between antecedents (e-marketing mix elements), sources of Brand Equity and Brand Equity in the online context.

Finally, there is also a research gap in understanding how sources of Brand Equity affect the online Brand Equity in the context of consumer decision-making process. There can be two type of brand interactions in the online context. One is the product brand and the other is the online retailer brand. As discussed earlier the literature review suggests the heuristics i.e. the rules a consumer opts for in different situations while purchasing online is still a grey area. To address this gap, we need to map the sources of online Brand Equity and thus attempt to uncover the hidden rules and information that are used during an online purchase. This is our third research gap that we attempt to explore in our research.

Objective 3: To explore the consumer brand choice in the online context.

2.9 Proposed Model

We next propose a generic model to investigate the relationships between e-marketing mix variables and sources of online Brand Equity and relationships between sources of online Brand Equity and online Brand Equity. It is well established in the literature that Marketing activities significantly affect sources of Brand Equity. The model is based on Aaker's conceptual model and Yoo, Donthu and Lee's (B. Yoo et al., 2000) systematic examination of marketing mix elements in creating Brand Equity. The various marketing activities called e-marketing mix elements act as

antecedents of sources of online Brand Equity and sources of online Brand Equity act as antecedents for building online Brand Equity (Refer figure 9).

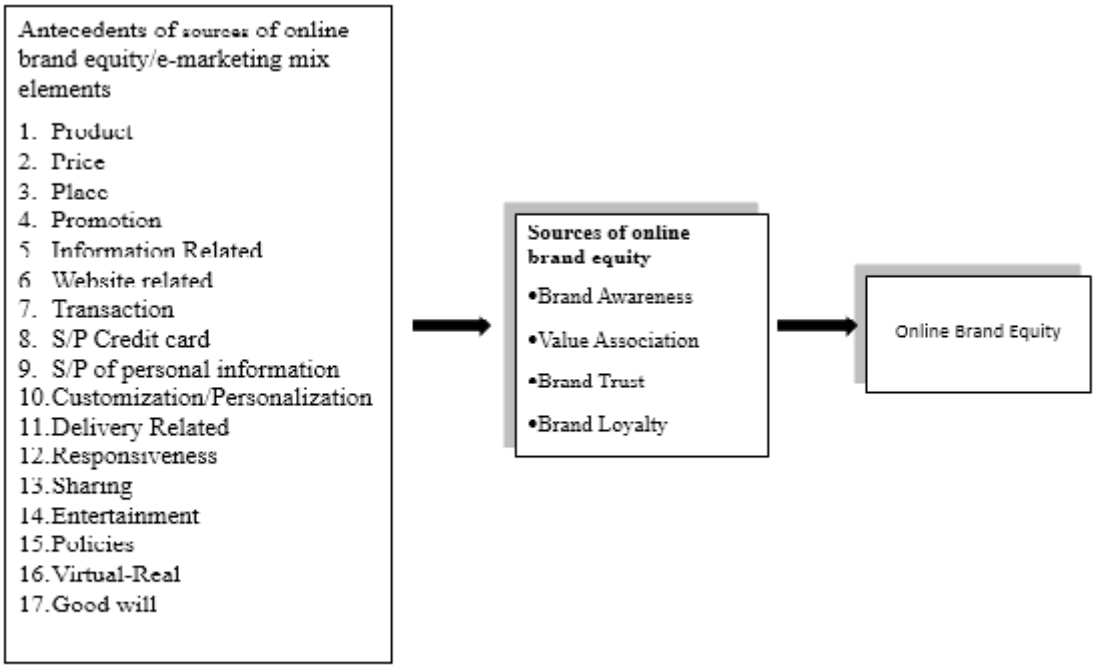


Figure 9: Figure depicting the proposed model

Chapter 3: Research Methodology

The previous Chapter explained the antecedents associated with online Brand Equity. These are e-marketing mix variables and sources of OBE. The primary investigation started with an exploratory research approach, to establish the relevant elements of the marketing mix in the online context. Further, descriptive research approach was adopted to establish and characterize relationships between e-marketing mix elements and sources of OBE. This Chapter outlines nature of the investigation, research design/s and the means of capturing and analyzing the information that is required to address our research objectives.

The literature review has built the scope and context of the study and next we are going to outline the various elements of research methodology to test our proposed model and the hypotheses. In this Chapter, we discuss the nature of our research paradigm, research design, scope of the study, sampling design, research methods, questionnaire development and data collection aspects. The last section of this Chapter contains major tasks to carry out the research, which are arranged in a chronological order.

3.1 Research Paradigm

The word paradigm is defined as a broad view or perspective of something. The paradigm can also be defined as a set of beliefs that deals with ultimate or first principles (Guba & Lincoln, 1994). The belief and practices regulate and outline the process and investigation methodology to carry out a research. The important paradigms are positivism, post positivism, interpretivism, critical theory, and constructivism. We started with positivism approach for this philosophical inquiry where we were investigating about online Brand Equity. Positivism approach affirms a deterministic and empiricist philosophy, where causes conclude effects and aim to directly observe, quantitatively measure and objectively forecast relationships between variables (Mackenzie & Knipe, 2006). Positive epistemology says that whatever can be observed is converted into credible data. This helps us to develop hypotheses and a research methodology, which can be replicated in the future. The positivist approach tends to quantify the observations and allow us to do statistical analysis (Bryman, 2004, 2008). As we moved further into the research, we found that a major chunk of the study is dependent on social and human experiences. Because of which, qualitative methodology is also adopted.

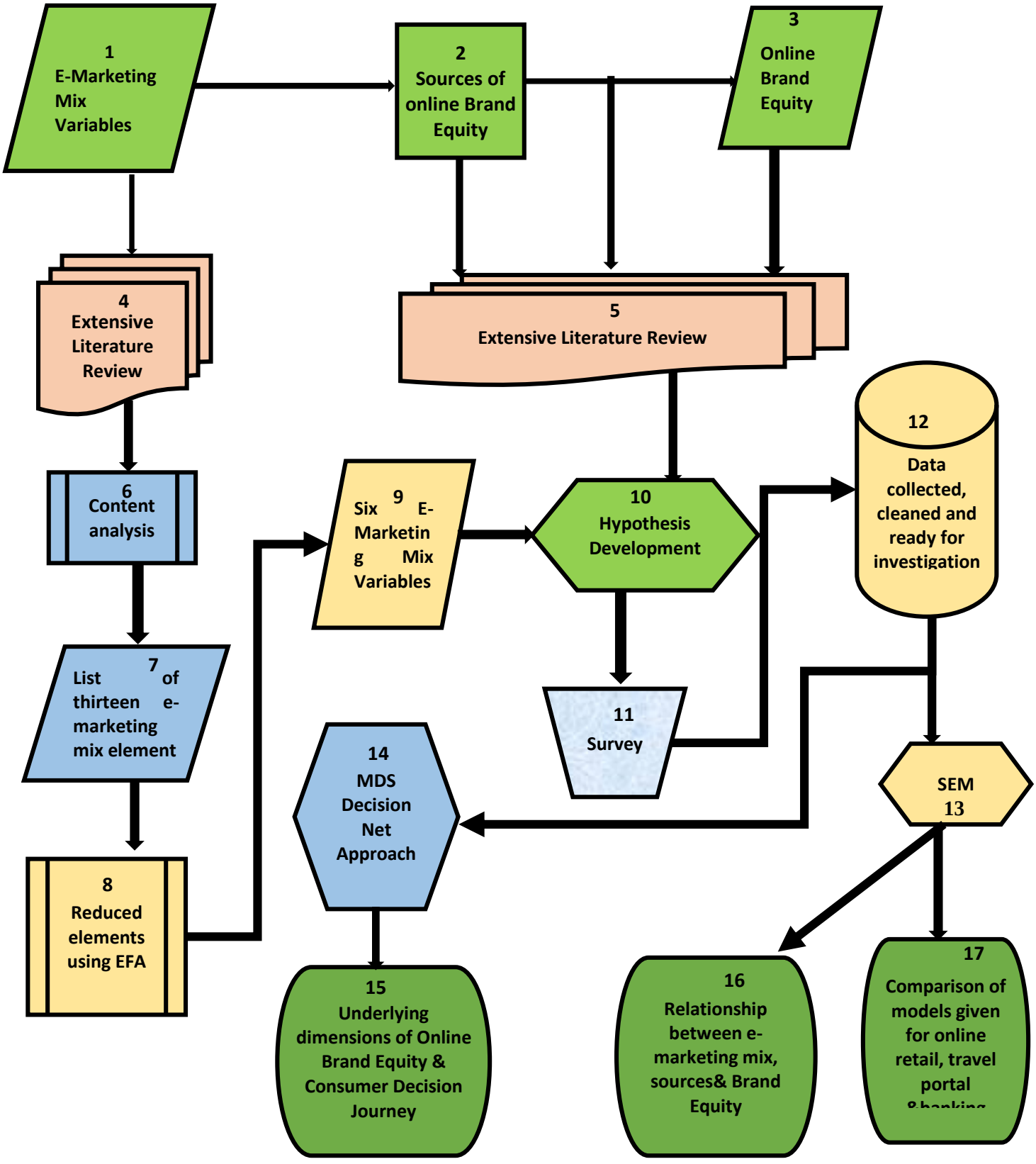


Figure 10: Flow Diagram of Research Methodology

Due to the complex nature of the study, there was no single paradigm that could satisfactorily arrange all of the required methodological aspects. Therefore, we decided to combine the quantitative/positivist paradigm with the qualitative/interpretive paradigm. The blending of both paradigms provided us with the ability to statistically analyze the scientific data whilst also recognizing the complex psychosocial and emotional factors that influence online consumer behavior.

3.2 Research Design/ Approach

Figure no. 10 is the flow diagram of our research approach. It will help us to understand the steps taken for exploratory and descriptive research designs. There are in total 15 decisions in the diagram. Decision no 1, 2 & 3 are the building blocks explained in the literature review Chapter (Chapter 2). Decision no 4 & 5 are the extensive literature review for the three building blocks. Decision no 4 or the extensive literature review for the e-marketing mix variable was not sufficient to generate a list of the e-marketing mix elements. Therefore, we did content analysis (decision no.6) to systematically arrange the literature so that a definitive list of e-marketing mix can be generated and validated. Decision no 7 is the final list of 13 e-marketing mix elements. We further reduced these 13 e-marketing mix elements with the help of exploratory factor analysis (decision no 8). Decision no 9 is the reduction of six e-marketing mix elements. We use decision no 9 and the extensive research of the sources of OBE and OBE literature to build the hypotheses i.e. decision no. 10. The data was collected using survey method for finding out the associations between the e-marketing mix variables and sources of OBE as proposed in the hypotheses. After the data was collected the next step was preparing this data for investigations i.e. decision no. 12. Once the data is ready for investigation we use structure equation modelling to investigate and establish the relationships between the antecedents of OBE. Additionally, step no 14 and 15 also carried out to understand the consumer decision journey and to identify the underlying dimensions of online brand choice.

3.3 Scope of the Study

In our study, we investigate into modelling into online Brand Equity. We explored the online space by revisiting the taxonomy of website classification. Finally, selected the online brands so that it can represent the Indian e-commerce segment, by conducting a small open ended survey, about daily online activities. The result of the survey is given in figure 13 in the form of a pie chart.

We first explain the steps to identify the major website classification.

Taxonomy of website classification: Revisited

Many studies have proposed a website classification based on different criteria. The internet is not a new phenomenon but is constantly changing with the advent of new technology and user need. Although research on hypermedia computer mediated environment has grown in the late 1900s, the classification of websites is still confusing. The purpose of the activity was to perform a review and to clarify and explain the various website classification available by synthesizing the relevant literature.

This was done at the initial stage of our research to explore the word "online". The classification determined only helped to understand the basic structure of website classification. To identify and listing the articles, a structured approach has been adopted (Watson, 2002). The steps are as follows:

Step 1: Use of keyword and database search

The databases, which have been searched, are Proquest, Emerald, ScienceDirect on-site, Jstor, Taylor and Francis, IEEE and Wiley online. The keywords used to identify the relevant articles are "Classification"," categorization" and "genres". The first classification that has been identified was in the year 1996.

Step 2: Reading and scanning the articles by the abstracts and titles.

At first, the titles of the articles are scanned and the relevant ones are segregated. Further, abstracts are read and the type of classifications is identified and included for further study.

Step 3: Find out the basis of the classification

The relevant articles are further scrutinized and the classification has been identified. There are very few articles where the central idea is only website classification. Most of the research articles which attempted to classify the website have done it to study the characteristics of the websites. Few important criteria and basis that are used to classify websites are; internet law, technical perspective etc. The segregation of such articles as per the context is given in Annexure 3.

Step 4: Identifying a general classification

Various classifications of a based on different criteria have been compared and contrasted so that a generalized classification or pattern can be determined for the use of future researchers. We have

divided the classes of the website into two levels. The first level of classification consists of two broad classes, Hedonic and Utilitarian. The utilitarian class can accommodate all the websites which are visited to fulfil the needs of an individual. Whereas the Hedonic class include websites which are visited for pleasure. Most of the available website can fit into this broad category. The second level of the categorization is divided into three parts, the commercial, service and mixed type. Commercial websites which include the b to b and b to c types can only be utilitarian in nature whereas the service and mixed type of website can be utilitarian as well as hedonic in nature. The Service category fits the informational, entertainment, and communication websites. The mixed category is taken into consideration so that it can take care of the overlaps which we have seen was the limitations of almost all the studies which we have reviewed. Refer figure 11.

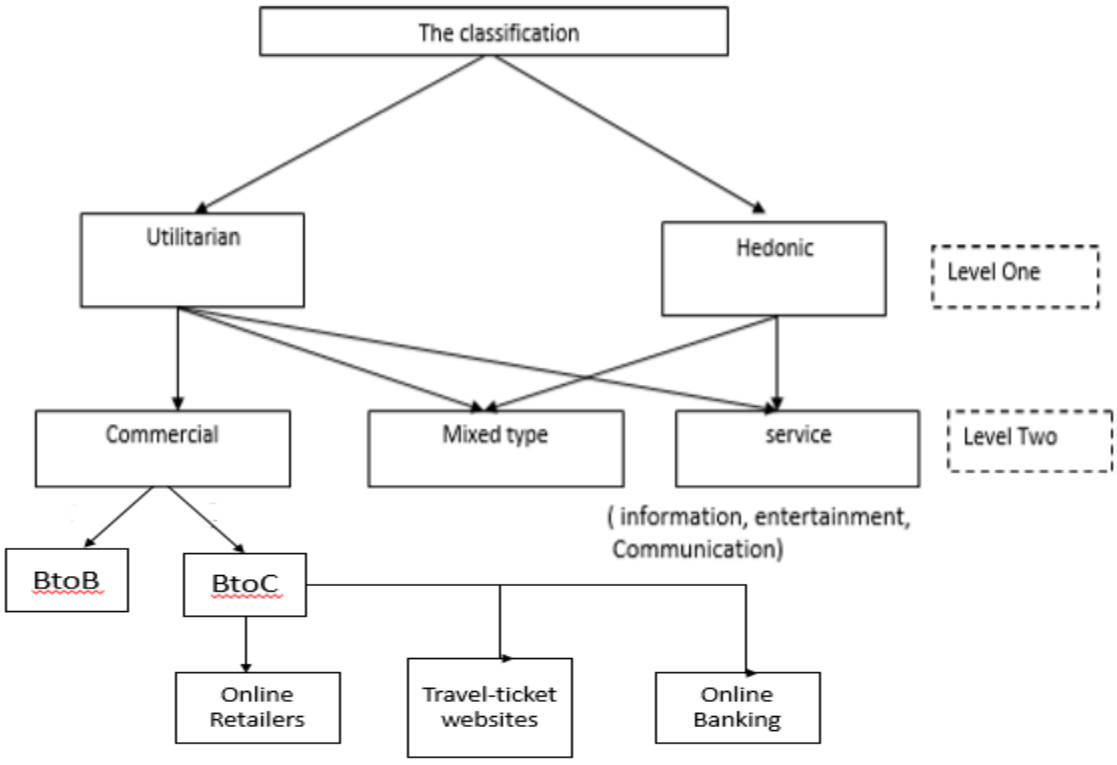


Figure 11: Figure depicting general classification of websites

Secondly, based on the results of an open survey we selected three categories/sectors; online retail (Flipkart, Amazon etc), travel- ticket booking (Makemytrip, irctc etc) and online banking (ICICI, SBIonline etc). The focus was on understanding the relationship between such brands and

consumers. In this process, the interaction with third party websites or mediating websites were not taken into consideration.

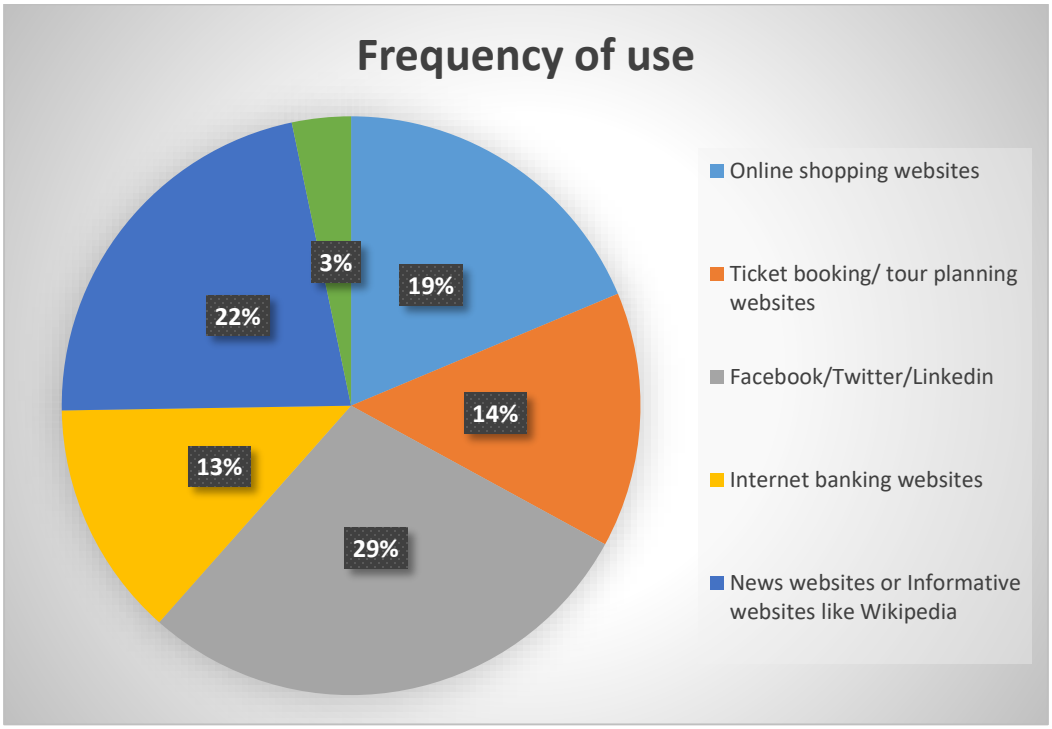


Figure 12: Pie chart representing the browsing behavior among the university student

If we compare the taxonomy of website classification and the frequency of use result, the maximum browsing frequency is in the service and mixed category i.e. 51% (29%-informative websites and 22%-social media). However, we have taken transaction based or commercial category that accounted 46% (19%-shopping, 14%-ticket booking and 13%-internet banking) of the browsing frequency (Refer figure 12).

3.4 Sampling Design

Sampling strategy is important to increase the validity and the representativeness of the data collected (Bryman, 2004). The following section will focus on population, the scope of the study, sampling frame, and sample method and sample size.

Population: The target population of this study is online shoppers who actively participate in online shopping, travel-ticket booking and online banking activities. The age group of such a

population is between 21-34 years. It is mostly the youth who are internet savvy and involved in online purchase and transactions. We have taken a homogenous population of BITS Pilani university students in the same age group and education background so that the influence of external factors can be minimized (J. G. J. Lynch, 1999). The use of student sample though has been criticized by many authors because of the generalizability power (Lamb Jr., Charles W. Stem Jr., 1979; Wells, 1993). It has also been argued that the difference between student samples and the consumer samples are minimal enough to consider students as the subjects of the study (S. P. Brown & Beltramini, 1989; Khera & Benson, 1970; Sheth, 1970). Investigations with respect to available Brand Equity theories and also exploring new relationships demand homogeneity and control of other external error (Goldsmith, 2002). In addition, since this population has all the characteristics with respect to an average online shopper, therefore, researching brand perception and further exploration is in order.

Sampling Frame: The sampling frame consists of all the student IDs available on the websites of the university. It is a pool of undergraduate students, postgraduate students and Phd research scholars. The age group varies from 17-30.

Sampling Method: We have used purposive random sampling with replacement.

Sample Size: To calculate the sample size, alpha level and margin of error are the two important factors as per Cochran's formula (Cochran, 1977). The margin of error is the error a researcher is willing to accept and the alpha level is the risk a researcher can bear if the original margin of error exceeds the acceptable margin of error. Generally, the alpha level is set at 0.05 or 0.01 (Ary, Jacobs, Razavieh, & Sorensen, 2009) The alpha level is used in the form of t-value. In our study, we have used an alpha level of 0.05 and for which the t-value is 1.96. For the acceptable margin of error, 3% margin of error is acceptable for continuous data and 5% for categorical data (Krejcie & Morgan, 1970). As we have categorical data (likert scale), we accept 5% as the margin of error. We have taken a uniform university population of 4386 students and using the table developed by Bartlett et al (Bartlett, Kotrlik, & Higgins, 2001) at p=0.05 and 3% margin of error using Cochran's formula (Cochran, 1977) the sample size should be 351. But as we have many variables and the criticality of the variables cannot be determined at the initial stage, we calculated sample size using the variance estimation of each variable and used the largest determined sample size as our final sample size to provide desired results.

The formula used is

$$N_0 = \frac{(t)^2 * (s)^2}{(d)^2}$$

Where t = value for selected alpha level of .025 in each tail = 1.96 (the alpha level of .05 indicates the level of risk the researcher is willing to take that true margin of error may exceed the acceptable margin of error.)

Where s = estimate of standard deviation in the population = 1.167. (Estimate of variance deviation for 10-point scale calculated by using 10[inclusive range of scale] divided by the number of standard deviations that include almost all (approximately 98%) of the possible values in the range).

Where d = acceptable margin of error for mean being estimated = .30 (number of points on primary scale * acceptable margin of error; points on primary scale = 10; acceptable margin of error = .03.

Using this above formula, the maximum sample decided is 588. The final sample we collected was 700, out of which 621 has been used for the analysis. 65 percent of 621 were responses pertaining to online shopping, 30 percent and 5 percent pertaining to online ticket booking and online banking respectively. Other than the final data collection 150 samples were collected initially as a pilot to explore the e-marketing mix variables. Those 150 samples were mostly people who were frequent online shoppers (experts).

3.5 Research Methodologies/Tools Used at Exploratory and Descriptive Research Stages

Various data collection tools are used to achieve the set objectives. The exploratory phase of the study used qualitative techniques like content analysis, decision net approach and expert interviews. In the descriptive phase of the research, we used quantitative tools like exploratory factor analysis, confirmatory factor analysis, structure equation modelling and multidimensional scaling to test the hypotheses identified from the generated relationships. The next section is going to address the tools one by one.

3.5.1 Tools Used in Exploratory Research Design Stage

i. Content Analysis

Webster dictionary defines content analysis as "analysis of the manifest and latent content of a body of communicated material through classification, tabulation, and evaluation of its key symbols and themes in order to ascertain its meaning and probable effect. Content analysis is an effective qualitative technique that counts textual elements and provides a means to identify, organize, retrieve and index data. It is a blend of qualitative and quantitative techniques and helps in understanding the ideological mind-set, themes, categories and various phenomenon. More importantly, it is one of the means to systematically review the literature (Shelley & Krippendorff, 1984).

ii. Decision Net Approach

Decision net models are deterministic in nature, consider individual choices and detailed version to examine the purchase process. These are considered to be the first step towards an approximation of how the consumer decides to combine attributes and situation to buy a product. There are many procedures to analyze decision nets. In this study, we are focusing purely on structural measures and the efficiency of information processing (Bettman, 1974). First, the decision net is converted into directional graphs (Bettman, 1971a). Following Bettman's approach, each node of the graph is denoted by a binary (Yes/ No) decision point. The edges of the graph denote a Yes or No decision path traversing from one node to another (i.e., one decision point to another). We made nodes that are the decision points connected with lines or arcs. The edges, therefore, represent the sequence of processing information that is given in each node. Each decision path is assumed equally likely, making the nodes equidistant (with an edge length of one). Standard graph metrics, such as depth of nodes, shortest and longest traversal paths are then used for comparison across the main graph sub-graphs to understand planned and unplanned purchase behavior. The depth of a node in a graph is given by the average of all 'path distances' from the first node in the net to the node. The deeper the node is in the net, the later the attribute is considered in the decision process (Bettman, 1971a).

3.5.2 Tools Used in Descriptive Research Design Stage

In the first stage of descriptive research design, e-marketing mix variables are reduced using exploratory analysis and confirmed using confirmatory analysis. In the second stage, the relationships between e-marketing mix variables and online sources of Brand Equity have been established using structure equation modelling. Also, multidimensional scaling has been used to determine various dimensions of online shopping. The next step is going to throw light on the various techniques used.

i. Exploratory Factor Analysis

Exploratory factor analysis (EFA) helps in reducing the number of variables by bringing interrelated variables together that measure the same underlying variable. More specifically, the goal of factor analysis is to reduce "the dimensionality of the original space and to give an understanding to the new space, extended to a reduced number of new dimensions which are expected to underlie the old ones" (Rietveld & Hout, 1993), or "to describe the variance in the observed variables with respect to the underlying latent factors". Thus, factor analysis gives a clear view of the data, and also the makes the output usable for subsequent analyses.

There are various measures which justify the sample adequacy and factor extraction. Kaiser-Meyer-Olkin (KMO) and Bartlett's Test of Sphericity first test the suitability of the data. KMO index can range from 0 to 1 and a value in the range of 0.5 considered suitable for factor analysis. Bartlett's Test of Sphericity should be significant ($p<0.5$) to proceed further in the factor analysis. Among the various[21] extraction method available to extract factors, the most common are principal component analysis (PCA) (Williams, Brown, & Onsman, 2012). PCA is the default factor extraction method in most of the software and is helpful when the prior theory or model is in its rudimentary form. Thus PCA is used in establishing the preliminary solution. In this study, we have used EFA for more than just refining a scale like a preliminary investigation. Here the goal is consequential than just confirming the previous theories. The literature suggests that when the aim is to understand the latent structure of the model principal axis or maximum likelihood method (common factor models) are to be used (Conway & Huffcutt, 2003). As PCA produces identical

[21] Principal components analysis (PCA), Principal axis factoring (PAF), Maximum likelihood, Unweighted least squares, generalized least squares, Alpha factoring, Image factoring

results and closely resembles common factor models (Goldberg & Digman, 1994; Velicer & Jackson, 1990), we have used PCA in our study. The factors identified using EFA are used in developing a further hypothesis and also confirmed by using Confirmatory Factor Analysis (CFA). CFA is discussed in brief in the next section.

The options available to decide upon the number of factors are Kaiser's eigenvalue > 1 rule (Kaiser, 1958), the scree plot, a priory theory, or retaining factors which explain the maximum variance or most interpretable solution (Conway & Huffcutt, 2003). Lastly, the aspect of Rotation is very important while doing EFA. Basic two types of rotation used to reach to a more interpretable solution; orthogonal rotation and varimax rotation. Varimax is the most popular orthogonal rotation that maximizes the variance of square loadings on a factor. Oblimin and Promax are the types of oblique rotation. Oblimin rotation minimizes the covariance and is based on a unifactorial property of each variable (kim & Mueller, 1978).

Reporting of EFA results is also an important part. Descriptive statistics, correlation matrix, Eigen values, commonalities are few parameters that are reported for the analysis purpose (Fabrigar, Wegener, MacCallum, & Strahan, 1999; Floyd & Widaman, 1995).

ii. Confirmatory Factor Analysis (CFA)

Confirmatory factor analysis is a part of Structural Equation Modelling (SEM). It is used for the validation of the measurement model so that the model can further be used for path or structure analysis (T. A. Brown, 2006; MacCallum & Austin, 2000)**.** It is always suggested to do a confirmatory factor analysis so that any misfit variable can be identified before moving ahead in the analysis (Thompson, 2004). The legitimacy of CFA is underlined with conceptual rationale as a hypothesis testing approach to data analysis. Based on theory and other empirical research or combination of both, a model is postulated and the model is validated given the sample data. Therefore, we can say that EFA is data driven and CFA is theory or hypothesis driven. Unlike EFA it is possible to assign constraints to factor models. CFA produces many goodnesses of fit statistics to evaluate the factor model but the factor scores are not calculated. Software packages that are used to do CFA are Mplus, LISREL, AMOS, SAS etc. In our study, we have used PROC CALIS procedure of SAS and AMOS to perform CFA. The commands/codes for Proc Calis procedure are given in Annexure 2

There are important terminologies associated with CFA. The unobserved variables are called "latent variable constructs". In CFA we check the validity of measurements of every latent construct so that later on we can find out the relationship or structure between latent constructs without worrying about its reliability and validity (Siddiqui, Mirani, & Fahim, 2015).

iii. Structure Equation Modelling

Structure equation modelling is a multi-equation technique with multiple dependent variables. It consists of two models; measurement (null) and structural model. The measurement model deals with the relation between observed and unobserved variable. There are other variables, which indirectly or directly affect each other, structural model deals with such relationships. In SEM, path diagram is created based on the theory and then data is placed and the difference between the expected and theoretical model is compared. This comparison is judged with the help of model fit indices. By segregating measurement error from the true scores of attributes, structural equation modeling using covariance structure analysis, models the latent variables directly (Yuan, 2005). All the fit indices can be clubbed into three groups; absolute fit indices, incremental fit indices and parsimony fit indices (Mueller & Hancock, 2008). Absolute fit indices measure how well the model fit in comparison to no model situation, unlike incremental fit indices. This category includes; Chi-square test/normed chi-square (X^2/df), RMSEA, GFI/AGFI, RMR and SRMR. Below table no 15 indicates the accepted fit measures.

Table 15: Accepted Range of various Absolute fit indices used in SEM

Absolute Fit Indices	Accepted Range
Chi-square/df	<5
RMSEA	.08-.10, mediocre fit <.08, good fit >.10, poor fit
AGFI	Range of 0-1, values close to .90 or greater are considered best fitted models
SRMR (standardized RMR)	<.08
CFI	>.90

Incremental fit indices are also known as comparative fit indices (Miles & Shevlin, 2007) or relative fit indices (McDonald & Ho, 2002). Normed-fit index (NFI) and comparative fit index (CFI) are the two indices that are checked in case of incremental fir indices. NNFI as low as .80 is

accepted as a threshold and CFI should be more than .90. In the result section, we have reported indices from absolute fit indices and incremental fit indices group.

We have chosen SEM because of multiple reasons. The first reason is that it helps in determining the direct and indirect effect. When a variable affects the dependent variable through another variable then the indirect effect is observed. Also, structural equation modelling allows estimating the combined effect of independent variables in the form of concepts/constructs linking to the dependent variable. Moreover, measurement error associated with each variable is taken into consideration while predicting the actual behavior based on the theoretical support (Gefen, Straub, & Boudreau, 2000). Identification of the model is one of the important steps in structure equation modelling. Identification of model determines whether enough information is available to determine the unknown coefficients and matrices (Kenneth A Bollen, 1989). There are three conditions; over-identified models, just-identified models and under-identified models. Theories are easily tested with over identified models. Just identified models are not interesting and are generally used in multiple regression. Under identified models require re-specification.

While analyzing, more than one co-efficient are observed. Based on covariance matrix and covariance-variance matrix the coefficients are divided into four matrices of coefficients and four matrices of covariance. The four coefficient matrices are 1) the matrix which relates the endogenous variable to each other 2) the matrix which relates endogenous to exogenous variables 3) matrix that relates endogenous indicator with endogenous variable and 4) matrix that relates exogenous indicators to an exogenous variable. The other four covariance matrix are 1) covariance among endogenous variables 2) covariance between exogenous variables 3) covariance between errors for endogenous variable and 4) covariance between errors for exogenous variables. R-square, b-coefficients, standard errors and standardized coefficients are the SEM analysis outputs. These outputs along with the model fit indices together help in analyzing and interpreting the results.

iv. Multidimensional Scaling

Multidimensional Scaling (MDS) is both a multivariate and an exploratory technique. In MDS the relationship between variables either quantitative or qualitative is geometrically represented. Basically, MDS is a visualization technique and constructs maps. The objects/variables are represented as points in a spatial configuration. The points are placed in a way that the

objects/variables which are similar in nature are close to each other and the distance are more between the dissimilar variables/objects. We have used MDS in our study to determine the underlying dimensions of online consumer behavior. MDS is also a data reduction technique like factor analysis but it is different with respect to reduced dimension. MDS usually can reduce the data in fewer dimensions compared to factor analysis.

The goodness of fit for MDS is judged using the amount of stress. A small stress represents a well fitted solution whereas a high value indicates bad fit (Kruskal, 1964).

Stress	Goodness of _t
.20	Poor
.10	Fair
.05	Good
.025	Excellent
.00	Perfect

One of the important decisions is about the number of dimensions. The technique is to check the sudden drop in stress index. If the stress index drop is maximum from two dimensions to three dimensions, then it is most likely that two dimensions are sufficient enough to explain the pattern in the data. Other than overall stress, separate squared relation (RSQ) is also measured. The more the RSQ value is the better is the correlation between predicted and obtained distance in the configuration. IBM SPSS 20 was used to perform multidimensional scaling in our study and derive the underlying dimensions of online retailer brand choice and unfold the rules of consumer heuristics.

3.6 Questionnaire Designing

Generally, any questionnaire has three parts; introductory section, substantive information and specific classification information. In this study, we used three different questionnaires, the details of which are given in this section.

Two pilot studies were also done in this period. The first pilot study was done with 30 respondents (convenient sample) to test the e-marketing mix questionnaire and the second was done with 17 respondents (convenient sample) to test the online Brand Equity questionnaire. The pilot test is a function of questionnaire and nature of the study (Kerlinger, 1986; Malhotra & Birks, 2006). A pilot study is considered as robust pre-tests conducted under similar conditions (Peterson, 2000). The actual questionnaires are given in Annexure no 2.

To understand the browser behavior an open ended questionnaire was circulated to sixty university students to capture the frequency and type of online activities. The objective of the questionnaire was to understand if at all the student browse frequently and what are the major activities they do online.

The second set of questionnaire contained fifty-seven items taken from the literature incorporating the following constructs: Informational value of a website, format, speed and navigation, security & privacy feature of a website, customer service function, product category information and customization feature, auxiliary services like delivery, transaction process, entertainment and sharing feature of a website. Responses to these were captured using 0-to-10 rating scale measuring the perception of online shopping experts. The objective of this step was to further reduce the e-marketing mix elements obtained from content analysis and generate a generic parsimonious dimensional framework for e-commerce

The 0-to-10 rating scale is used for this questionnaire as it intended to measure the magnitude of a specific e-marketing mix variable or marketing activities associated with a retail or travel or banking website. 0-to-10 rating scale avoids the confusion for a respondent that which side of the scale is positive and which side is negative. Also, this 11 rating options gives a true average rating and captures the differentiations precisely as well as increases the variability (Cicchetti & Tyrer, 1985; Preston & Colman, 2000)

Final survey questionnaire had two parts. The first part captures the sources of online Brand Equity and the second part captures the magnitude of e-marketing mix variables. The major objective of this part of the study was to identify and characterize the relationship between the e-marketing mix variables and the sources of online Brand Equity. The introductory section of the questionnaire that was used for the final survey contained the screening question followed by the frequency of use question. The category given the highest frequency of use has been carried forward. Top of the mind recall for the highest frequent category has been captured. The rest of the questionnaire was based on the top of the mind recalled brand. Substantive information section contained 17 questions related to e-marketing mix variables and 24 items related to sources of online Brand Equity. There was no specific classification information captured because the demographics like the age group, gender, qualification was already available with us. The e-marketing mix variables

are more objective in nature and were captured in 0-to-10 rating scale whereas, the sources of online Brand Equity captured in seven points Likert scale.

The 24 items have been selected after the literature review of the available online and offline sources of Brand Equity were carried out. The similarity and difference between the sources of both the environment (offline & online) are compared and contrasted. Literature pertaining to 'sources of online Brand Equity' is limited. No major difference was found between the sources of online and offline Brand Equity. Therefore, after a detailed review was done we decided to adopt the questionnaire (w.r.t sources of online Brand Equity) for the final survey from the Rosa and Riquelem (2008, 2010) studies.

Item reliability, composite reliability, convergent validity and average variance extraction are the measures determined for assuring the reliability and validity of the questionnaire. All the values are more than the evaluation criteria. More than 0.6 in the case of composite reliability, more than 0.5 in case variance extraction estimate and more than .4 in the case of item reliability (Bagozzi & Yi, 1988; Fornell & Larcker, 1981). Items where the measures are less than 0.4, composite reliability for the factor has been checked. For convergent validity t-test for the factor loading of the indicators is checked, the values are significantly different from zero which suggests the convergent validity of the indicators. The reliability and validity measures of both the questionnaire are listed in table no. 16 & 17.

We also explored the underlying dimension of online brand choice. We used the final survey data points to generate MDS graphs. We chose top five online retail brands (based on the top of the mind recall) viz. Flipkart, Myntra, Amazon, Snapdeal and eBay and major travel-ticket booking website brands like IRCTC, Makekytrip, Yatra and Red bus. Then we mapped them against the sources of online Brand Equity. Further, we attempted to generate a decision flow diagram based on the dimensions identified which represent the consumer heuristics of online purchase.

3.7 Data Collection

Data is collected at various stages throughout the research work. The data was collected in the form of both open ended and close-ended questionnaires as mentioned in the previous section. The medium used was through e-mails and personal/one-to-one survey. The first form of data is

collected in the form of an open ended questionnaire distributed among the university students s. The second phase of data collection was done to explore the e-marketing mix variables. The survey questionnaire was designed on qualatrics.com and the link sent online to one hundred and fifty experts. The questionnaire link was also distributed using e-mails and other social media networks like Facebook using snowball sampling. There were two sets of experts, the first set being those whose purchase frequency is more than 3 times a month and the other sets are individual who have technical knowledge about website development. Customers of 'flipkart.com'[22] have been chosen and designated as experts if they have an online shopping frequency of 3 or more per month. Experts are chosen in the first stage as the expert opinion may closely approximate the truth. Also according to Spearman-Brown prediction formula, expert ratings increases the reliability of the final averaged result (Spearman, 1910). The list of e-marketing mix variables is reduced with the help of exploratory factory analysis based on the accuracy of expert opinions.

For the final stage of data collection, students were contacted using their e-mail ids (available at the university website). We randomly selected students from the university student pool with replacement. So the sampling procedure can be characterized with purposive simple random sampling with replacement. The respondents had been given two modes for responding; one was a pure online mode in which the link was sent and data has been captured. The link to the questionnaire was distributed using qualatrics.com. The second mode was meeting the respondents at their convenient time and place for a one to one interaction. The one to one interaction not only generated the responses related to the questionnaire but also various insights regarding online shopping behavior. A total of 1800 students were contacted, out of which 700 responded and finally 621 responses are used for the analysis. Out of 621, 150 responses[23] were collected as a one-to-one survey.

[22] Alexa Rating: Flipkart is the leading destination for online shopping in India.

[23] 150 responses are available in the form of recorded (voice) interviews. The average time duration was 17-20 minutes.

Table 16: Reliability & Validity Measures for e-Marketing Mix Elements

E-marketing mix elements items	Item Reliability	Composite Reliability	Variance extracted estimates
Customer value and benefit		0.72	0.57
The website gathers feedback from the customers effectively.	0.61		
The website supports the feature of product comparison.	0.52		
Customer care and Relationship		0.78	0.58
The website is very creative	0.68		
The customer service representatives are also available online.	0.57		
The website sends information which is relevant to one's purchase.	0.48		
Content of the website		0.89	0.74
At this site, the information related to the product and services are easy to find.	0.85		
The product information available at the website has clarity and easily understandable.	0.89		
The information provided is accurate and reliable.	0.77		
The website sends information which is relevant to one's purchase.	0.48		
Interactivity feature of website		0.74	0.48
The visual effects and the interactivity feature makes the website very entertaining	0.64		
The website provides videos related to the product and how to use it.	0.30		
The website pages load fast.	0.52		
The website has a feature to send personalized emails.	0.47		
Speed of service provided by the website		0.74	0.57
The product can be reached with a minimum number of clicks	0.62		
The website ensures timely delivery of the product.	0.57		
The website pages load fast	0.52		
Security-reliability		0.83	0.65
The website is always available for business.	0.53		
The website has adequate security features	0.80		
The transactions are very safe	0.80		
The website has a feature to send personalized emails	0.47		

Table 17: Reliability & Validity Measures for Sources of OBE

Sources of Brand Equity and respective items	Item Reliability	Composite Reliability	Variance extraction estimate
Brand Awareness		0.86	0.57
I know what it looks like	0.49		
I can recognize it among other competing online businesses	0.66		
I can quickly recall the name of the website	0.68		
Some characteristics of it come quickly to my mind	0.42		
I have difficulty in imagining it	0.12		
Association wrt price		0.82	0.51
I pRefer it because price deals are frequently offered	0.49		
I have a pReference for it because it frequently offers an updated list of product promotions	0.29		
Using it, I can make the most of the least money	0.66		
In it, I can find the lowest prices for a quality brand	0.64		
I cannot find quality products at an affordable price on it	0.034		
Association wrt merchandising and convenience		0.85	0.49
I have a pReference for it because it allows the comparison of product prices across online stores	0.11		
I like it because it allows tracking my orders	0.45		
I like it because it offers alternative forms of payments, cash on delivery, credit cards, money order etc.	0.42		
I like it because one can find the broadest range of products	0.49		
I have a pReference for it because it provides the deepest specialized assortments	0.54		
It is good because it allows returns to be shipped back at retailer's cost	0.31		
Brand Trust		0.87	0.69
It feels safe to disclose personal information on it	0.40		
It feels safe to conduct transactions on it	0.61		
It has my confidence	0.73		
Brand Loyalty		0.84	0.63
It makes sense to buy from it instead of any other online business, even if they are the similar to it	0.51		
Even if another business has the same feature as it has I would pRefer to buy from it only	0.51		
I would definitely recommend it people near to me	0.52		

Table 18: Summary of Major Research Activities and Methodologies Used

S.No	Method	Description	Number of samples	Result Section No.
1.	Extensive literature review for identifying e-marketing mix elements using content analysis	An exhaustive list of e-marketing mix elements generated using content analysis of the previous literature of online Brand Equity and online Brand Equity sources	47 Studies	Chapter 4
2.	A short survey to understand the browsing behavior of the sample	A very short survey identifying the browsing frequency of various website.	60	Section 3.3
3.	Another survey to reduce the number of variables identified from the literature	Experts identified for the study and asked survey questions related to identified e-marketing mix elements. Online survey, as well as one-to-one survey method, have been used	150	Chapter 4
4.	Literature Review to map traditional sources of Brand Equity and online sources of Brand Equity	Online sources of Brand Equity and traditional sources of online Brand Equity are synchronized for further steps	-	Chapter 2
5.	Final survey to identify the relationships	Surveys in the form of online forms and one-to-one interviews conducted for identifying the relationship between e-marketing mix elements and sources of online Brand Equity.	406 (online retail)+185 (travel-ticket website) +30 (banking)	Chapter 5
6.	Dimension identification & Consumer decision journey	Under objective no 3, we attempted to identify dimensions for online brand choice and consumer decision journey	406+185	Chapter 6

Chapter 4: Generation of a Definitive List of E-Marketing Mix Elements

4.1 Introduction

In this Chapter, we address our first objective that is to generate a definitive list of the antecedents to sources of online band equity.

Marketing actions of a firm are e-marketing mix variables that are antecedents to sources of online Brand Equity. There is a substantial difference in the definitions available for e-marketing mix elements with significant overlaps in the literature. To meet this objective, we try to answer four important research questions viz:

- Whether a definitive standard list of e-marketing mix elements has been proposed in the literature?
- Whether all the e-marketing mix variables have appeared with equal regularity in the literature of sources of online Brand Equity?
- Is it possible to develop a standard definitive list of e-marketing mix elements as well as propose an overarching e-marketing mix framework?

Following is the schematic representation of the steps taken to identify a definitive list of e-marketing mix elements (Refer figure 13).

Figure 13: Schematic Representation to Identify E-marketing mix elements

4.2 Content Analysis

4.2.1 Definitive & Standard list of e-marketing mix elements

RQ1: *Whether a definitive standard list of e-marketing mix elements has been proposed in the literature?*

We review the literature related to e-marketing mix elements and examine various extant e-marketing mix frameworks. There are many frameworks proposed but the e-marketing mix

elements that are used in these frameworks have minimal uniformity. Therefore, in order to generate a definitive list of e-marketing mix elements, we propose to use content analysis. Content analysis of literature and extraction of the definitions of e-marketing mix variables was carried out through the following steps.

i. Step 1: Use of keywords and database search

We Referred to Jstor, Emerald, Science Direct on-site, Taylor and Francis, IEEE, Proquest and Wiley online journal databases and used these keywords for article searches "e-marketing mix, online marketing variables, online Brand Equity, online Brand Awareness, online Brand Loyalty, e-loyalty, online satisfaction, e-satisfaction, online trust, online service quality, e-service quality, online brand image and website attitude". Both the list of journal databases and the set of keywords were decided based on the interaction of the researcher with two experts and their collective judgment. In all, forty-five articles from thirty journals, 3 dissertations and 1 conference proceedings were included.

ii. Step 2: Reading and scanning the articles

At first, the titles of the articles were scanned and the relevant ones were segregated based on whether there was a description related to a relationship between the e-marketing mix variables and the sources of online Brand Equity. Both conceptual, as well as empirical papers, were segregated. Definitions of the major e- marketing mix variables were noted and used for Reference.

iii. Step 3: Further reading and content analysis of the definitions

Content analysis of the definitions of various e-marketing mix elements that lead to sources of online Brand Equity was next carried out. Further, the definitions of the marketing elements were compared and contrasted to remove the overlap. As the Content analysis is a research technique for making replicable and valid inferences from data to their contexts (Shelley & Krippendorff, 1984), a combination of an inductive and deductive method has been used to code the categories of marketing variables. Coding Scheme is given in table no 19.

iv. Step 4: Coding Categories

In this step, we developed the categories and set the operational definitions for each category. After which the coding was done. There were 16 categories identified from the available literature. It should be noted that the marketing mix variable "place" has been dropped from the list of seventeen variables. Place Refers to the point of sale and website is the place of transaction in the online context. The feature and characteristics of a website is captured by the "website characteristic" category. The definitions of the coding categories are given in table 19.

Table 19: Coding Scheme of e-Mix Variables

S.No	**Codes of Variable Related to**		**Coding Scheme**
1	Information (Website Content)		Info
2	Website Characteristics	Website Format	WebFor
		Web Speed	WebSpeed
		Web Navigation	WebNav
3	Website Security	S/P of Credit Card	SP credit
4	Website Privacy	S/P of Personal information	SP info
5	Customization/Personalization		Custz
6	Delivery		Delv
7	Transaction		Transac
8	Responsiveness		CustServ
9	Product		ProR
10	Pricing		PriceR
11	Sharing		Share
12	Policies		RetP
13	Entertainment		EntR
14	Feeling of virtual-Real (Website Interactivity)		V-R
15	Promotions/WOM offers		Promo/WOM
16	Good Will		Goodwill

v. Step 5: Data Coding

Data coding was done manually by two coders; between whom one was an independent coder. The independent coding was used to check the reliability of coding. Clarifications about the coding categories along with their definitions and practical implications had been given to the independent coder. We identified fifteen mutually exclusive e-marketing mix elements. Their definitions are given in table no 20. We finally retained thirteen variables based on the measurement of agreement indicated by Cohen's Kappa. Cohen's Kappa is used to measure inter-coder reliability. The Cohen's Kappa for all the variables was more than 0.40 except for the "transaction-related" and the "promotion/WOM variable" (see table 21). Cohen's Kappa more than 0.40, indicates fair to good agreement between the coders beyond chance. The identified discrepancy was rectified and changed with the help of another researcher. The difference existed in the "transaction-related" variable as it cannot be separated from the "website related variable". For any smooth transaction to take place, the pre-requisites are the website related features like navigation, format and speed. The agreement was also low for "promotion and WOM" element as it cannot be distinguished properly from the "community", and "sharing element".

Table 20: Definitions and Characterization of e-marketing mix variables

S. No	Codes of Variable Related to		Definitions/Characterizations
1	Information (website content)		Accurate, searchable, complete, relevant, up-to-date & understandable information available on the website.
2	Website Characteristics	Website Format	Layout & the color scheme of a website.
		Web Speed	Uploading and loading speed of a website.
		Web Navigation	The extent of smooth and easy browsing experience.
3	Website Security	S/P of Credit Card	The security and privacy of credit cards and other financial information.
4	Website Privacy	S/P of Personal information	The security and privacy of personal information.
5	Customization/Personalization		The availability of tailor made products catering to specific needs of customers.
6	Delivery		Timely and fast delivery of products
7	Transaction		Flawless and hassle free transaction process along with smooth billing.
8	Responsiveness		It is characterized as solving queries on time, intimating customers about new products from time to time, availability of FAQs and ease to contact the customer service personnel.
9	Product		It is characterized by choices of product variants, and ability to compare prices on competing products.
10	Pricing		It is characterized by the availability of low prices.
11	Sharing		Provision of sharing of views by the customers about the products or services they have used.
12	Policies		The financial and physical risk free norms available on the website w.r.t. returning a product, compensation required in case of damages & terms and conditions of various processes.
13	Entertainment		The degree of enjoyment a customer feels while visiting a website.
14	Feeling of virtual-Real (Website Interactivity)		The degree by which virtual experience is equivalent to a real one because of the website features and services.
15	Promotions/WOM offers		Exposure of customers to the available promotion activities and the word of mouth.
16	Good Will		The Image and reputation of companies which may affect the decision making process of the visitors.

Table 21: Measurement of Agreement (Cohen's Kappa)

S. No	Variables	Kappa
1.	Information Related	0.527
2.	Website related	0.651
3.	S/P Credit card	0.806
4.	S/P Personal information	0.768
5.	Customization/Personalization	0.837
6.	Delivery Related	0.717
7.	Transaction Related	0.312
8.	Responsiveness	0.609
9.	Product Related	0.475
10.	Price Related	0.649
11.	Sharing	0.453
12.	Entertainment	0.414
13.	Policies	0.559
14.	Virtual-Real	0.658
15.	Promo/WOM	0.287
16.	Good will	0.705

4.2.2 Regularity of e-marketing mix element in the literature

RQ2: *Whether all the e-marketing mix variables have appeared with equal regularity in the literature of sources of online Brand Equity*?

To arrive at a set of frequently used e-marketing mix variables the relevance of the marketing mix variables in building online Brand Equity sources is indicated by their frequency. Out of the 13 variables identified 6 have appeared more than 50 times in the literature. Variables related to the website, information, security/privacy and product are the first 4 to appear in the literature of online Brand Equity sources. The e-marketing mix variables viz. the feeling of virtual-real, sharing, and customization though have appeared in the literature with less frequency, but they cannot be termed irrelevant. These set of variables are the evolving marketing variables, which are changing with the change in the environment (see fig14). Also, we have generated a perceptual map using correspondence analysis to identify how the variables have evolved across time (see fig 15)

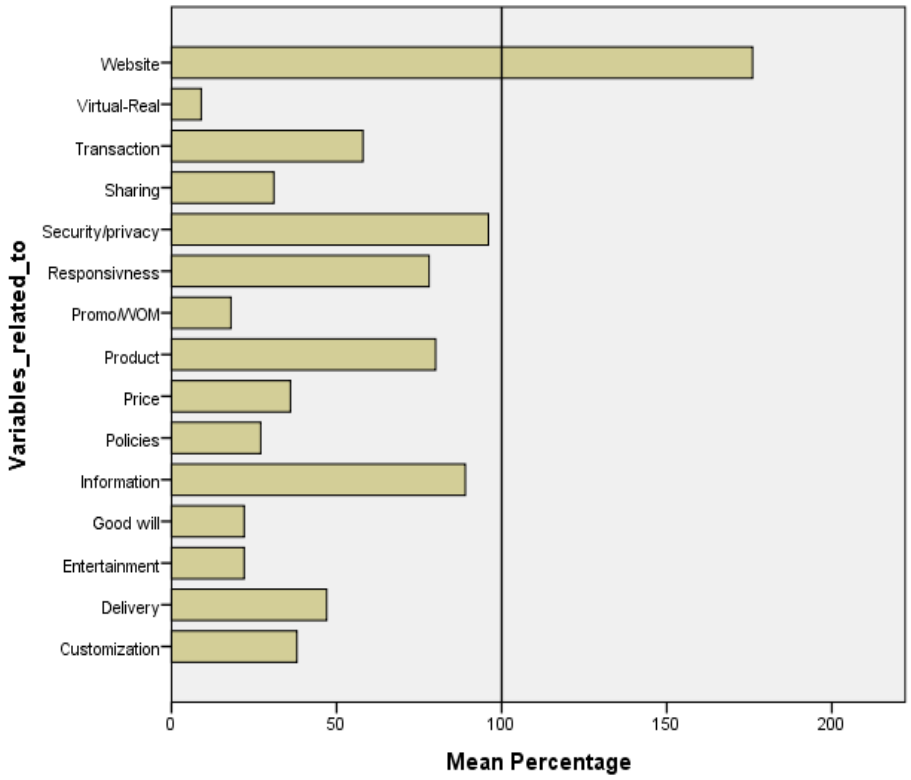


Figure 14: Frequency count for the antecedents of sources of online Brand Equity

The e-marketing mix variables and the years of their appearance in the literature map closely, hence it may be concluded that from the year 2000-2012, the main stream literature on online Brand Equity sources discussed their antecedents in equal measure over the years except for variables namely entertainment, goodwill, policies, promotion and sharing. The variable related to "entertainment" maps closely to the year 2012, pointing to the fact that it is one of the evolving variables that has been used by the authors in more recent studies. Similarly, "goodwill" maps closely to the year 2010. Variables related to "sharing" closely maps to years 2002, 2005, 2009 & 2012. Therefore, we may conclude that the variable "sharing" which has been identified in the early year 2000s lost its importance and then again made its appearance in the recent years. It is difficult to identify any pattern for the variables related to policies and promotions as they have mapped across the years seemingly without a distinct pattern.

Next, we wanted to statistically test as to whether all the marketing elements have appeared with same frequency in the literature of online Brand Equity sources. To segregate that set of e-

marketing mix variables, that are used frequently in the literature of sources of online Brand Equity.

The null hypothesis that all the marketing elements have appeared with equal frequency in the literature of online Brand Equity sources was proposed and Chi-square test/Fisher's exact test[24] performed at significance level α=0.05, (Kindly Refer table 24 & 25).

Chi square test was conducted for studies related to e-loyalty & e-satisfaction. The P value was <0.05. That means that the frequency of appearance of the e-marketing mix variables, in the literature of e-loyalty and e-satisfaction is not equitable. The e-marketing mix variables have appeared with a random pattern, with absence in few cases. Similarly, Fishers exact test's P value was <0.05 for e-service quality, online trust, website attitude and online Brand Equity and more than 0.05 in the case of online brand image.

The list of e-marketing mix variables that appeared frequently in the literature of online Brand Equity sources is next derived from the frequency table.

In the online service quality literature, the marketing variables that have appeared more than 50 % of the time are those variables that are related to information, website, security & privacy of information & credit card, responsiveness, customization, delivery & policies (see fig 16). E-marketing mix variables related to Promotion/WOM, entertainment, virtual-real, sharing, & transaction have not appeared in the literature of e-service quality.

[24] Fisher exact test is done as chi square test cannot be performed with 20% of the expected cell count is less than 5 (Yates, Moore & McCabe, 1999, p. 734)

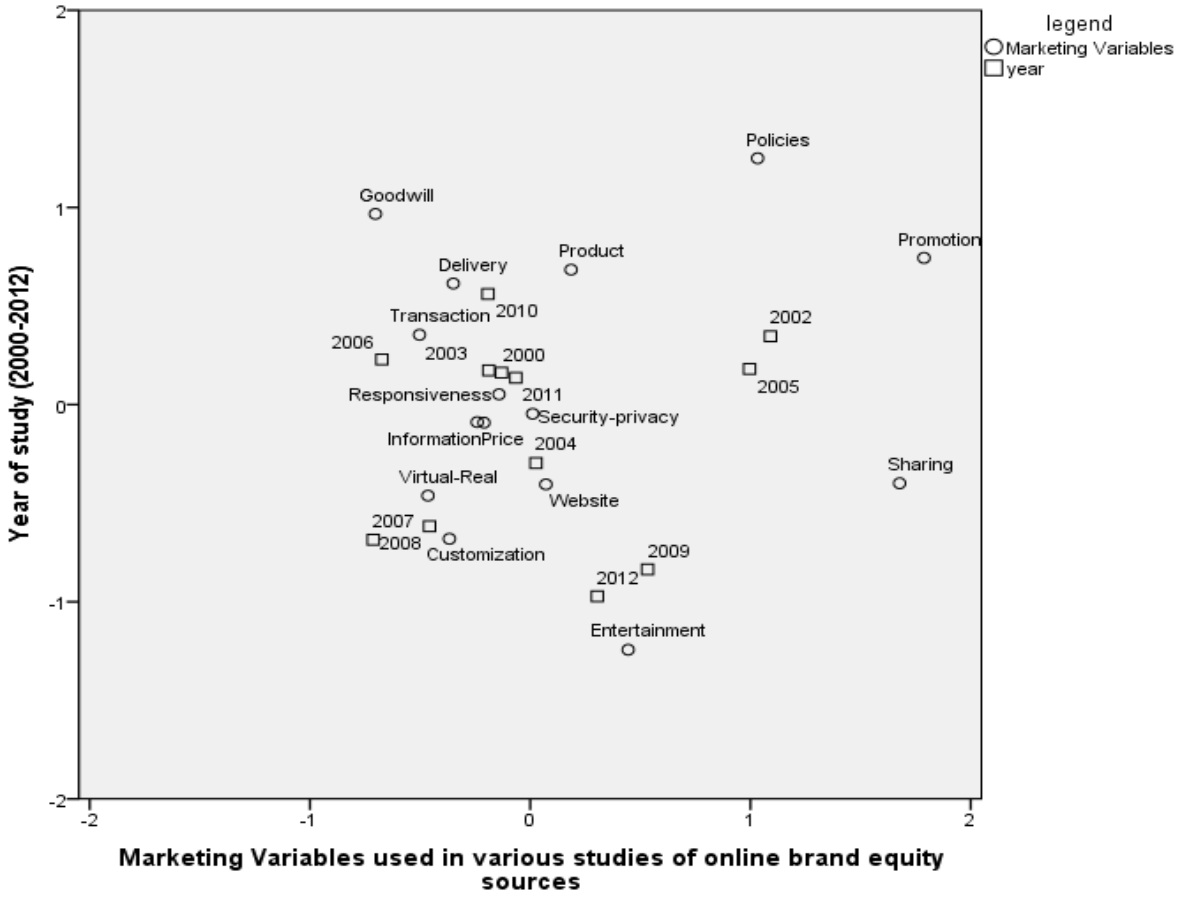


Figure 15: Perceptual Map showing how marketing variables evolved across time (2000-2012)

Table 22: Chi -square Distribution

Data	**E-loyalty**	**E-satisfaction**
Level of significance	0.05	0.05
Number of rows	2	2
Number of columns	15	15
Degrees of freedom	14	14
Results		
Critical Value	23.68	23.68
Chi-square Test Statistics	38.28	126.5
p-Value	0.00	0.00
	Reject the null hypothesis	Reject the null hypothesis

Table 23: Fisher Exact Test Statistics

Data	E-service Quality	Online trust	Online brand image	Website attitude	Online Brand Equity
Number of rows	2	2	2	2	2
Number of columns	15	15	15	15	15
Degrees of freedom	14	14	14	14	14
Results					
p-value (Two-tailed)	< 0.0001	0.001	0.144	< 0.0001	0.018
alpha	0.05	0.05	0.05	0.05	0.05
	Reject the null hypothesis	Reject the null hypothesis	Do not reject the null hypothesis	Reject the null hypothesis	Reject the null hypothesis

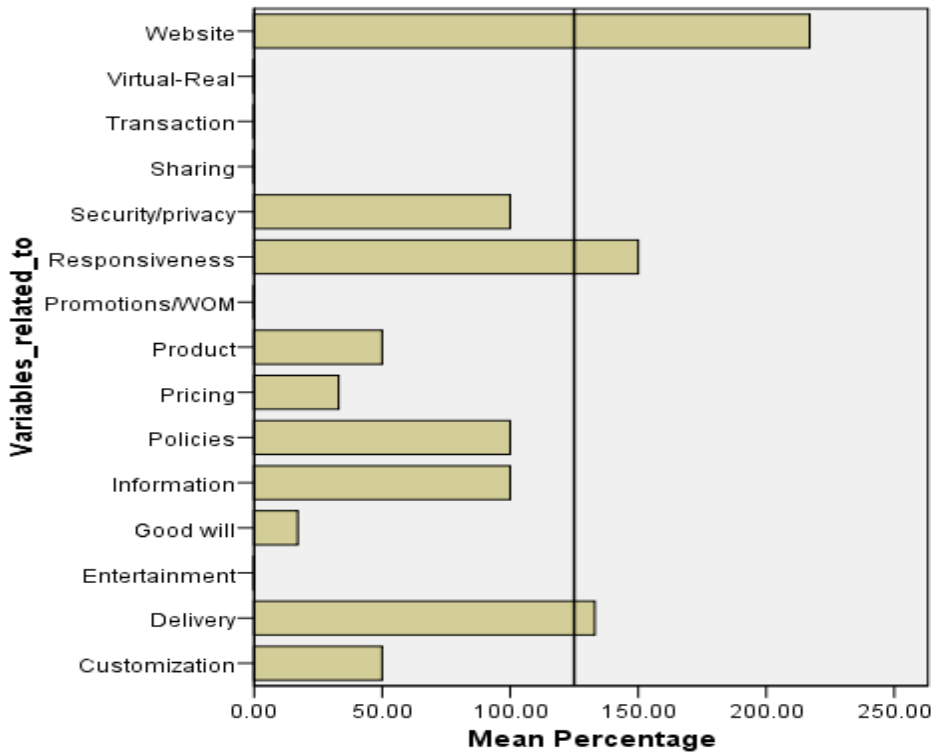


Figure 16: Frequency percentage of the antecedents of sources of online Brand Equity in online service quality literature

In the E-loyalty literature, most of the e-marketing mix variables have appeared more than 50% of the time except for variables goodwill, promotion/WOM, virtual-real, sharing, price & customization. Refer figure 17.

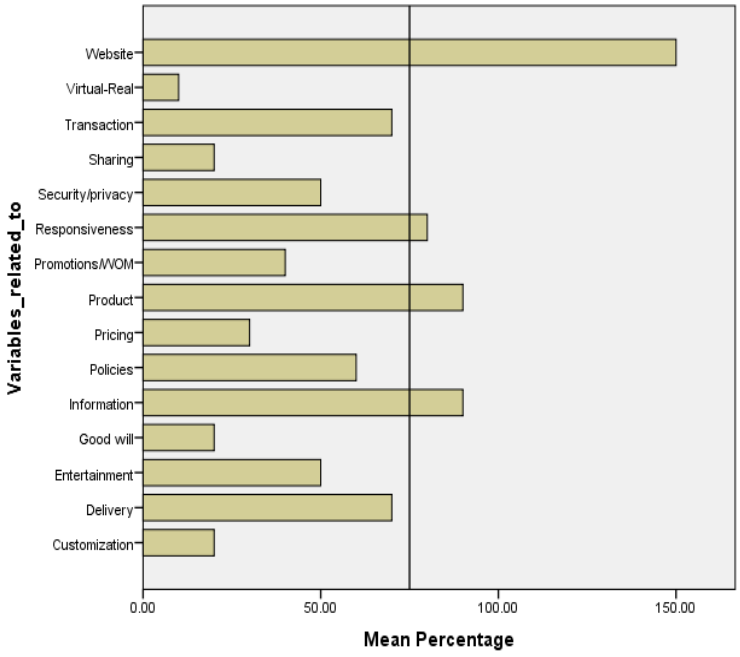


Figure 17: Frequency percentage of the antecedents of sources of online Brand Equity in e-loyalty literature

In the e-satisfaction literature, the marketing variables show a similar pattern like e-loyalty. Most of these have appeared more than 50% of the time, except for variables goodwill, promotion/WOM, virtual-real, sharing, price, policies & delivery. Unlike e-loyalty, customization has appeared more than 50 % of the time in the satisfaction literature. So it can be noted that online service quality and online satisfaction are closely associated. Refer figure 18.

Online trust has been influenced by the sharing factor, information related variable and security & Privacy variables. When consumers go online they search for relevant and accurate information, based on which they build their trust. Also "sharing" variable is relevant in the case of trust because buyers may form trust based on the reviews of online product and services. Variables like customization, delivery related, policies and compensation have not appeared in the online trust's literature (see fig 19).

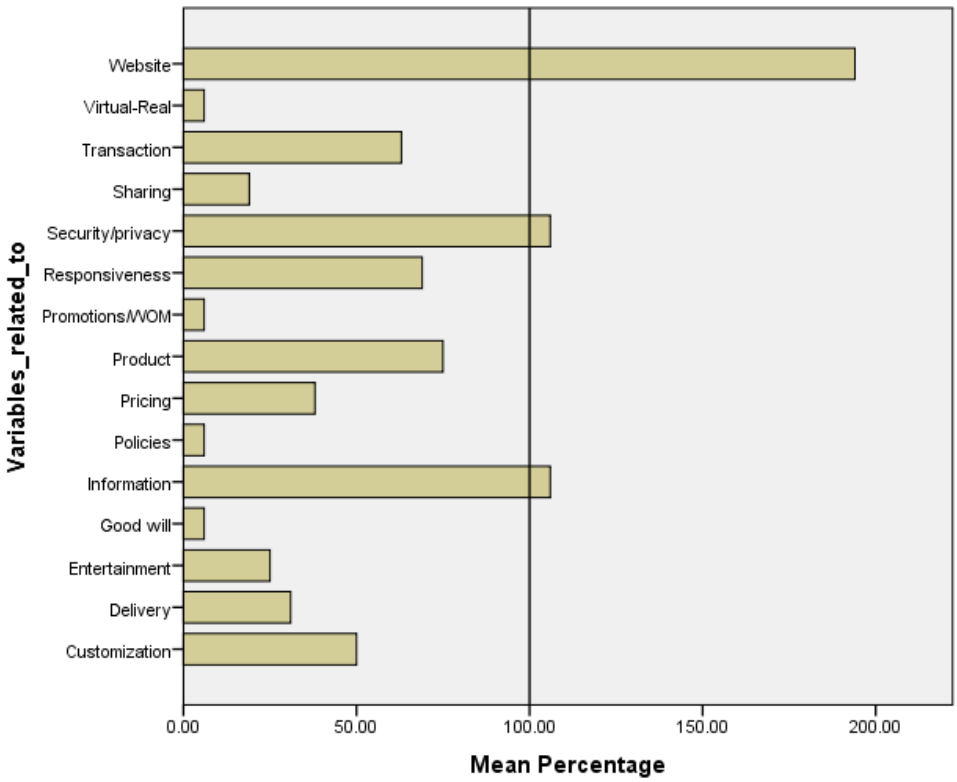


Figure 18: Frequency percentage of the antecedents of sources of online Brand Equity in online satisfaction literature

As the P value for online brand image in the Fisher exact test is less than 0.05 we do not reject the null hypothesis. The frequency of the marketing variable though is different but the difference is not significant. Website navigation experience & responsiveness is related to the online brand image. Prompt responsiveness helps the customer in assuring about the product, delivery process and post-purchase activities. The more often the website is shared, the more likely it indicates a positive brand image. So the variable "sharing" is important, the frequency count percentage is 70%. Policies, compensation and virtual-real factor perhaps don't help in building an online brand image as these seem to have been infrequently Referred to in the literature (see fig 20).

For "website attitude", there are only 8 variables out of 15 that appear in the literature. The variables are website navigation, website format, transaction related, security and privacy of credit card & personal information, product related, information related and good will. Among which website format, product and information related appear in all the studies of website attitude. The interesting fact about the dependent variable website attitude is that the frequency of all the

variables is either 50 % or above. We can infer that there is uniformity in using this variable by the researchers and it is high in case of website attitude (see fig 21).

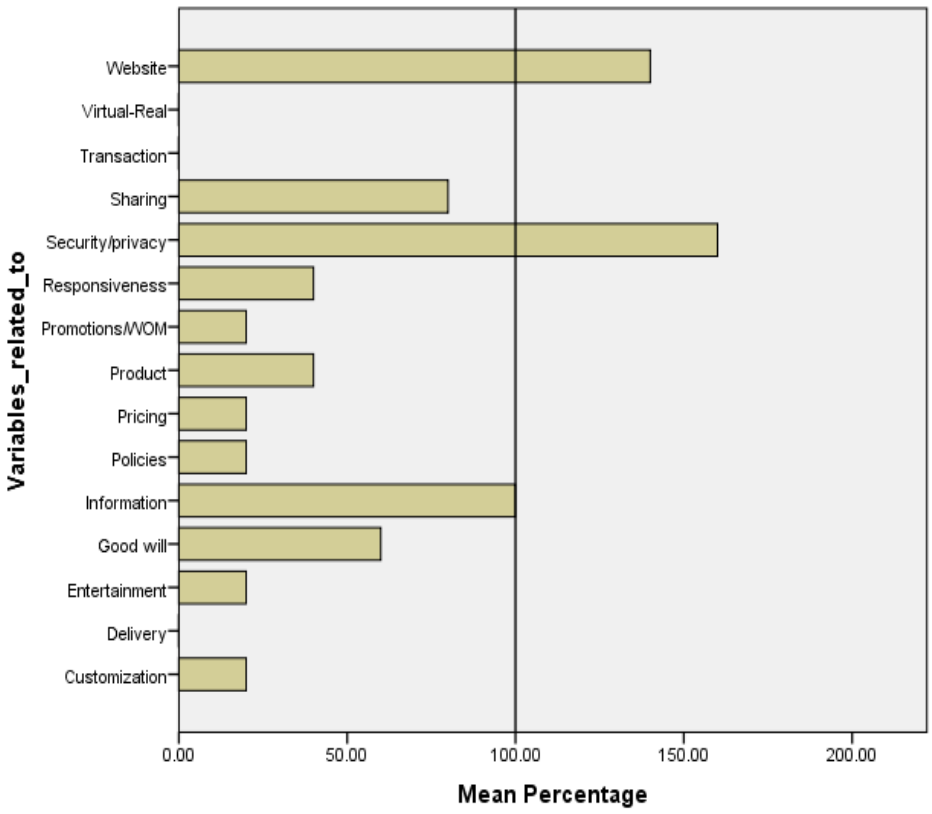


Figure 19: Frequency percentage of the antecedents of sources of online Brand Equity in online trust literature

The literature of online Brand Equity supported all the variables except, customization and information related variable. Website navigation, responsiveness, product related, and delivery related variable are variables that appeared in all the studies of online Brand Equity. The virtual-real variable which didn't appear in most of the sources of online Brand Equity appeared frequently with online Brand Equity. The frequency of virtual-real is 50%. The security and privacy related variable are also important; the frequency is 80% (see fig 22).

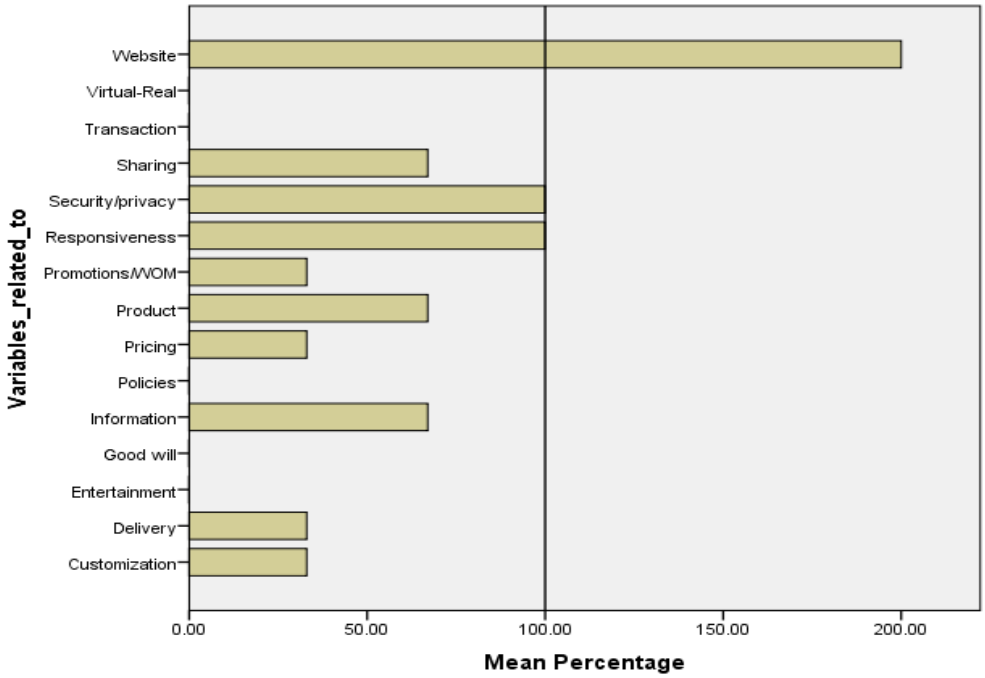


Figure 20: Frequency percentage of the antecedents of sources of online Brand Equity in online brand image literature

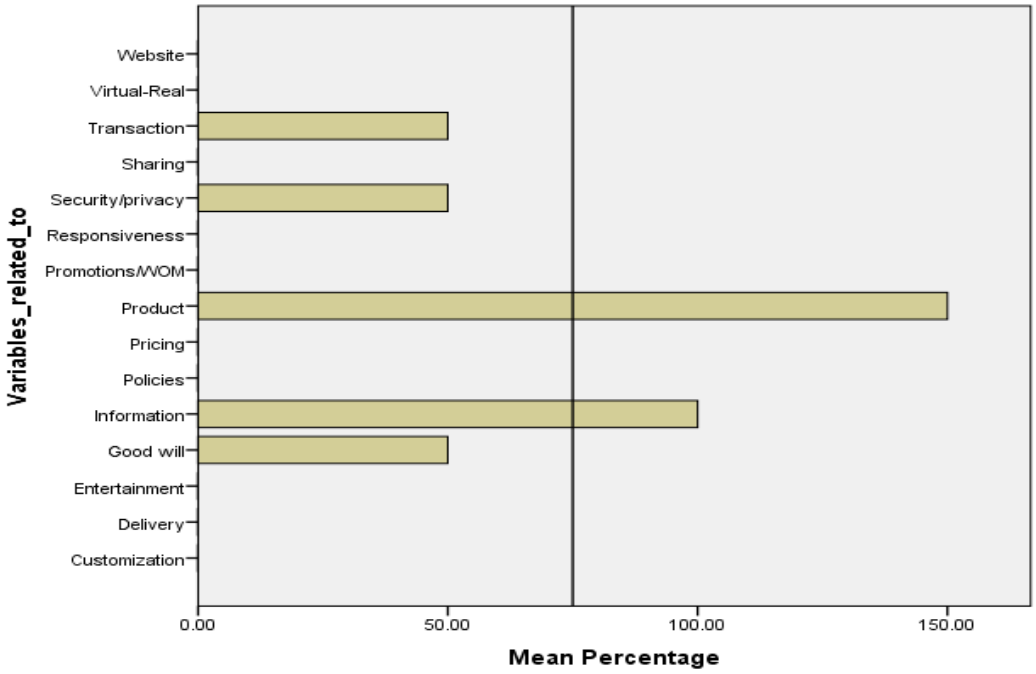


Figure 21: Frequency percentage of the antecedents of sources of online Brand Equity in website attitude literature

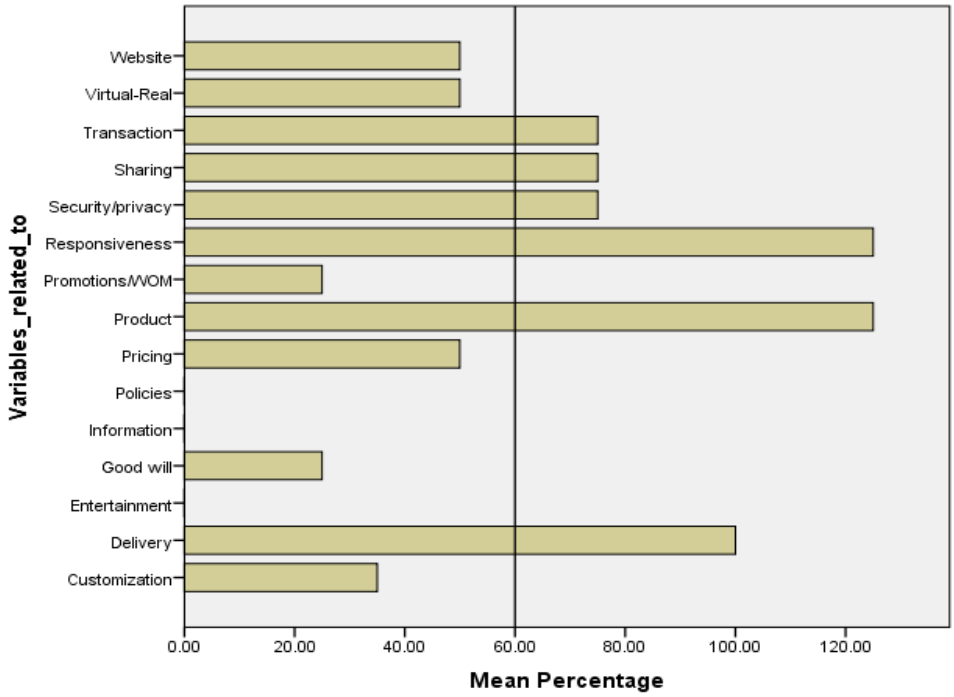


Figure 22: Frequency percentage of the antecedents of sources of online Brand Equity in online Brand Equity literature

4.3 Exploratory Factor Analysis

Next, we attempt to reduce these thirteen e-marketing mix elements with the help of exploratory factor analysis for sake of parsimony. The reduced list contains six e-marketing mix elements; website content, customer care and relationship feature, navigation speed of the website, web interactivity, web security-privacy, and customer value and benefit.

Exploratory Factor analysis has been performed using SPSS (version 16). In the first step, principal component analysis has been performed without any rotation for all the fifty-seven items. This measurement model resulted in twelve components that explained 92 percent of the variance (See table 26). Out of twelve components, only 6 could be identified distinctively because of poor model fit. In the second step, principal component analysis with varimax rotation was performed after removing the multi-collinearity of the data. After removing the extreme multicollinearity, the measurement model only retained seventeen items with a determinant value >0.0001. This second model has retrieved six components that were distinct and meaningful. The KMO test which

measures the sample adequacy is more than 0.5 and Bartlett's test of Sphericity is also significant. The communality of each item is more than 0.5.

Table 24: KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.531
Bartlett's Test of Sphericity	Approx. Chi-Square	279.825
	Df	136
	Sig.	.000

Table 25: Communalities

	Initial	Extraction
At this site, the information related to the product and services are easy to find.	1.000	.769
The product information available at the website has clarity and easily understandable.	1.000	.728
The information provided is accurate and reliable.	1.000	.724
The product can be reached with a minimum number of clicks.	1.000	.639
The website is always available for business.	1.000	.893
The website pages load fast.	1.000	.834
The website is very creative	1.000	.685
The website has adequate security features	1.000	.788
The transactions are very safe	1.000	.726
The customer service representatives are also available online.	1.000	.815
The website has a feature to send personalized emails.	1.000	.708
The website also sends information which is relevant to one's purchase.	1.000	.865
The website ensures timely delivery of the product.	1.000	.749
The website gathers feedback from the customers effectively.	1.000	.725
The website supports the feature of product comparison.	1.000	.814
The visual effects and the interactivity feature makes the website very entertaining	1.000	.864
The website provides videos related to the product and how to use it.	1.000	.933

Extraction Method: Principal Component Analysis.

The six underlying components have Eigen values>1 and communality of each item ranged from 63% to 93%.Factor loadings ranged from 0.468-0.943, which is above the threshold value of 0.3 (kim & Mueller, 1978). The variance explained by each component ranged from 6.2% to 24.8%, and the total variance explained is 77.97%. Following the principle of 'Occam's Razor' which states that given two models, the simpler one should be pReferred as it is likely to have lower generalization error (Blumer, Ehrenfeucht, Haussler, & Warmuth, 1987). Model 2 that explained

Table 26: Rotated Component Matrix

	Component					
	1	2	3	4	5	6
At this site, the information related to the product and services are easy to find.			.641			
The product information available at the website has clarity and easily understandable.			.734			
The information provided is accurate and reliable.			.819			
The product can be reached with a minimum number of clicks.						.780
The website is always available for business.		.761				
The website pages load fast.						.725
The website is very creative					.629	
The website has adequate security features		.858				
The transactions are very safe		.468				
The customer service representatives are also available online.					.555	
The website has a feature to send personalized emails.		.614				
The website also sends information which is relevant to one's purchase.					.918	
The website ensures timely delivery of the product.	.808					
The website gathers feedback from the customers effectively.	.833					
The website supports the feature of product comparison.	.832					
The visual effects and the interactivity feature makes the website very entertaining				.610		
The website provides videos related to the product and how to use it.				.943		

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

77.97% of the variance with 6 components has been pReferred over model 1 that explained 92% variability with 12 components.

Out of the 6 underlying components, 4 can be identified clearly. Variables associated with information like easy availability of information, understandable, clear, accurate and reliable information loaded on component 3. This component can be termed as the content of the website. The loading speed of the website and navigating the website with minimum clicks loaded on component 6. These two variables are related to the website feature. The component 5 can easily be termed as responsiveness or customer care. The items which loaded on component 5 are the availability of the representatives, creativity of a website and sending information about one's purchase. Component 2 is the security &reliability of the website. The underlying items are the availability of the website round the clock, security features, safe transaction and provision of personalized e-mails. Website interactivity has been captured by component 4. Other auxiliary services that can help a customer are the feature of product comparison, timely delivery and provision of customer feedback are loaded on component 1. Component 1 can be termed as customer value and benefit.

Reliability and Validity

A confirmatory factor analysis was carried on seventeen variables using PROC CALIS procedure (SAS). The initial model showed a poor fit, $\chi 2=728.73$ with df = 98 $p<0.05$; RMSEA=0.13; CFI=0.85; NNFI=0.84. However, with the help of modification indices, a model with a better fit could be generated. Wald test suggested that no variable can be dropped out from the model but Lagrange Multiplier test suggested that few of the variables were complex in nature and, therefore, contributed to more than one factor. The new model showed a moderate fit, $\chi 2=416.5$ with df = 94 $p<0.05$; RMSEA=0.9; CFI=0.93; NNFI=0.90.

Further, item reliability, composite reliability, variance extraction estimates and convergent validity were assessed. The table has already been discussed in the methodology Chapter.

The item reliability was estimated from the R^2 that ranged from 0.30 to 0.88 (Refer table 3). Values greater than 0.39 are considered ideal but in this case, only one item "the video related to the product" is 0.30. But the composite reliability of all the six factors is more than 0.70, the variance extraction estimates explain the variance explained by the factors as well as the measurement error. The variance extraction estimate is greater than 0.49 except the 'interactivity factor'. T-test for the factor loading of the indicators is significantly different from zero that suggests the convergent validity of the indicators.

It seems that all the 4 frameworks discussed earlier in the review of literature section perhaps do not apply completely in this context. Instead, the components that were thrown up by exploratory factor analysis and further confirmed by confirmatory factor analysis are forwarded as a definitive list of e-marketing mix variables in the context of online marketing. The definitive list comprises of the following variables viz.

- Customer value and benefit,
- customer care and relationship
- Content of website
- Interactivity
- Speed of service and
- Security-reliability (C^3IS^2).

To summarize we first identified thirteen e-marketing mix elements with the help of content analysis and then finally reduced the list to six e-marketing mix elements with the help of EFA (Refer figure 23).

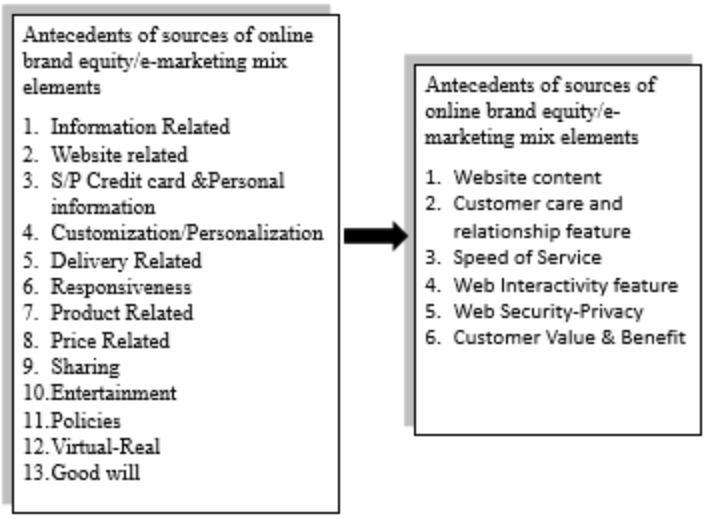


Figure 23: Transformed list of e-marketing mix elements

The final conceptual model is given in figure 24.

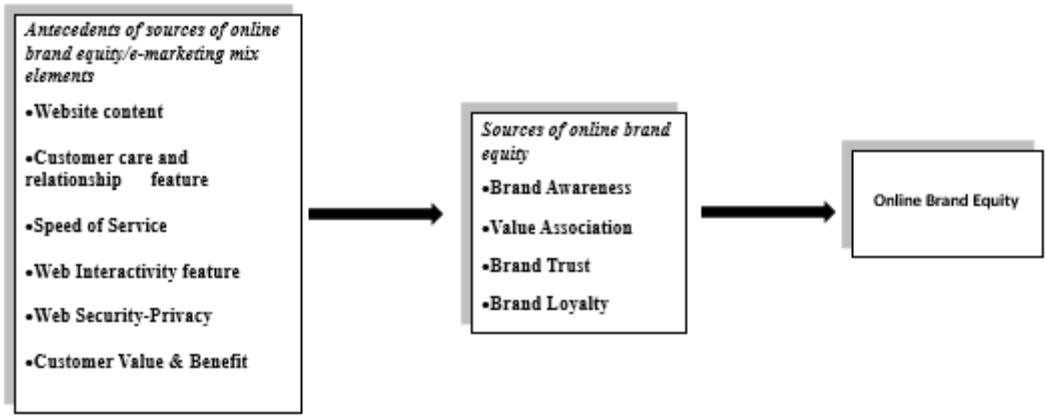


Figure 24: Conceptual Framework

An overarching e-marketing mix framework

RQ3: *Is it possible to develop a standard definitive list of e-marketing mix elements as well as propose an overarching e-marketing mix framework?*

As we generated a parsimonious list of six e-marketing mix elements (customer value & benefit, the content of the website, customer care & relationship, interactivity feature of a website, security-privacy, and 4speed of the website) we also attempted to find out an overarching e-marketing mix framework.

We first determined the characteristics on which the classification can be based, looking into mutually exclusive categories and determined its usefulness. We now proceed to classify these six e-marketing variables into two set of dimensions: primary and secondary.

Primary Dimensions: E-marketing mix variables viz. Customer value and benefit, security-reliability and content of the website are the three basic requirements for any e-commerce business to run. We can also relate them with economic value, technological and informational parameters. Customer value and benefit is an economic value dimension which considers the cost-benefit aspect. The assumption that consumers make a decision based on their expectation on future price (Doyle & Saunders, 1985) still holds true. The informational dimension has three forms, information of the customer, information for the customer and information by the customer

(Chung-Hoon Park & Kim, 2003). Website content is information for the customer. Ensuring security feature of a website and making it reliable are technological concerns which are a mandatory feature for any e-commerce site.

Secondary Dimensions: Customer care and relationship, the speed of service, and website interactivity features are the additional three e-marketing mix variables that add value to the basic offerings. Customer care and relationship variable is at the intersection between the primary dimensions of Information and Economical considerations. Information about the customer is used to give greater value to loyal customers or design offerings for different valuable customers. As a relationship is a two-way process, conversly customer can opt for offers, self-selecting and opting for loyalty programs and benefits. Suffice it to say that customer care and relationship in e-commerce domain is based on the twin pillars of value and information- information about customers and use of information by the customer. Similarly, the speed of service variable enhances the consumer experience. It is at the intersection between the primary dimensions of Economical value and Technology. How the technology can also enhance value through the speed of service is one of the defining features of the success of e-commerce. The last variable under this category is Interactivity feature of the website. It is at the intersection between the primary dimension of Information and Technology. The more interactivity an e-commerce website offers the more virtual-real it becomes (Ryan & Jones, 2009).

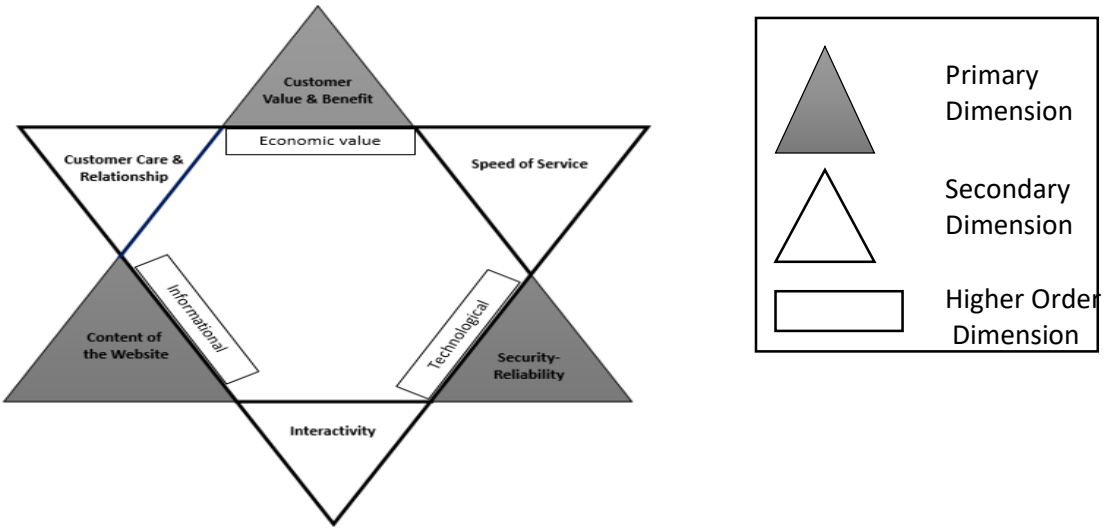


Figure 25: Overarching framework for e-marketing mix elements

Chapter 5: Development of Proposed Framework & Hypotheses

This Chapter is divided into two important sections. The first section discusses the proposed conceptual framework, depicting the relationship between e-marketing mix variables, sources of online Brand Equity and online Brand Equity. In section 2 we generate hypotheses based on the proposed conceptual framework that would be tested empirically later on.

5.1 The Conceptual Framework

As established previously through literature review, the marketing activities significantly affect the Brand Equity dimensions (sources of Brand Equity) and thus strengthen the Brand Equity (D. A. Aaker, 1991a; Boonghee Yoo & Donthu, 2001a). We present the basic conceptual framework that depicts the relationship between marketing activities in the online context with the sources of online Brand Equity and Brand Equity. E-marketing mix elements act as antecedents to sources of online Brand Equity.

The block 2 of our framework i.e. sources of online Brand Equity draws on a traditional Brand Equity model. Sources of Brand Equity are Brand Awareness, Brand Association, Perceived Quality and Brand Loyalty (D. A. Aaker, 1991a). Rios and Riquelem (2008. 2010) on sources of online Brand Equity, the sources used are Brand Awareness, Value Association, Brand Loyalty, and Brand Trust. Brand Awareness and Brand Association also called brand knowledge are the central concepts of Brand Equity (Keller, 2001). Value Associations of online retailers are therfore cues that are associated not only with price but also with convenience, merchandising and policies & procedures.

The source of Brand Equity which are different from the traditional sources is Brand Trust. Brand Trust is known as a special form of Brand Association but is more important in the online environment as the perceived risks like product risk and privacy & security are involved (Bart et al., 2005b; Li & Zhang, 2002; Winch & Joyce, 2006). There are studies that suggest that trust of brick-and-mortar companies or offline companies can be transferred to online retail stores (Li & Zhang, 2002; J. Park & Stoel, 2005).

Therefore, our framework comprises of six elements of e-marketing mix variables in block one and four sources of OBE namely Brand Awareness, Value Association, Brand Trust and Brand

Loyalty. The framework is given in figure 26 in which the block 1 consists of six e-marketing mix elements.

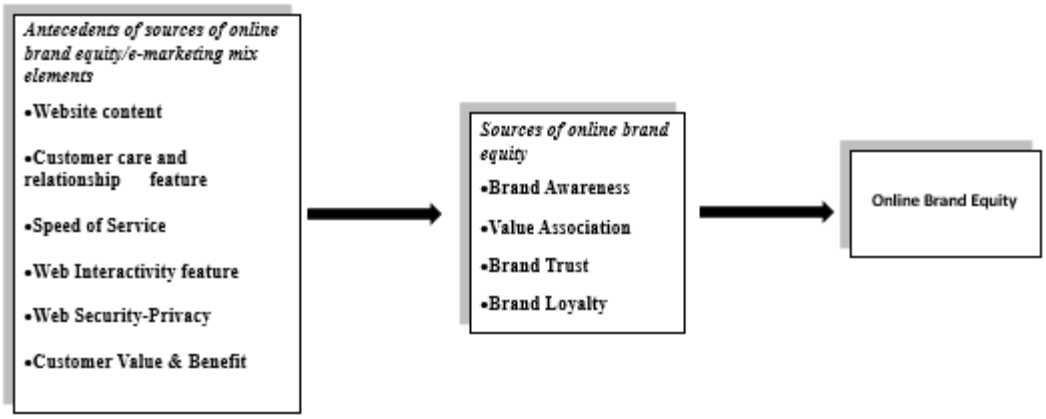


Figure 26: Research framework for building online Brand Equity

Our research objectives are:

Objective 1: To generate a definitive list of antecedents to sources of online Brand Equity.

Objective 2: To investigate and characterize the relationships between antecedents, sources of Brand Equity and Brand Equity in the online context.

Objective 3: To explore the consumer brand choice in the online context.

We have already generated a definitive list of e-marketing mix variables in Chapter 4. Next, for our second objective, we list the hypotheses and test them using SEM. The results of SEM Investigations will be given in Chapter 6.

5.2 Characterization of the proposed relationships between antecedents, sources of Brand Equity and Brand Equity in the online context.

The second major objective is to find out the relationship between antecedents and sources of online Brand Equity. We aim here to posit the relationships between e-marketing mix elements and sources of online Brand Equity.

5.2.1 Hypothesis: set 1 - Linking e-marketing mix elements to Brand Awareness

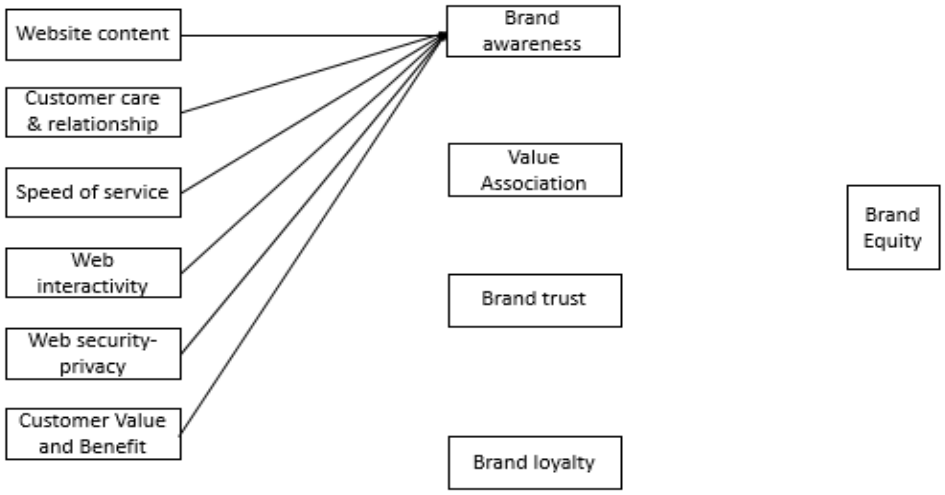


Figure 27: Schema of Brand Awareness and e-marketing mix element's proposed relationship

Brand Awareness: Brand Awareness is one of the focal independent variables of Brand Equity and an important key dimension (D. a Aaker, 1996). It is capable of generating Brand Equity even when the other sources of Brand Equity are absent (Hoyer & Brown, 1990). It is characterized as the process of perceiving a brand based on past encountered experience (Mandler, 1980). Any interaction with the brand can be the experience Reference point and help in the top of the mind recall.

Advertising enhances Brand Awareness as a repetitive recall increases the probability of a brand entering the consideration set (Hauser & Wernerfelt, 1990). As advertising is a type of promotion activity, therefore the e-marketing mix element equivalent to promotion i.e interactivity and customer care may also increase the level of Brand Awareness. Availability of a brand or distribution intensity affects the Brand Awareness (Smith, 1992). E-marketing mix element, the

speed of service, therefore, helps in building Brand Awareness. An increase in the value of any product automatically balances increases the level of satisfaction. And awareness increase along with consumer satisfaction (Farris et al., 1989). Website content and security-reliability increases the value and therefore may increase the Brand Awareness. Therefore, we pose the following hypothesis:

H1a: *Customer value and benefit has no significant relationship with Brand Awareness.*

$H1_b$: *Customer care and the relationship has no significant relationship with Brand Awareness.*

$H1_c$: *Content of the website has no significant relationship with Brand Awareness.*

$H1_d$: *Interactivity feature of the website has no significant relationship with Brand Awareness.*

$H1_e$: *Speed of service has no significant relationship with Brand Awareness.*

$H1_f$: *Security-reliability feature of the website had no significant relationship with Brand Awareness.*

5.2.2 Hypothesis: set 2 - Linking e-marketing mix elements to Brand Trust

Brand Association: Association with the brand in the online context is majorly divided into trust association and Perceived Quality or Value Association.

Brand Trust

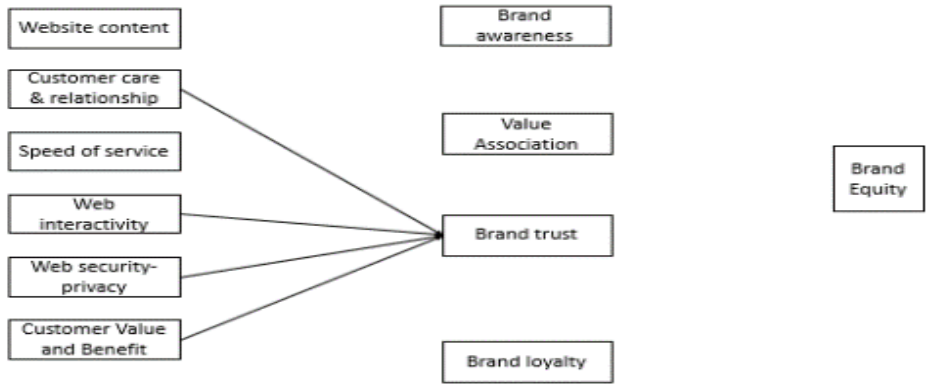


Figure 28: Schema of Brand Trust and e-marketing mix element's proposed relationship

Aaker considers trustworthiness as one of the forms of Brand Association (D. A Aaker, 1996). When online companies are involved, trust can be singled out as the ability to trust a website for

an online transaction is of utmost important. The literature on online Brand Equity suggests that Brand Trust is only dependent on the security and privacy of a website (Head & Hassanein, 2002; D. J. Kim et al., 2008; Ratnasingham, 1998; Rios & Riquelme, 2010). Therefore, we state:

$H2_a$: Security and privacy of a website have no significant relationship with Brand Trust.

Brand Trust is also based on individual's experience and interaction (Garbarino & Johnson, 1999). The experience process develops as the consumer learns over time (Delgado-Ballester & Munuera-Alemán, 2001). It is the experiential benefit form of Brand Association. Customer value & benefit and customer care & relationship in the online context are important aspects of consumption experience. Also, interactivity feature of a website enhances the consumer experience and therefore Brand Trust. This led us to pose that:

$H2_b$: Customer support feature has no significant relationship with Brand Trust.

$H2_c$: Customer care and relationship has no significant relationship with Brand Trust.

$H2_d$: Website interactivity has no relationship with Brand Trust.

Since we are investigating about the concept of Brand Equity, therefore, an attempt to find out the relationship between website content and speed of service with trust association will also be made.

5.2.3 Hypothesis: set 3 - Linking e-marketing mix elements to Value Association

Value Association

Perceived Quality or Value Association maintain the uniqueness of a brand and increase the willingness to pay a premium price for a brand. The more the number of cues, the strong is the association with a brand. The product and non-product attributes create Value Association. Accurate & reliable information, easy navigation, the interactivity feature of a website which can confusion, thus creating value for consumers (Chiu & Wang, 2000; Chou & Lin, 1998; Trumbull et al., 1992). Thus, we propose:

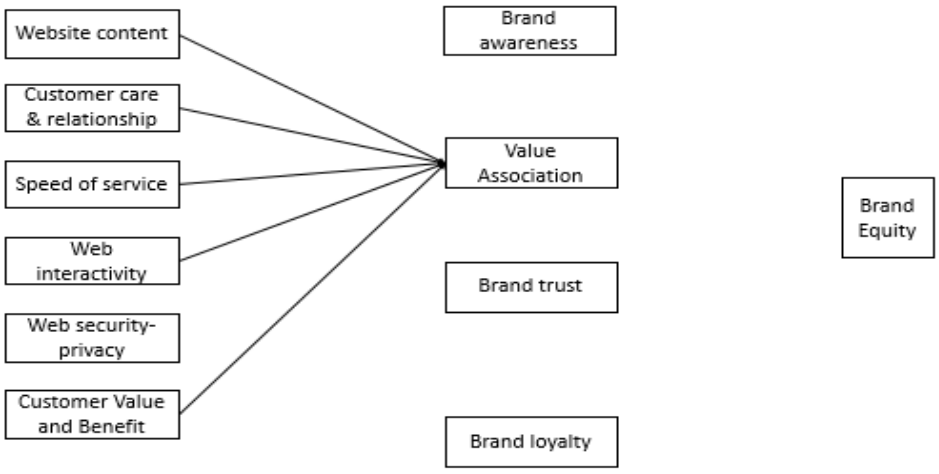


Figure 29: Schema of Value Association and e-marketing mix element's proposed relationship

H3a: *Website content has no significant relationship with Value Association.*

H3b: *Website interactivity has no significant relationship with Value Association.*

H3c: *Speed of service has no significant relationship with Value Association.*

Advertising provides important cues of value or quality of a product and positive relationship has been found out between advertising and Perceived Quality (D. A. Aaker & Jacobson, 1994; Milgrom & Roberts, 1986). As advertising is a promotional activity, therefore, the equivalent e-marketing mix variable may have a positive relationship with Value Association as well. Therefore, we pose:

$H3_{d:}$ *Customer care and the relationship have no significant relationship with Value Association.*

Since any added benefit increases the satisfaction level and thus increases the Perceived Quality of the website (Chattopadhyay, Shivani, & Krishnan, 2010; Boonghee Yoo & Donthu, 2001a). This led us to pose:

$H3_e$: *Customer value & benefit has no significant relationship with Value Association.*

We will also attempt to find out if there is any relationship between security-reliability and Value Association of a website.

5.2.4 Hypothesis: set 4- Linking e-marketing mix elements to Brand Loyalty

Brand Loyalty

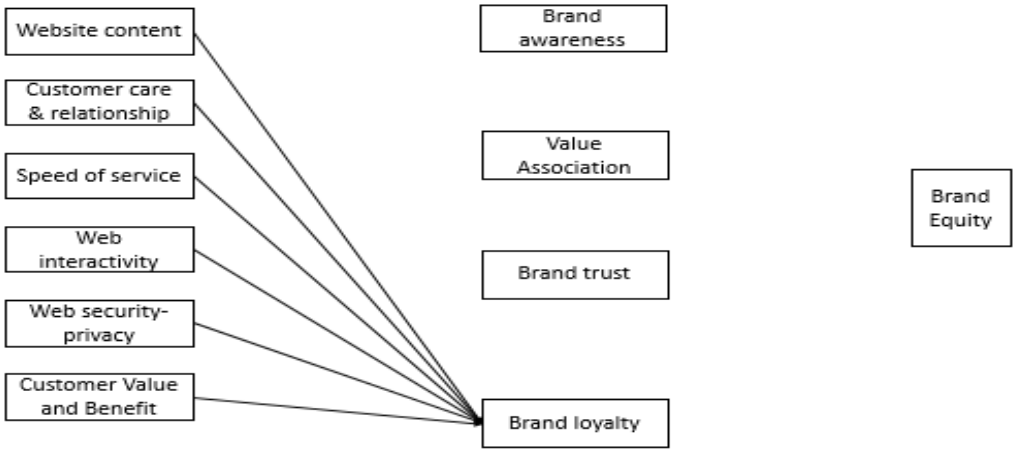


Figure 30: Schema of Brand Loyalty and e-marketing mix element's proposed relationship

The relationship between Brand Loyalty and attributes like physical quality and customer care can be derived from the traditional research industry (Ekinci et al., 2008; Grönroos, 1984; Nam et al., 2011). In the online context Content of the website, navigation speed, interactivity feature, security and privacy feature of a website are the physical attributes that facilitate online purchase. Also, advertising is positively associated with Brand Loyalty according to an extended hierarchy of effects between association and attitude towards the brand (Shimp, 2004). Therefore, we posit:

$H4_a$: *Website content has no significant relationship with Brand Loyalty*

$H4_b$: *Website interactivity feature has no significant relationship with Brand Loyalty*

$H4_c$: *Speed of service has no significant relationship with Brand Loyalty*

$H4_d$: *Security-reliability feature of a website has no significant relationship with Brand Loyalty*

$H4_e$: *Customer care and relationship has no significant relationship with Brand Loyalty*

$H4_f$: *Customer vale & benefit had no significant relationship with Brand Loyalty*

5.2.5 Hypothesis: Set 5 - Linking sources of online Brand Equity to online Brand Equity

Brand Equity

The relationship of sources and Brand Equity are well established in the literature. By strengthening the sources of online Brand Equity, online Brand Equity can be generated. When Perceived Quality or Value Association is high, it acts as a driving force to choose a brand from a group of other competitive brands. Perceived Quality is a component of brand value (Zeithaml, 1988) and it positively affects Brand Equity (B. Yoo et al., 2000). From mere recognition to the domination of a brand in the mind of the customer may start with Brand Awareness. Brand recognition and brand recall, both aspects are important for building online Brand Equity. Brand Awareness and Brand Association lead to positive Brand Equity as they are the signal to quality and commitment to any product. Also, it helps the consumer at the point of purchase to finalize the consideration set and therefore making them brand loyal(D. A. Aaker, 1991a; Alba & Hutchinson, 1987). Brand Loyalty directs customers to rebuy the brand routinely. Hence, if consumers are loyal the Brand Equity increases. Altogether, we pose:

$H5_a$: Brand Awareness has no relationship with Brand Equity in the online context.

$H5_b$: Value Association has no relationship with Brand Equity in the online context.

$H5_c$: Brand Trust has no relationship with Brand Equity in the online context.

$H6_d$: Brand Loyalty has no relationship with Brand Equity in the online context.

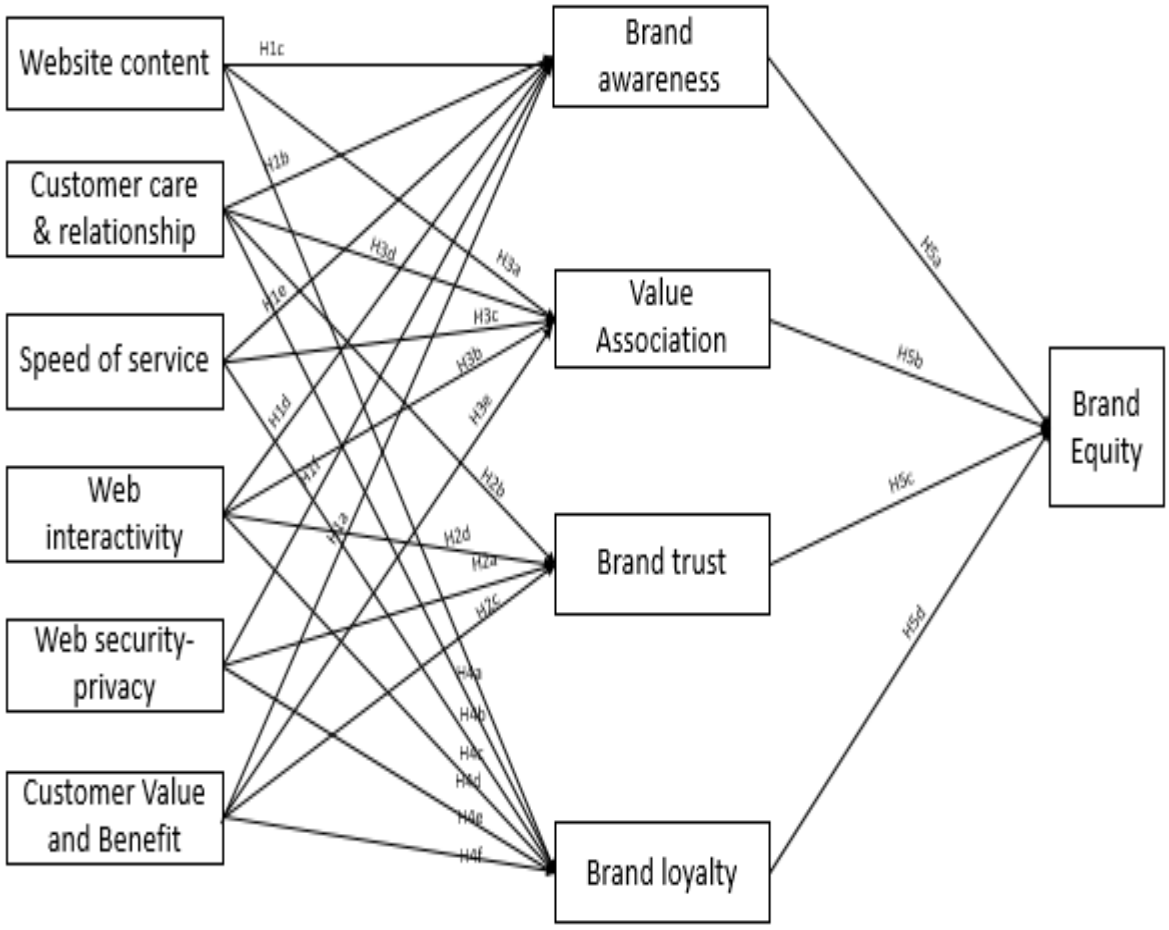


Figure 31: Final Schema of e-mix elements, sources and online Brand Equity proposed relationship

All the hypotheses are tested for online retailers as well as online travel-ticket booking. The final model allowed us to compare the difference between online retailers and travel-ticket booking**.**

Chapter 6: Analysis and Results

6.1 Introduction

This Chapter reports all investigations regarding second objective of our study viz. investigation and characterization of the relationship between antecedents of sources of OBE, sources of OBE and OBE. The associations between all these three major components are identified using structural equation modelling (SEM).

This Chapter consolidates the results through a meaningful and systematic procedure. The relationships between the e-marketing mix variables, sources of online Brand Equity and Brand Equity have been investigated stepwise through SEM using IBM AMOS 20.

SEM's ability to consider and assess both structural and predictive questions is a unique strength that makes it appropriate for this part of the investigation. SEM has the ability to frame and answer increasingly complex questions with the help of data (Jaccard and Wan, 1996; Kwlloway, 1998) represents a key reason for adopting the technique as a method for analyzing a complex phenomenon like online Brand Equity.

It is a comprehensive statistical approach to test hypothesis about relations between latent and observed variables. To determine the nature of the relationship there are three situational models. These are strictly confirmatory (SC), alternative model (AM) and model generating (MG). As this name suggests SC model strictly fits one model available to a set of empirical data. A researcher uses AM when he/she has mainly alternative/competitive available, and one of them is selected by testing it on a set of single empirical data. Last but not the least, the researcher has the freedom to modify, test and retest a tentative model using the same data set in the model generating (MG) approach. The goal is not only to find the best statistical fitted model but also which can be interpreted meaningfully.

We have chosen SEM because of multiple reasons. The model generation approach allowed us to determine various known and unknown relationships between e-marketing mix variable, sources of online Brand Equity and online Brand Equity. This is also called exploratory mode of SEM Application (MacCallum & Austin, 2000; Maccallum, 1986). Another reason is that it helps in determining the direct and the indirect effect. When a variable affects the dependent variable through another variable then the indirect effect is observed. Also, structural equation modelling

allows the estimation of the combined effect of independent variables in the form of concepts/constructs linked to the dependent variable. Moreover, measurement error associated with each variable is taken into consideration while predicting the actual behavior based on the theoretical support (Gefen et al., 2000). Identification of the model is one of the important steps in structure equation modelling. Identification of model determines whether enough information is available to determine the unknown coefficients and matrices (Kenneth A Bollen, 1989). There are three conditions; over-identified models, just-identified models and under-identified models. Theories are easily tested with over identified models. Just-identified models are not interesting and are generally used in multiple regression. Under-identified models require re-specification.

6.2 Structural Equation Modelling (SEM) Results

The first step in SEM is to first check the assumption of normality. The requirement to perform SEM is a continuous data and multivariate normal distribution. We checked multivariate normality using Mardia's Coefficient (Mardia, 1970). In both the data set of online retail and travel-ticket website the values pertaining to skewness is >2, kurtosis is >7 and multivariate normality coefficient is >5, z-statistics more than 1.96 suggested a non-normal data. Therefore, we used bootstrapping approach to handle the multivariate non-normal data. Bootstrapping serves as a resampling procedure by which the original sample is considered to represent the population. Multiple subsamples of the same size as the parent sample are then drawn randomly, with replacement, from this population and provide the data for empirical investigation of the variability of parameter estimates and indices of fit. After bootstrapping to n=2500 sample, the distribution turned to normal. The normal distribution is given in figure 32 & 33.

Once the multivariate normality is achieved using bootstrapping the next step is to identify the best fitting model between e-marketing mix variables, sources of OBE and OBE by doing multiple investigations. The subsequent section discusses the investigations done for online retail brands and travel-ticket booking websites. The investigation scheme is given in figure 34.

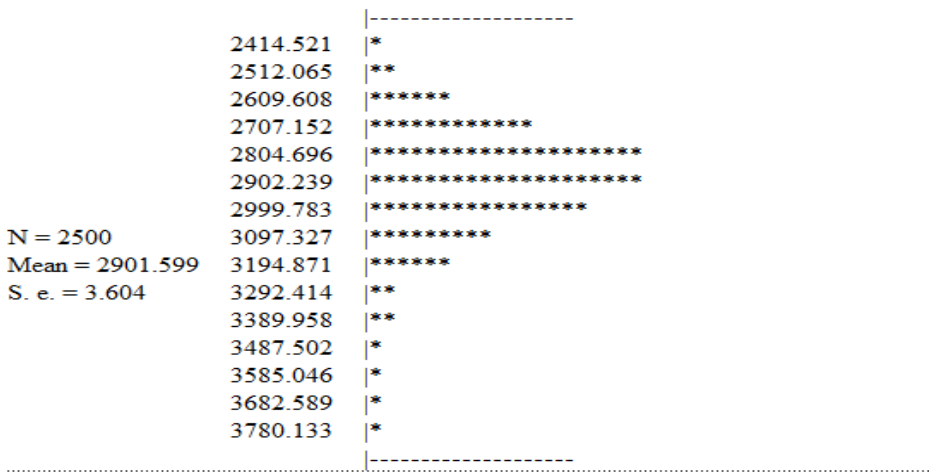


Figure 32: Stem & Leaf Graph after bootstrapping of online retail data

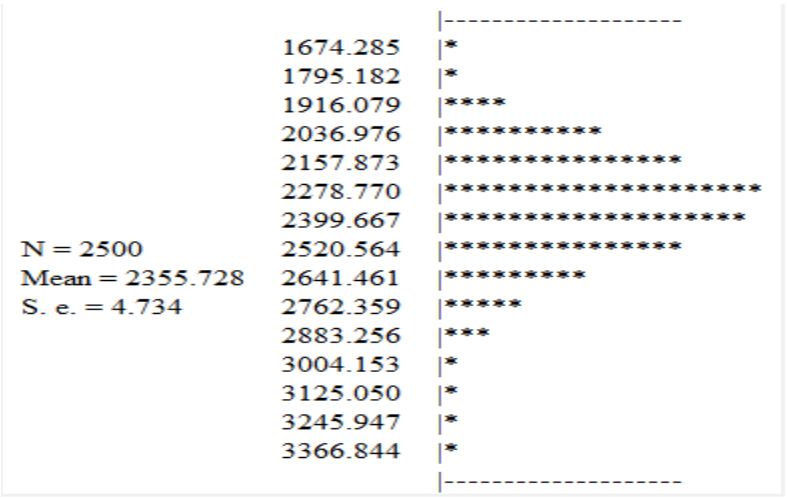


Figure 33: Stem & Leaf Graph after bootstrapping of travel-ticket website data

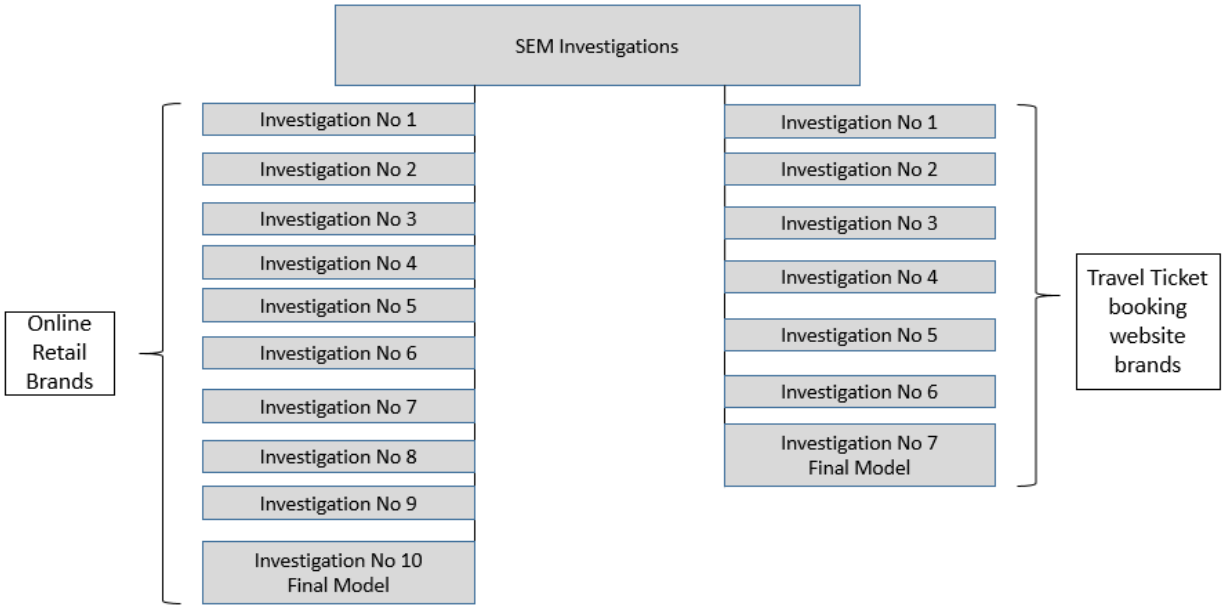


Figure 34: SEM Investigations Schema

The next section discusses the statistical fit for the models generated using SEM for online retail brands and travel-ticket website brands.

6.2.1 Online retail brand

When we run the base model using SPSS AMOS the fit indices results are: CMIN/DF=4.0, RMR=.323, GFI=.70, CFI=.75, RMSEA=.087. The indices show poor fit and therefore the model cannot be accepted. Further, we modified the model by iterative testing, removing various non-significant paths and introducing new paths with the help of modification indices. Each investigation step is indicated in the form of path models. The final accepted model is given in figure 44.

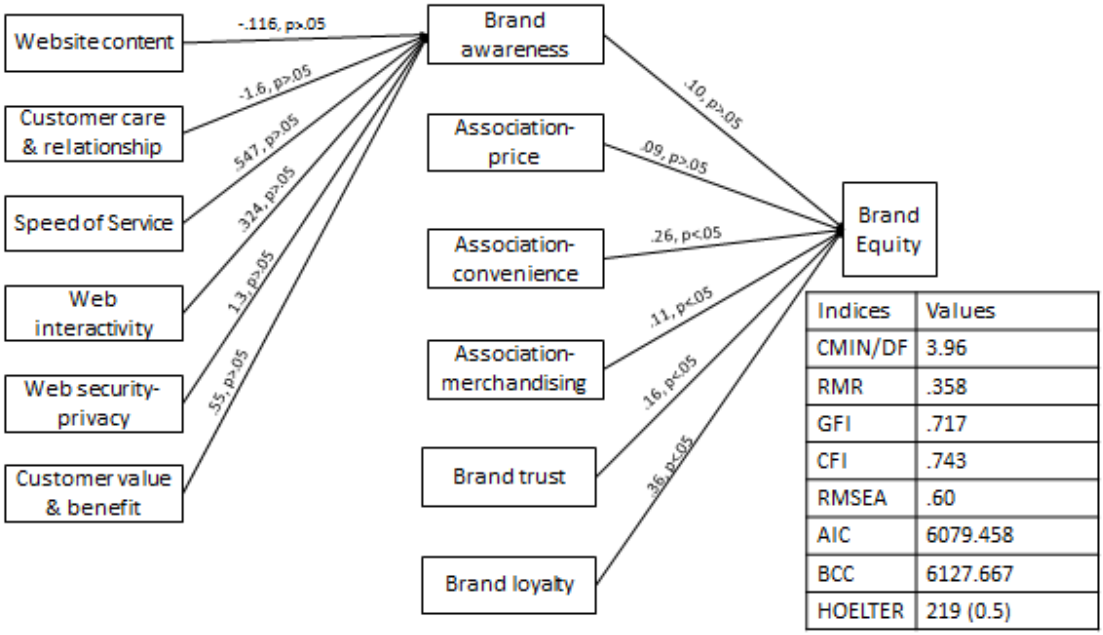
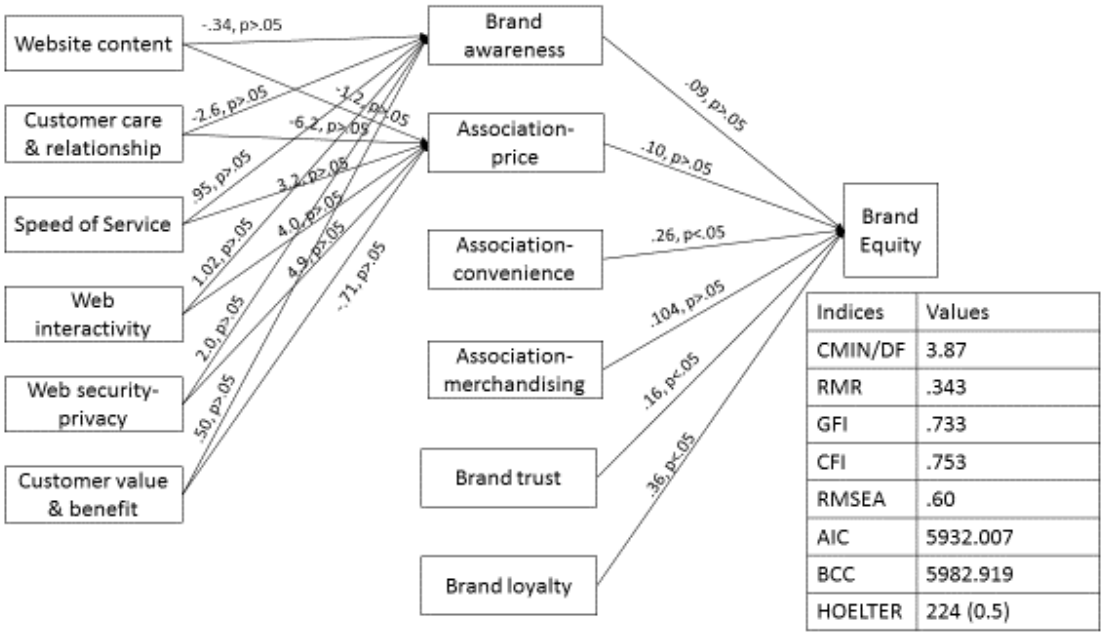


Figure 35: Investigation 1 following the SEM's MG approach for online retail brands

Investigation No 1: We first run our hypothesized relation model given in figure 32, but it failed to converge. Then we started our investigations by taking one source of OBE and all the six e-marketing mix elements at a time. In investigation no. 1 we associated all the e-marketing mix elements with Brand Awareness, IF we look at the statistic indices CMIN/df, RMSEA have acceptable value. But we move to our next investigation to achieve a better fit model.



Indices	Values
CMIN/DF	3.87
RMR	.343
GFI	.733
CFI	.753
RMSEA	.60
AIC	5932.007
BCC	5982.919
HOELTER	224 (0.5)

Figure 36: Investigation 2 following the SEM's MG approach for online retail brands

Investigation No 2: in our second investigation, we increased the number of association relationships. The sources of OBE- Association wrt price and its relationship with e-marketing mix variables are under study (In addition to investigation no 1). When we look at the fit indices, only CMIN/df has a better value in comparison with the model obtained in investigation no 1.

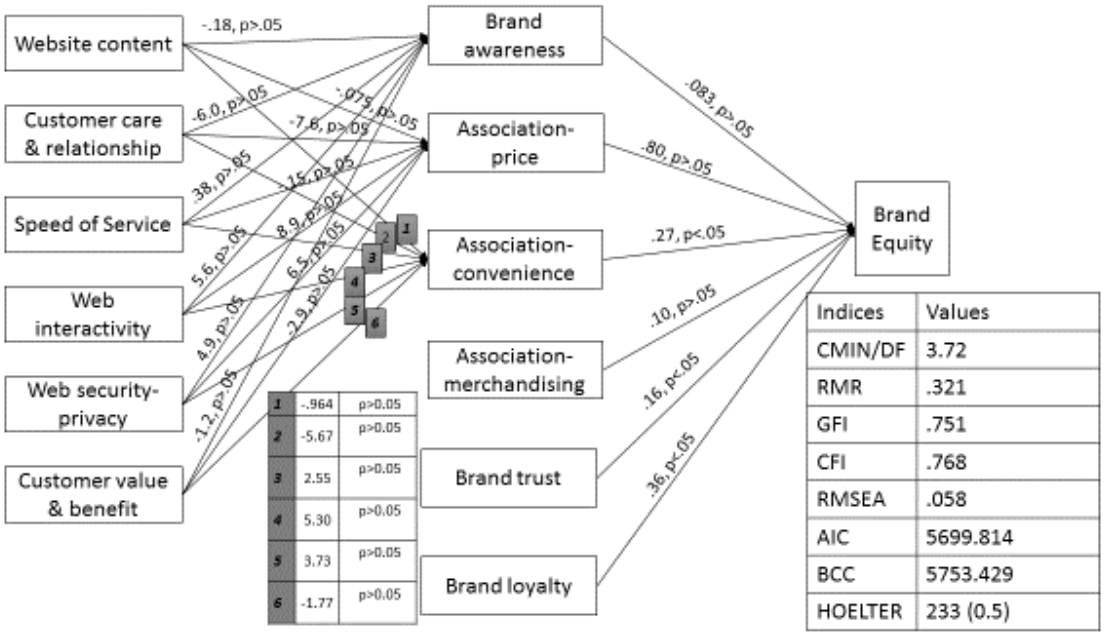
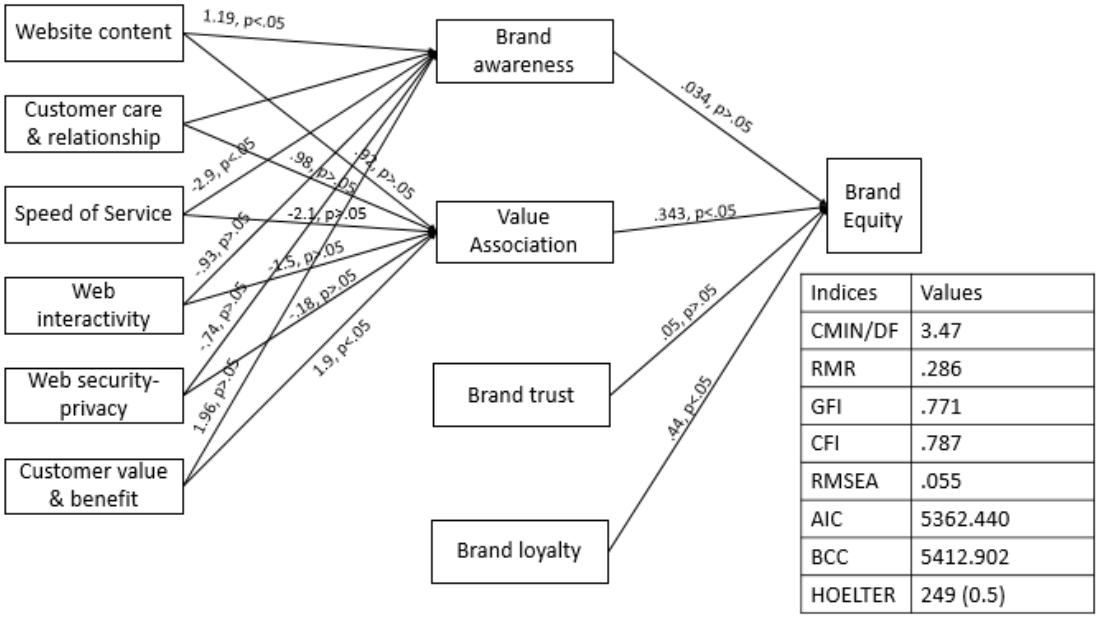


Figure 37: Investigation 3 following the SEM's MG approach for online retail brands

Investigation No 3: Another set of sources of online Brand Equity i.e. Association-convenience is added to the model. In this model along with CMIN/df, the RMSEA value improved.



Indices	Values
CMIN/DF	3.47
RMR	.286
GFI	.771
CFI	.787
RMSEA	.055
AIC	5362.440
BCC	5412.902
HOELTER	249 (0.5)

Figure 38: Investigation 4 following the SEM's MG approach for online retail brands

Investigation No. 4: In this investigation, we combined the Association-Price, Association-Convenience and Association-merchandising to the original variable Value Association. Initially, all the association cues were tested separately to generate better insights. But the fit indices in this model improved (CMIN/df, RMR and RMSEA). We, therefore, decided not to bifurcate the variable Value Association.

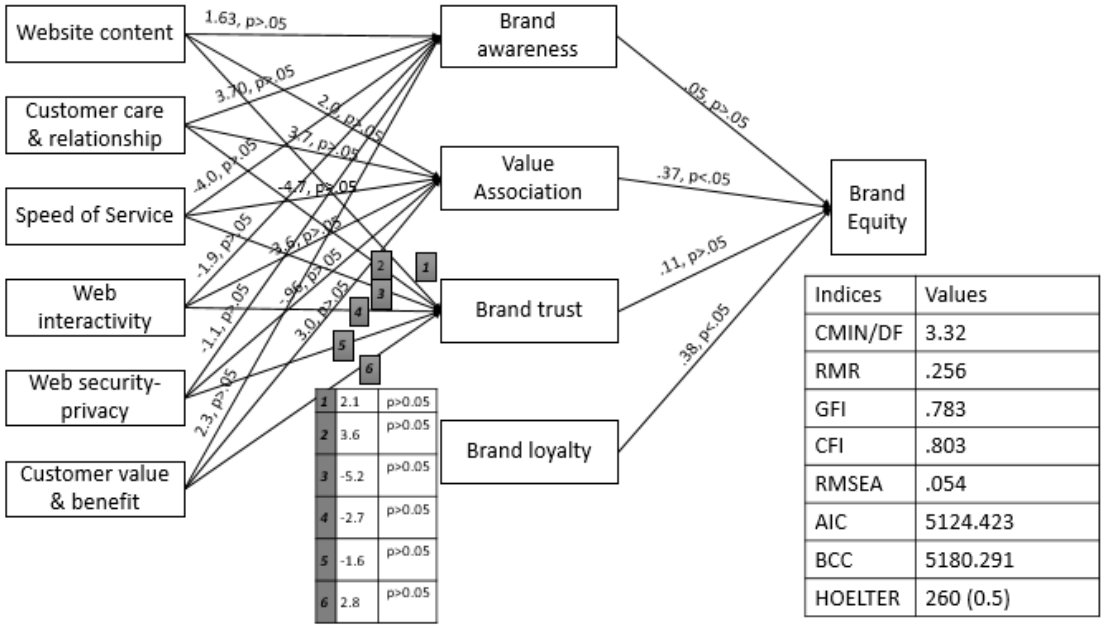


Figure 39: Investigation 5 following the SEM's MG approach for online retail brands

Investigation No. 5: As soon as Brand Trust is included in the model along with e-marketing mix variables all the fit indices improved and are in moderately acceptable range. The RMSEA value which was .06 in the initial investigation is now .054.

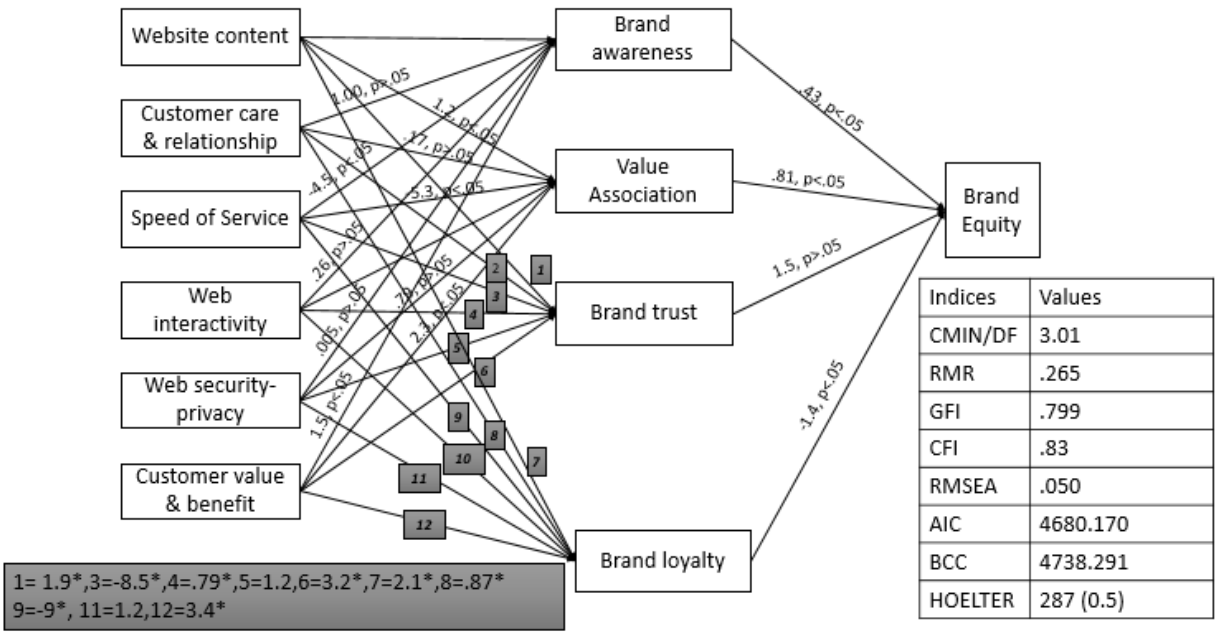
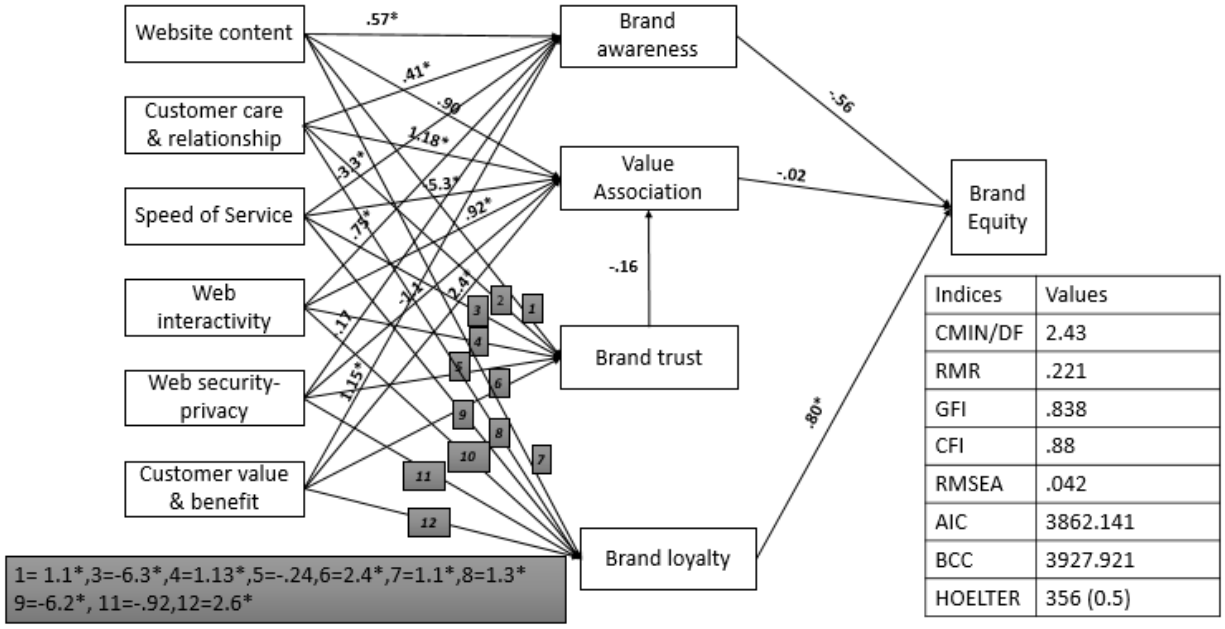


Figure 40: Investigation 6 following the SEM's MG approach for online retail brands

Investigation No. 6: In this investigation, all the sources of OBE, e-marketing mix variables are under consideration. As we added Brand Loyalty to the model, the fit indices improved and are in the moderately accepted range of the model. One of the important changes in this model is that the path from Brand Awareness to Brand Equity is now significant.



Indices	Values
CMIN/DF	2.43
RMR	.221
GFI	.838
CFI	.88
RMSEA	.042
AIC	3862.141
BCC	3927.921
HOELTER	356 (0.5)

Figure 41: Investigation 7 following the SEM's MG approach for online retail brands

Investigation No. 7: In investigation no 6 the model consideration set included e-marketing mix variables, Sources of OBE and Online Brand Equity. In this investigation, we looked at the modification indices (MI) and parameter change values. AMOS suggested an association between Brand Trust and Value Association to get better statistical parameters. As we added the path in the model the fit indices dropped and the model is a better fitted one as compared to the previous models.

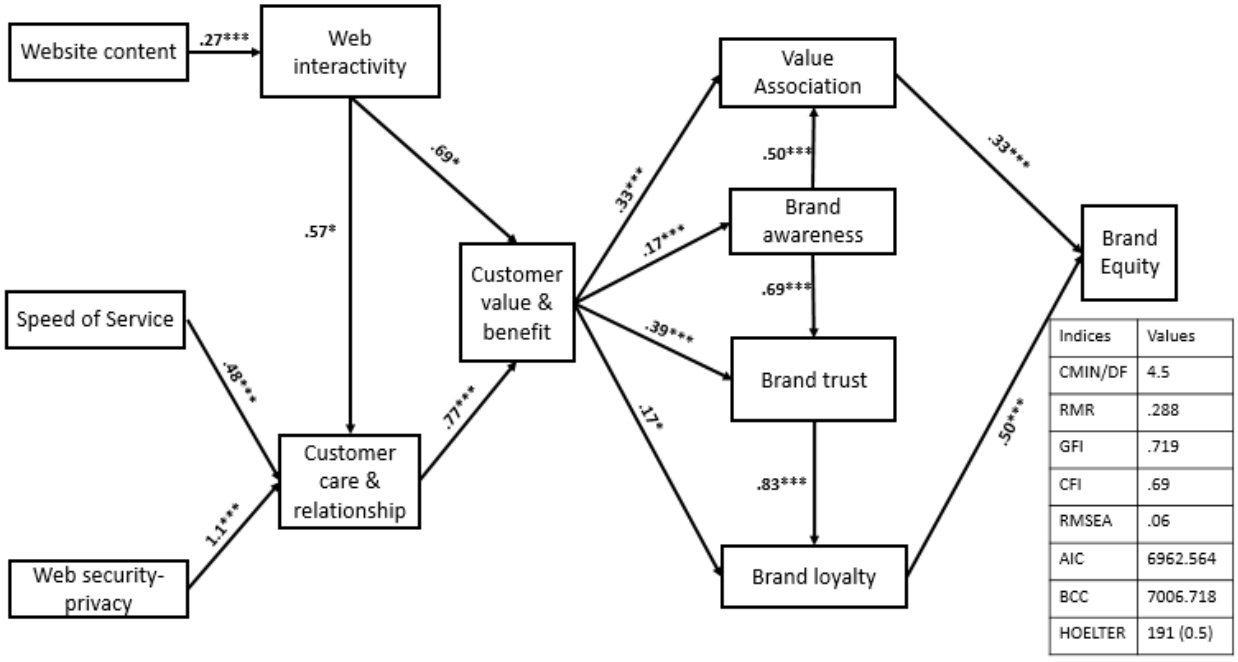


Figure 42: Investigation 8 following the SEM's MG approach for online retail brands

Investigation No. 8: Following the modification indices we inter-related the e-marketing mix variables and also associated Brand Awareness with Value Association and Band Trust. Also, Brand Trust is associated with Brand Loyalty. But in this investigation, we didn't see the fit indices getting better. The RMSEA value which dropped to 0.042 in investigation no 7 increased to 0.06 in this model.

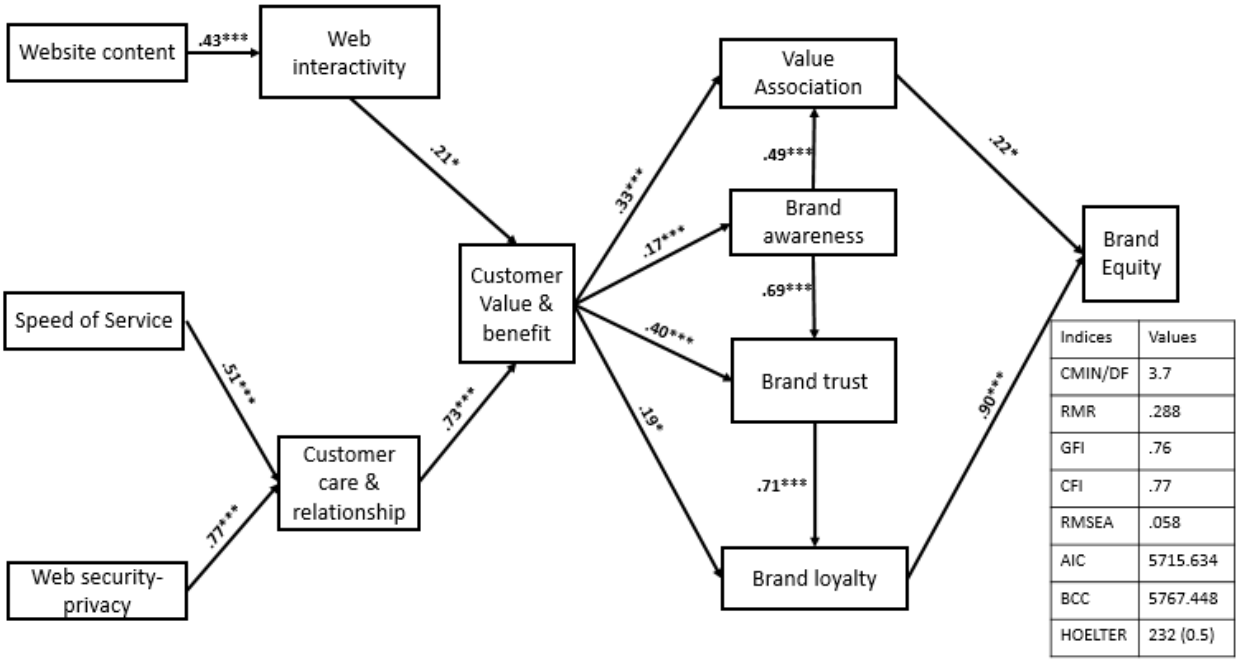


Figure 43: Investigation 9 following the SEM's MG approach for online retail brands

Investigation No. 9: In this investigation, we observed improvement in the statistical fit indices. RMSEA decreased to 0.058 and CMIN/df decreased to 3.7.

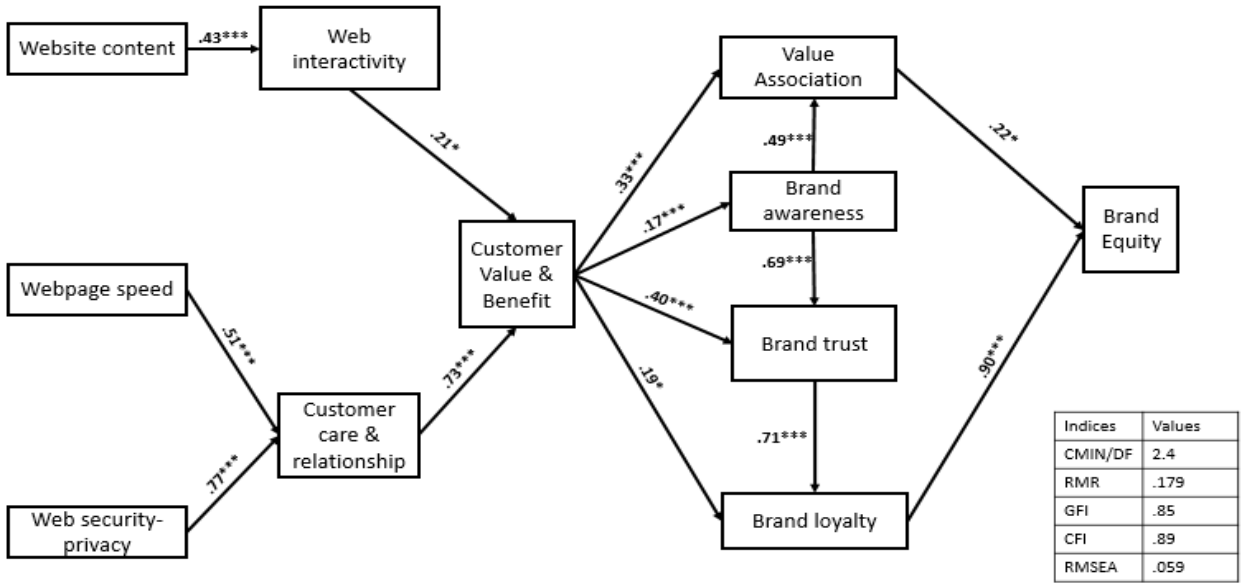


Figure 44: Investigation 10 following the SEM's MG approach for online retail brands

Investigation No.10: This is the best fitted model with CMIN/df=2.4, RMR=.179, GFI=.85 CFI=.89 and RMSEA =.059 among all with a moderate fit (Browne & Cudeck, 1992; Hu & Bentler, 1999; Kline, 2010; Mueller & Hancock, 2008). In this model, we see various new relationships formed among the e-marketing mix variables, between e-marketing mix variables and sources of online Brand Equity and among sources of online band equity as well.

The hypotheses, that are supported in the final structural equation model of Brand Equity for online retailers are H1a, H2c, H3e, H4f, H5b and H5d (Refer able 28). We also found mediation effect between the sources of online Brand Equity, reported in the next section.

Table 27: Supported hypotheses in the final model for online retail brands

S.No	Hypothesis	Relationship	Supported/Not supported
	H1a	Customer value and benefit → Awareness	Supported
	H2c	Customer value and benefit→ Brand Trust	Supported
	H3e	Customer value and benefit→ Value Association	Supported
	H4f	Customer value and benefit → Brand Loyalty	Supported
	H5b	Value Association→ Brand Equity	Supported
	H5d	Brand Loyalty → Brand Equity	Supported

Customer value and benefit has shown significant association with all the sources of OBE. It is indeed the only online e-marketing mix element, which is contributing towards OBE. It is evident from the literature that when customer value increases the level of satisfaction increases. The level of satisfaction is positively related to Brand Awareness(Farris et al., 1989) and Brand Loyalty (R. Oliver, 1999). In the online context as well satisfaction is related to Brand Loyalty (Anderson & Swaminathan, 2011; Donio', Massari, & Passiante, 2006; Horppu, Kuivalainen, Tarkiainen, & Ellonen, 2008). The arrangement of the other marketing mix elements in this model is discussed in detail in the discussion Chapter (section 8.4).

The some of the hierarchical relationships between the sources of OBE holds true and discussed in section 8.4 in detail.

Mediation Effect

We further investigated the interaction effect between sources of online Brand Equity and Brand Equity separately. Interaction effect can be of two types; moderation and mediation (K A Bollen, 1987). We have not found any moderation effect between the variables but encountered significant indirect mediation effects. Bootstrapping using AMOS allowed us to find out the indirect effect and its nature. There are three indirect effects that exist in the determined model. The significance of the indirect effect determined using 2000-bootstrapped sample. Significant indirect effect exists between Brand Awareness & Brand Loyalty, Brand Awareness & Brand Equity, and Brand Trust & Brand Equity. The standardized indirect effects are .46*, .53* and .73* respectively. Though Brand Trust and Brand Equity are not directly associated but if Brand Trust goes up by 1 standard deviation, then Brand Equity goes up by .73 standard deviations. Refer figure 45.

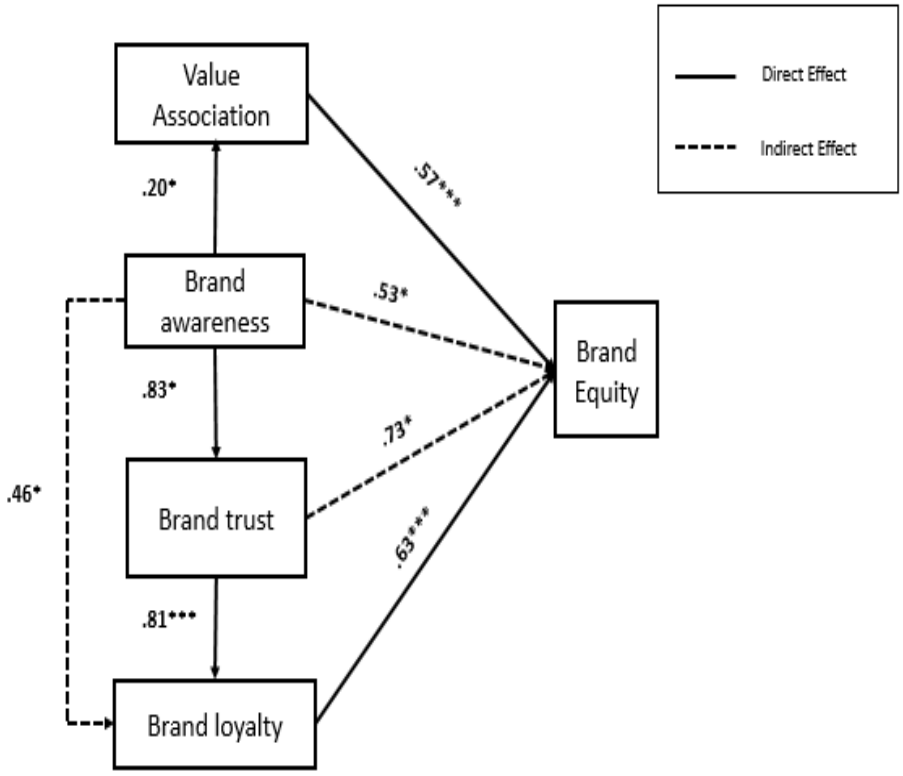


Figure 45: Figure representing mediation effect among sources of online Brand Equity

6.2.2 Online travel-ticket website brand

This section lists down the hypotheses for the online travel-ticket website brand. Our investigations of modified alternate models lead finally to the best fitted model The final accepted model is given in figure no. 52.

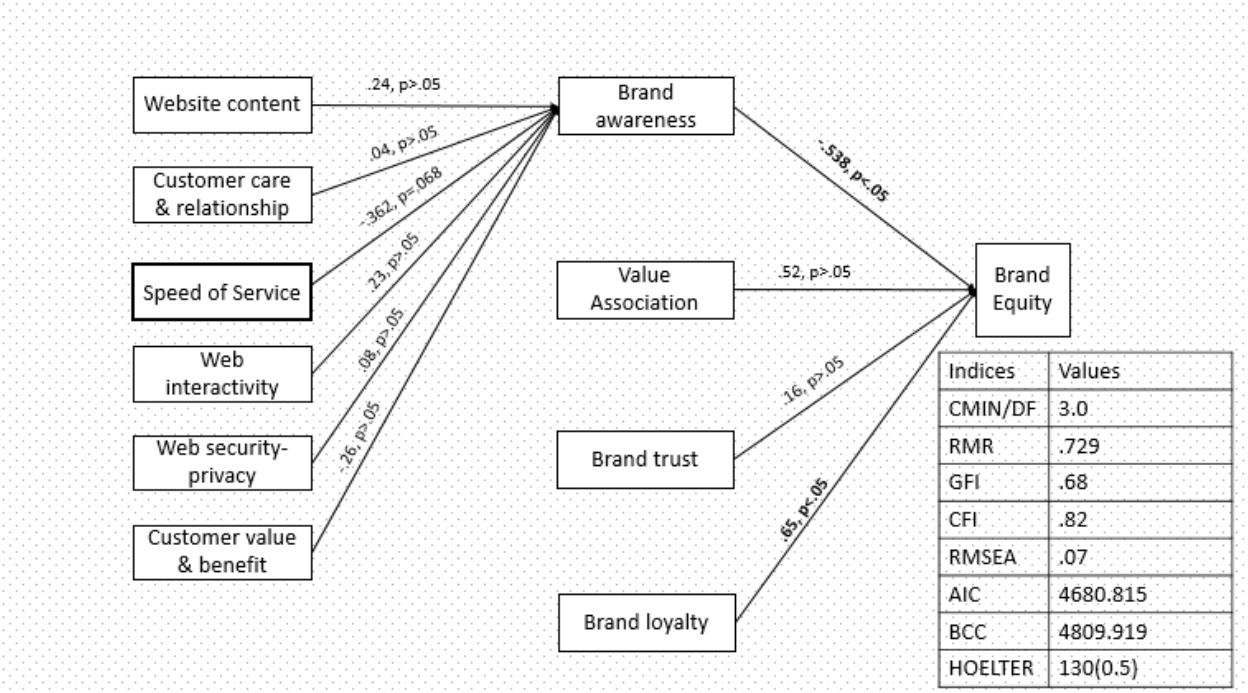


Figure 46: Investigation 1 following the SEM's MG approach for online travel-ticket brands

Investigation No. 1: Following the previous investigations done for online retail brands, we started exploring travel-ticket website brands. We kept the variable Value Association as one and did not attempt to break it down into 3 (as we did in our previous investigations).

Following the same rule, we investigate each source of OBE at a time. In this investigation, Brand Awareness and its relationships with e-marketing, mix variables are tested. The model fit indices show a poor fit.

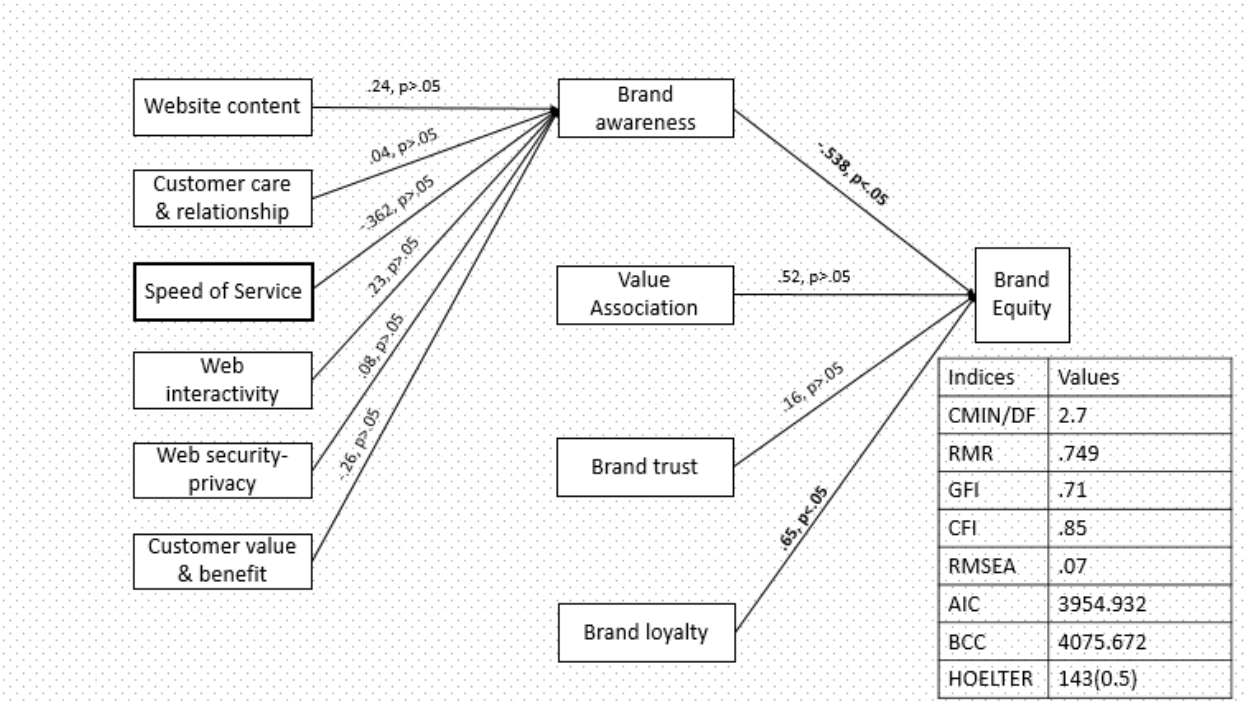


Figure 47: Investigation 2 following the SEM's MG approach for online travel-ticket brands

Investigation No 2: In this investigation following the modification indices we co-varied the error terns of webpage speed and there is a parameter change in the CMIN/df and other indices. However, there is a decrease in some of the fit measures but the model still is a poor-fit.

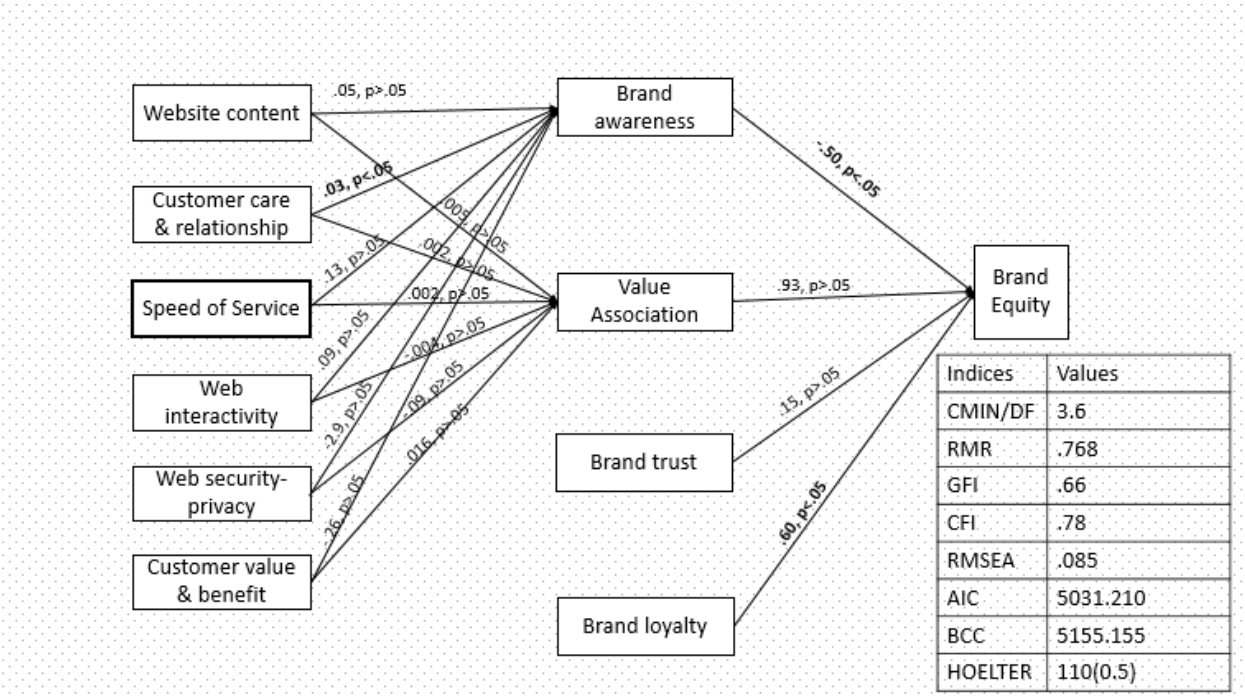


Figure 48: Investigation 3 following the SEM's MG approach for online travel-ticket brands

Investigation No. 3: We included Value Association in the model and its relationship with the e-marketing mix variables. But unlike other investigations, there is no improvement in the statistical fit indices. The fit indices indicate a poor fit model.

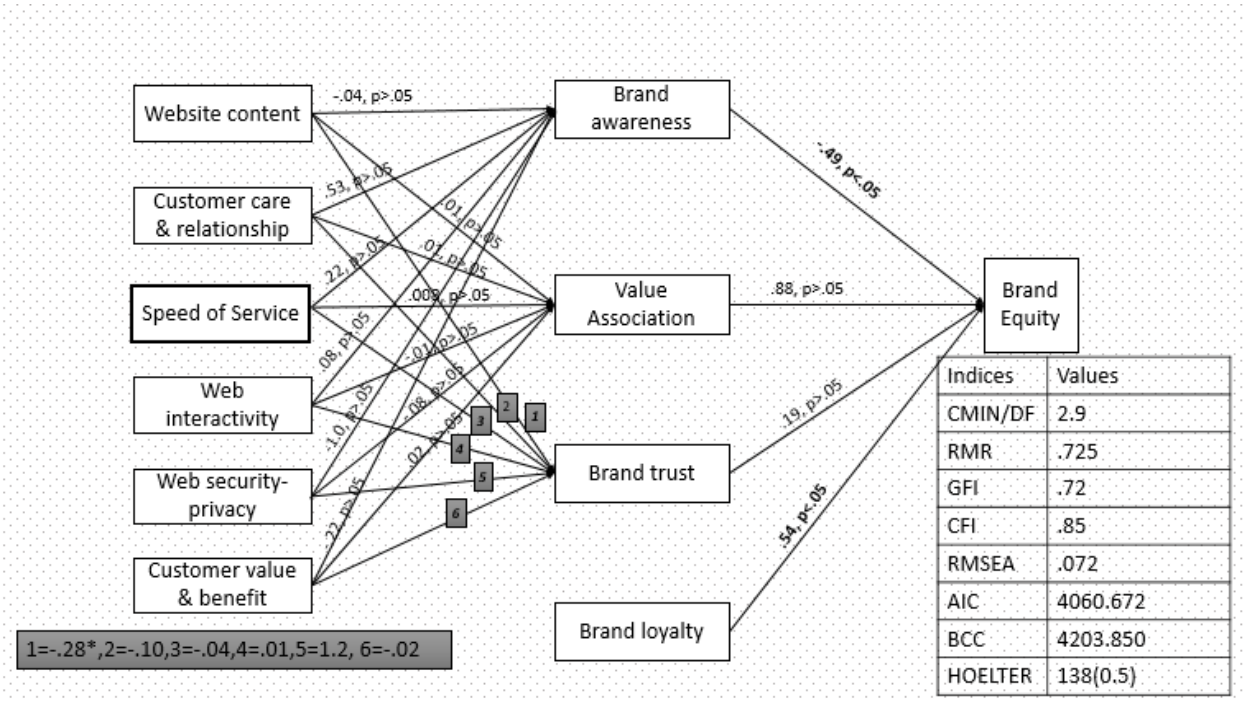


Figure 49: Investigation 4 following the SEM's MG approach for online travel-ticket brands

Investigation No. 4: As we included Brand Trust and its relationship in the model, we can see a decrease in the parameters but the model remained poor fit.

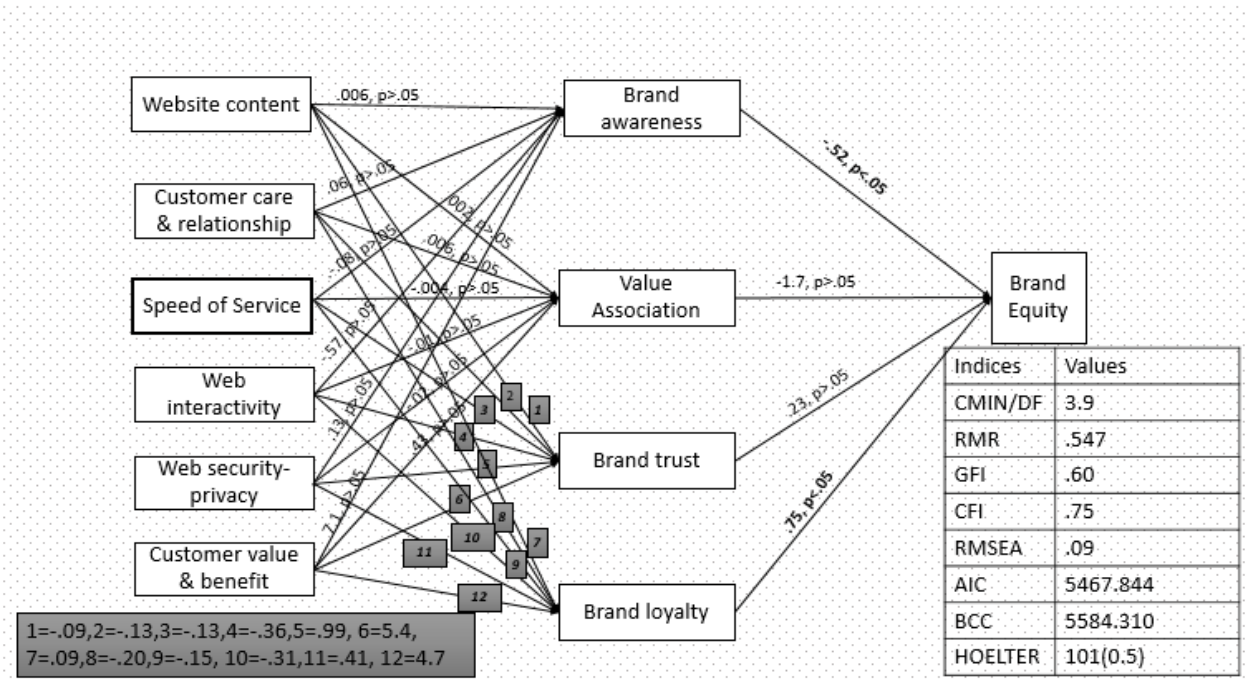
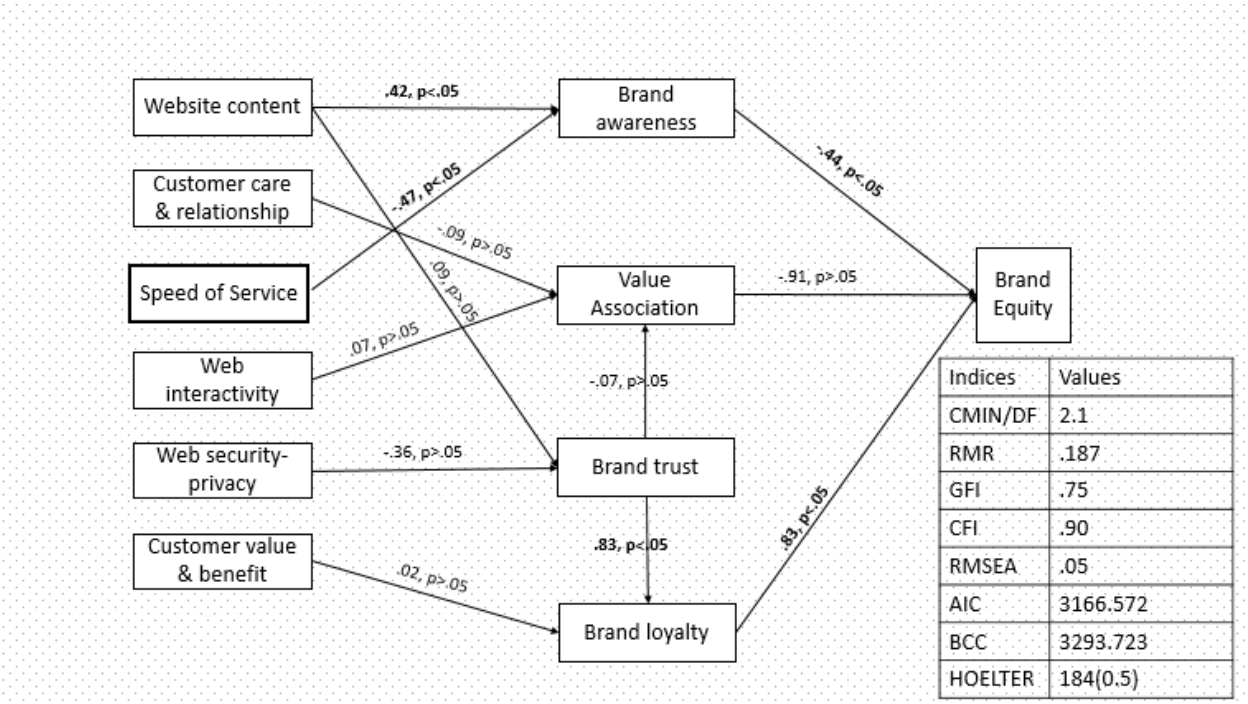


Figure 50: Investigation 5 following the SEM's MG approach for online travel-ticket brands

Investigation No.5: Adding Brand Loyalty in the model also didn't affect the statistical fit indices and it was still in the poor fit category. Now, we start looking at the modification indices and do our further investigations.



Indices	Values
CMIN/DF	2.1
RMR	.187
GFI	.75
CFI	.90
RMSEA	.05
AIC	3166.572
BCC	3293.723
HOELTER	184(0.5)

Figure 51: Investigation 6 following the SEM's MG approach for online travel-ticket brands

Investigation No.6: We followed the changes suggested by the modification indices and removed all the suggested associations. Unlike the model of online retail brands, the e-marketing mix variables are not inter-related to each other. The statistical fit indices improved compared to the previously investigated model and the model is now moderately fit.

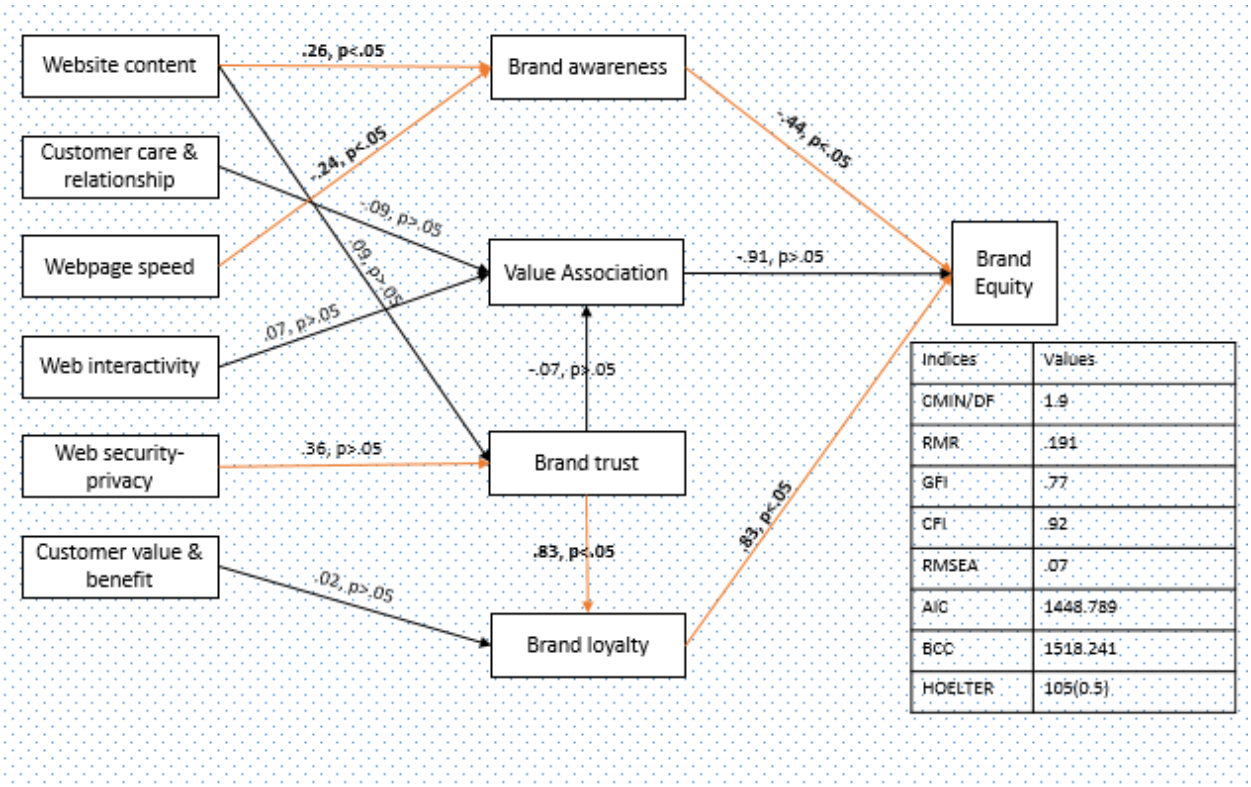


Figure 52: Investigation 7 following the SEM's MG approach for online travel-ticket brands

Investigation No.7: This is the best-fitted model for travel-ticket website brands.

The hypothesis, which is accepted in the final model, is H1c, H1e, H2a, H3a, H3b, H3d, H4f, H5a, H5b and H5d. A new significant relationship was identified between website content and Brand Trust. (Refer the below table no 28). There is no mediation effect identified between the sources of OBE and OBE.

Table 28: Supported hypotheses in the final model for online travel ticket website brands

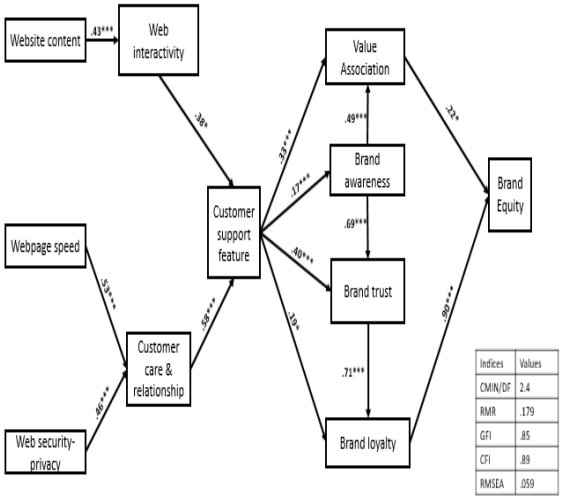
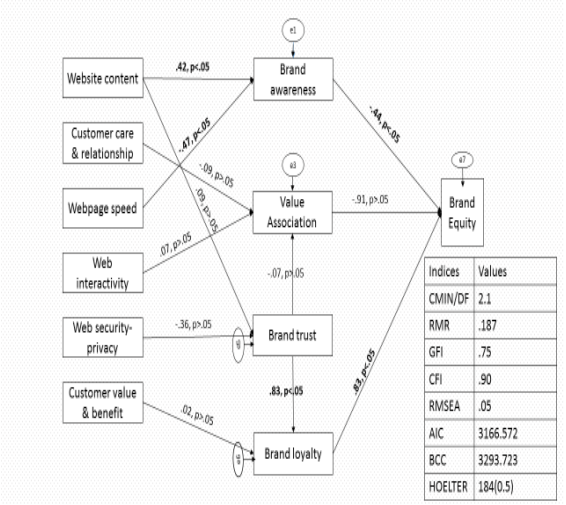
S. No	Hypotheses	Relationships	Supported/Not supported
	H1c	Content → Awareness	Supported
	H1e	Navigation speed→ Awareness	Supported
	H2a	Security/privacy→ Brand Trust	Not Supported
	H5a	Awareness→Brand Equity	Supported
	H5d	Brand Loyalty → Brand Equity	Supported

6.2.3 Online banking website brands

We initially started our investigations with three sectors; online retailers, travel-ticket booking, and online banking. As the survey was based on the frequency of use, and the sample collected for the use of banking websites is limited to 50, therefore, eventually, we decided to drop this sector from our study. The reason was also because the recorded responses were from students and their use of banking websites is limited to checking account balance.

6.2.4 Brand Equity Model Comparison

Table 29: Final Model Comparison

Model for Online retail brands & Significant Relationships	**Model for Online travel-ticket brand & Significant Relationships**
	
Customer value and benefit → Awareness Customer value and benefit→ Brand Trust Customer value and benefit→ Value Association Customer value and benefit → Brand Loyalty Value Association→ Brand Equity Brand Loyalty → Brand Equity Brand Trust→Brand Loyalty	Content → Awareness Navigation speed→ Awareness Security/privacy→ Brand Trust (NS) Awareness→Brand Equity Brand Loyalty → Brand Equity Brand Trust→Brand Loyalty

Structural equation models identified for online-retailers and travel-ticket websites are majorly different in terms of the interaction between the e-marketing mix variables and sources of OBE. In the online retail Brand Equity model, the effect of all the e-marketing mix variable is mediating through customer value and benefit whereas customer value and benefit has no significant relationship with sources of OBE in travel-ticket website Brand Equity. The possible reason could be online retailer has a wide variety of product assortment. It is possible for a customer to choose from a different combination of price, attribute and brands and therefore an optimal combination of these can bring value and benefit to the customer. Whereas, in travel and ticket bookings websites like makemytrip.com or travelyatra.com more all less the options (tickets) available are same in terms of price. Therefore, differentiating at the customer value and benefit level and creating a brand perception is difficult. Whereas, the content of a website at travel-ticket booking portal is very important. Adequate information of the journey details may help the customer in planning their travel, therefore, it is significantly associated with Brand Awareness. We see another significant relationship with Brand Awareness at travel-ticket booking website i.e. with Web-speed. Web-speed is negatively related to Brand Awareness. The negative relationship with Brand Awareness is due to the brand IRCTC. IRCTC, which is the top of the mind recall of 70% of the respondent, used to be known for its low web page speed. Most of the customers associate IRCTC with poor web page loading, therefore, a negative relationship with Brand Awareness is justifiable.

One of the relationships identified which is consistent with both the models i.e. online retail and travel ticket websites is a strong and significant association between Brand Loyalty and Brand Equity. Also in both the models, Brand Loyalty mediates the association of Brand Trust with Brand Equity.

Chapter 7: Online Brand Choice

This Chapter is going to address our third objective viz. exploration of the consumer's brand choice in the online context". There are seven sections in this Chapter. Section 7.1 introduces the Chapter and points out the importance of studying the consumer decision journey. Section 7.2 presents results obtained from multidimensional scaling. It explains the dimensions identified for online brand choice in the context of both online retailers as well as travel-ticket booking websites. Sections 7.3 & 7.4 detail consumer decision journey using a decision flow chart. In section 7.5, decision net approach has been used to further investigate the process. Section 7.6 elaborates the phenomenon observed from the decision flow diagrams. Finally, section 7.6 summarizes the findings from this Chapter.

7.1 Introduction

After investigating and characterizing the relationship between sources of online Brand Equity and its antecedents, we now attempt to investigate consumer decision journey in the context of online brand choice. To make effective marketing decisions, it is important to know one's consumer. A deeper understanding of consumer behavior is expected when the process of the consumer decision journey is observed more closely.

This is an exploratory part of our study where an attempt has been made to look at the underlying dimensions of brand choice by using sources of online Brand Equity. First, the sources of online Brand Equity are mapped to understand any pattern in the brand choice and then a consumer decision journey (based on information processing model perspective) is built to explore the consumer decision journey. Multidimensional scaling (MDS) approach and decision net approach are the techniques used to analyze the information. In this Chapter, we will discuss the results of both MDS and Decision Net Approaches.

7.2 Brand Choice Dimensions

We segregate the data with respect to five famous online retailers in India (Flipkart, Amazon, Snapdeal, Myntra, eBay) and two travel-ticket booking websites (Government-IRCTC and Private label brands-Yatra, Makemytrip). To understand if the consumers perceive online brands equally,

we take the help of perceptual maps and Analysis of variance (ANOVA). To examine the perceptual difference in terms of Brand Awareness, Value Association[25], Brand Trust, and Brand Loyalty of different independent online retail brands (Flipkart, Amazon, Snapdeal, Myntra, eBay), we conducted multiple group comparisons to measure variance. The sources of online Brand Equity were examined for measuring the difference between online retail brands.

Brand Awareness of the online retail brands did not show any significant difference for Flipkart, Amazon, Snapdeal, Myntra and eBay [F (4, 377) =1.892, p=.114] as the p value is less than 0.05. Similarly, Brand Association with respect to merchandise [F (4,377) = .31, p=.872] and Brand Loyalty is also not significant with p value more than 0.05 [F (4, 377) = 1.6, p=.169]. Whereas, Association with respect to Price [F (4, 377) = 5.2, p=.00], convenience [F (4,377) =2.6, p=.03], and trust [F (4, 377) = 2.71, p=.03] are significantly different (Refer table 30).

In the next step, we mapped the sources of online Brand Equity: Brand Awareness, Value Association, Brand Trust and Brand Loyalty for each of the selected brands. A graphical representation of the perceived sources of online Brand Equity and an insight into the underlying dimensions of consumer perceptions through ALSCAL program of Multidimensional scaling using SPSS (Forrest W . Young , Yoshio Takane, 1980) was the next step in the analysis. Young's S stress function (Young, Takane, & Lewyckyj. Rostyslaw, 1978) was used to find out the number of dimensions, stress value and RSQ. The one-dimensional solution for mapping perception with respect to Flipkart has given a stress index of 0.34. For two-dimensional solutions, the stress index drop was maximum. Similarly, in the case of Snapdeal and Amazon with two-dimensional solutions the stress level index drop is maximum. Hence two-dimensional solution provided the most parsimonious and accurate description of the data. The reliability of the classification generated by MDS is confirmed with test statistics of Stress and RSQ. Stress value less than 0.5 and RSQ more than 0.6 indicates the reliability of the underlying dimensions defining the classification. The stress value for the three maps are less than 0.5 and RSQ is more than 0.6. (Refer table 31).

[25] Value Association as association wrt price, wrt merchandising, and wrt convenience.

Table 30: ANOVA Results

Sources of online Brand Equity	F Value	Significance level
Brand Awareness	1.89	NS
Brand Association with respect to merchandise	.31	NS
Brand Loyalty	1.6	NS
Brand Association with respect to Price	5.2	.00 (<.05)
Brand Association with respect to convenience	2.6	.03 (<.05)
Brand Trust	2.61	.03 (<.05)

* NS: Non Significant

Flipkart, Amazon, Myntra and eBay are similar in terms of the underlying dimensions as discussed below. Except for Snapdeal, most of the brands display similar dimensions. The variation for Snapdeal could be because of the different business model it follows, that is first of its kind in the Indian e-commerce segment. It is a technology provider, only offers coupons, and does not sell any goods or services on its own. Because of which it attracts numerous unknown brands with huge discounts.

Furthermore, in the MDS (ALSCAL) Refer figure 53 for the two dimensions, which are identified for online retail brand choice, are as follows:

Dimension1: One end of the dimension 1 is reflecting planned purchase behavior and the other end unplanned purchase behavior or impulse buying. A planned purchase by a consumer leads them to their most favorite website, to which they are loyal while impulse purchase is a result of the non-directed scan of an assortment of merchandise on the different online retail stores. Therefore, we can say that planned purchase is the other end of this dimension continuum.

Dimension 2: Dimension 2 can be termed as commodity Vs brand continuum. The brand reflects quality & trust and commodity is about price. So while purchasing online it is perceived either as a commodity that is only characterized by price or as a brand which displays quality & trust.

Table 31: Stress and RSQ level for the top five online retail brand

Brand	Stress	RSQ
Amazon	.03	.98
Flikpart	.009	.99
Snapdeal	.009	.99
Ebay	.01	.99
Myntra	.003	.99

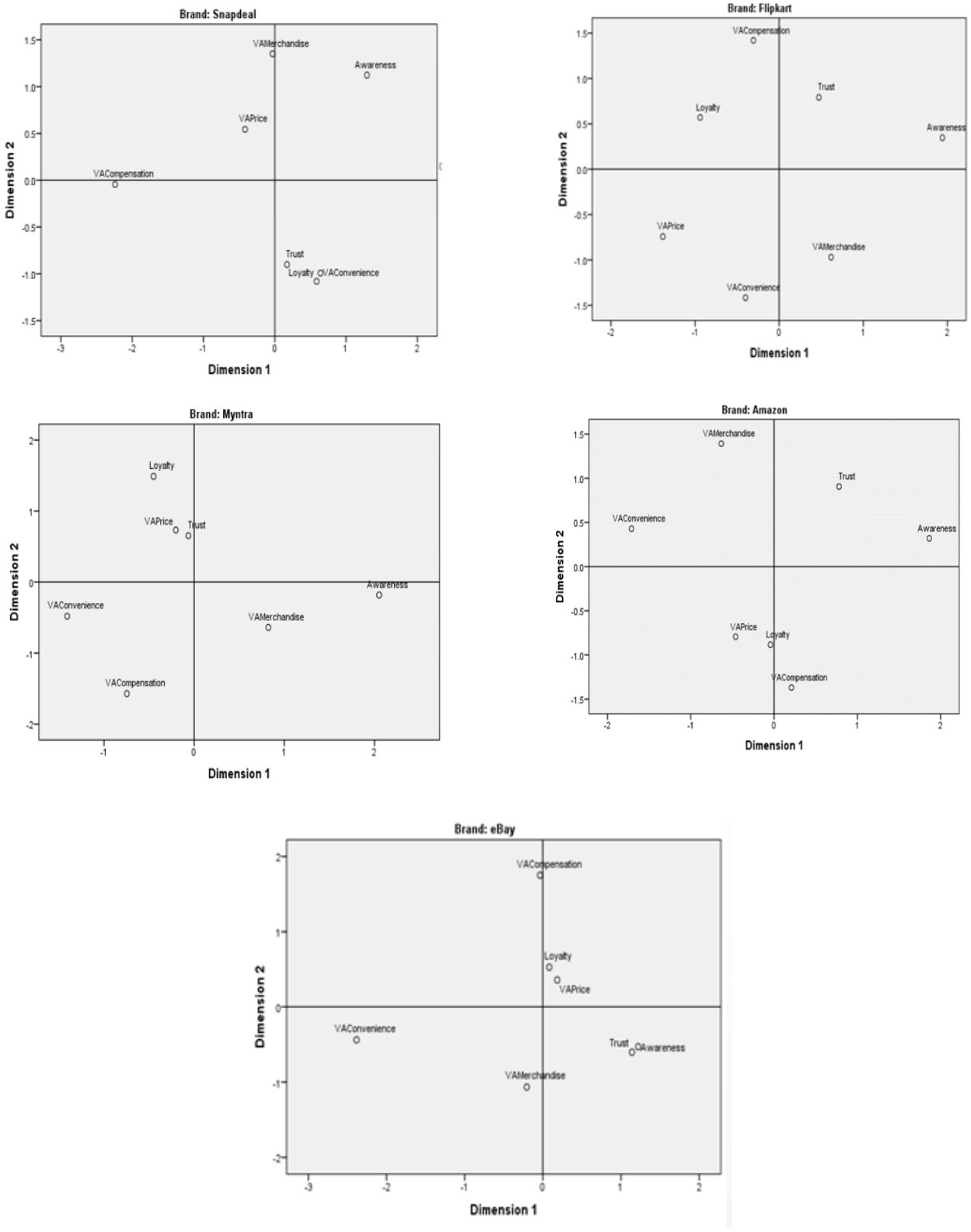


Figure 53: Popular brands and their perceptual maps

We repeated the same steps for travel–ticket booking website as well. We divided these websites into government-regulated websites and private label websites. The ANOVA results are as follows: Brand Awareness [F (1, 183) =.077, p=.781], Association wrt price [F (1, 183)=.783, p=.377], Association wrt convenience [F(1, 183)=.242, p=.624], Association with respect to assortment [F(1, 183)=.115, p=.734], Trust [F(1, 183)=.202, p=.654] and Loyalty [F(1,183)=.460, p=.672] are not significantly different as the p value is more .05.

The one-dimensional solution for mapping perception with respect to public sector brands (IRCTC) was given a stress index of 0.34. For two-dimensional solutions, the stress index drop was maximum. Similarly, in the case of Private label brands with two-dimensional solutions the stress level index drop is maximum. Hence two-dimensional solution provided the most parsimonious and accurate description of the data. The reliability of the classification generated by MDS is confirmed with test statistics of Stress and RSQ. Stress value less than 0.5 and RSQ more than 0.6 indicates the reliability of the underlying dimensions defining the classification. The stress value for the three maps are less than 0.5 and RSQ is more than 0.6.

There is no significant difference between the online travel portal brands on sources of online Brand Equity clearly indicates that this segment is one of the most of the competitive e-commerce segments. Availability of information and cost transparency makes it difficult to create brands in this segment. IRCTC that has a monopoly in Indian rail ticket booking is also outperforming and competing with the private label brands. Some of the private online travel portal brands have taken the first mover advantage and others are pursuing it. It becomes more important hence to do an in-depth study of consumer heuristics to understand the dynamics of brand choice. We have identified two dimensions from the above MDS perceptual maps (Refer figure 54):

Dimension 1: First dimension is Brand Knowledge-Compensation continuum; one end of the dimension is the knowledge about the brand i.e. the Brand Awareness as well as the associations. Another end is the compensation continuum. While choosing a brand for travel-ticket booking compensation reimbursement is one of the prevailing criteria. As travelers often cancel their travel plans, therefore compensation and refund related policies, become important while selecting websites to book tickets

Dimension 2: Price-Loyalty continuum is the second dimension. In the second dimension, the consumers vacillate between the price and loyalty dimension of a brand. A good price ticket can

steal the show and build loyalty towards the website but it may also act the other way round. Diversion from a loyal website to a non-loyal one can happen because of value deals.

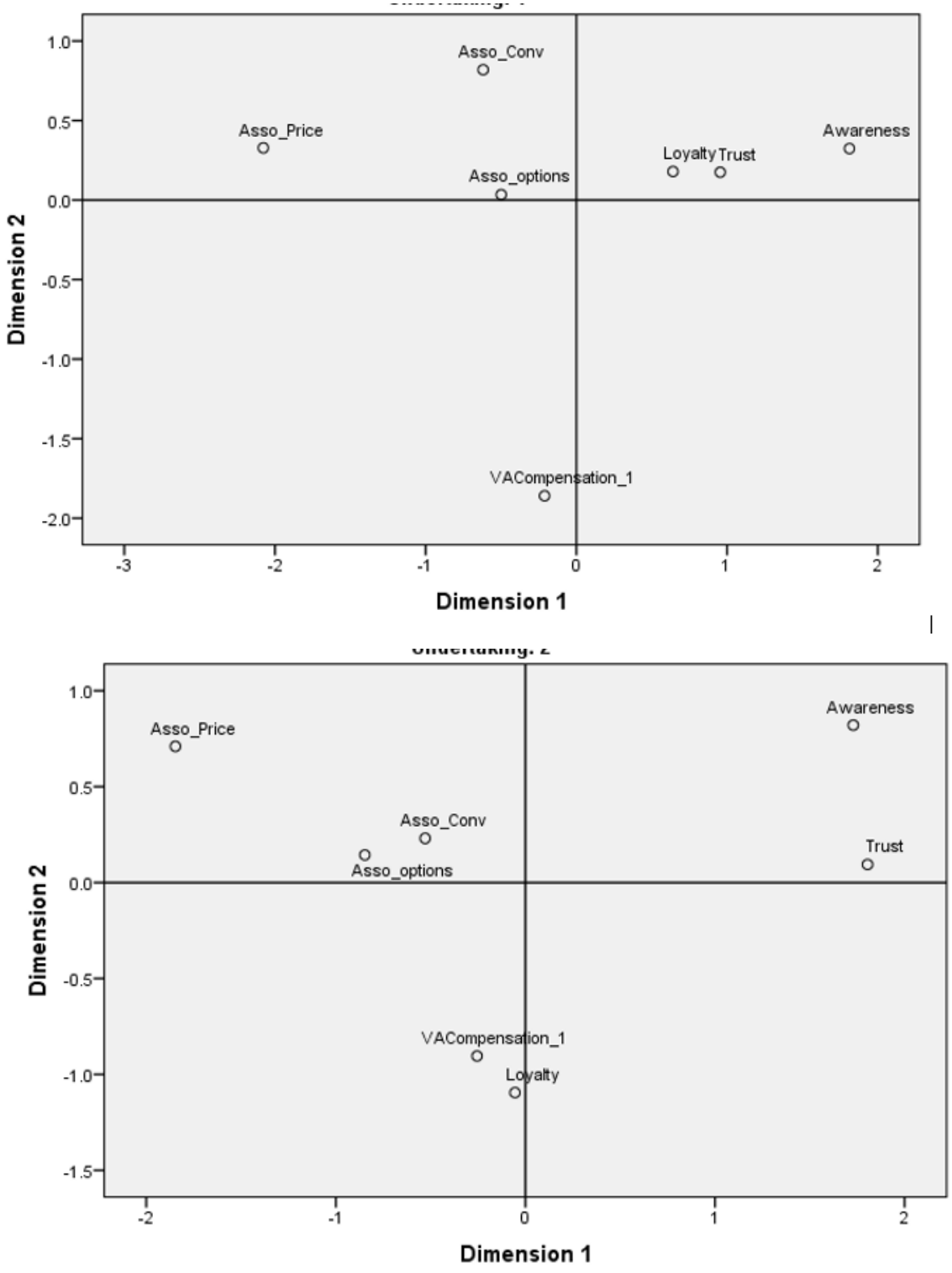


Figure 54: Perceptual Map Representing Public and Private label Brands Respectively

7.3 Consumer's Decision Journey

Online consumption behavior evolved as a complex process. An individual interacts with various websites, numerous products and brand categories during any online transaction. For a fast evolving and extremely competitive market, every website is at par in terms of website characteristics/ look and feel, security features, user interface design and other aesthetics. During a typical online purchase experience, the consumer is bombarded with different deals and discounts continuously. The deals and discounts are called marketing cues and are important tools for the online companies. These cues are important also because the focus is shifting to unplanned purchase from planned purchase. The more the customer indulges in impulse buying, the more is its revenue generation.

To understand the consumer behavior in an online environment, it is very crucial to understand how he or she processes the information. Only when the set of rules that a consumer uses while buying a product are decoded, marketing cues can get through the purchase decision nets. Placing and positioning such marketing cues appropriately at every step of consumer decision making process is, therefore, an important strategy, both from the point of view of the website hosting the product(s) as well as the product/ commodity brands.

We try to explore the process of online consumption and compare various decision making paths for planned and unplanned purchase or impulse purchase. A graph theoretic approach combined with decision flow charts/ schematic has been used as the basis of analysis. As discussed, online consumption behavior is a very complex process and may not be similar for a first purchase and repeat purchase behavior. This study is limited to first purchase consumption behavior only.

Methodology

For our analysis, we have developed a decision flow chart with the help of experts. The analysis is further augmented by decision net analytics (using directed graphs) to explore the patterns and regularity in the choice making process. A number of general relations between such directed graphs (representations of decision nets) are established and subsequently verified. Graph metrics (depth & shortest acceptable path distance) are also used to comment on the sequencing of planned/unplanned purchase options while decision making during an online shopping experience.

From the previous section of work, we have already established planned & unplanned purchase behavior and brand & commodity as the underlying dimensions of online retail brand choice. Further, we interviewed twenty-five frequent online shoppers (frequency> 3 times a month) and developed a decision flow chart or an information processing model. This is also called decision net and it represents the flow that how consumer uses various rules and process the situational information. Decision net models are deterministic in nature, consider individual choices and detailed version to examine the purchase process. These type of studies are the first step towards an approximation of how the consumer decides to combine attributes and situations to buy a product. There are many procedures to analyze decision nets. In this study, we are focusing purely on structural measures and the efficiency of information processing (Bettman, 1974).

First, the decision net is converted into directional graphs (Bettman, 1971a). Following Bettman's approach, each node of the graph is denoted by a binary (Yes/ No) decision point. The edges of the graph denote a Yes or No decision path traversing from one node to another (i.e., one decision point to another). We made nodes that are the decision points connected with lines or arcs. The edges, therefore, represent the sequence of processing information that is given in each node. Each decision path is assumed to be equally likely, making the nodes equidistant (with an edge length of one). In the second step, attempts are made to decompose the main graph (say G) into two sub-graphs, with the partition being done by one decision metric, viz., whether the consumer opting for the online transaction has a pre-decided website preference in mind before initiating the purchase (planned or unplanned) process.

Standard graph metrics, such as depth of nodes, shortest and longest traversal paths are then used for comparison across the main graph sub-graphs to understand planned and unplanned purchase behavior. The depth of a node in a graph is given by the average of all 'path distances' from the first node in the net to the node. The deeper the node is in the net, the later the attribute is considered in the decision process (Bettman, 1971a).

Based on the partition scheme used in the second step, the two sub graphs (G1, for pre-decided website purchase and G2 for un-decided website purchase) can be joined to form the main graph G with one common vertex and no other extra edge.

7.4 Decision Flow Chart

Either as a customer decides to buy a product, he lands on a website or browses randomly. The goal of the customer i.e. planned or unplanned purchase decision is associated with the product of purchase and product brand of purchase. The customer initiating an online transaction is, therefore, faced with three initial questions, viz.

- Whether the customer knows which website to surf for purchase (Yes/ No)
- Whether the customer knows which product to purchase (Yes/ No)
- Whether the customer knows which brand to purchase (Yes/ No).

Table 33 enlists the mutually exclusive outcomes (eight) for all combinations of the above questions and the possible actions in each case.

Table 32: Online transaction entry criteria vs. Purchase decision/ Subsequent action

<table>
<tr><td colspan="3">Online transaction entry criteria</td><td colspan="3">Purchase decision/ Subsequent action</td></tr>
<tr><td>Website</td><td>Product/ Commodity</td><td>Brand</td><td>Action</td><td>If purchase, is it unplanned?</td><td>Type of Impulse</td></tr>
<tr><td>Doesn't know</td><td>Doesn't know</td><td>Doesn't know</td><td>Randomly browse</td><td rowspan="2">Yes</td><td rowspan="2">Pure</td></tr>
<tr><td>Knows previously</td><td>Doesn't know</td><td>Doesn't know</td><td>Browse website</td></tr>
<tr><td>Doesn't know</td><td>Knows previously</td><td>Doesn't know</td><td>Compare (website and brands)</td><td rowspan="4">No</td><td rowspan="4">NA</td></tr>
<tr><td>Doesn't know</td><td>Knows previously</td><td>Knows previously</td><td>Compare (websites only)</td></tr>
<tr><td>Knows previously</td><td>Knows previously</td><td>Doesn't know</td><td>Compare brands</td></tr>
<tr><td>Knows previously</td><td>Knows previously</td><td>Knows previously</td><td>Go for purchase</td></tr>
<tr><td>Doesn't know</td><td>Doesn't know</td><td>Knows previously</td><td colspan="3" rowspan="2">Highly unlikely, that the customer knows the brand name and not the commodity (will assume reversion to random surfing as outcome)</td></tr>
<tr><td>Knows previously</td><td>Doesn't know</td><td>Knows previously</td></tr>
</table>

Based on the above table (table 32) decision flow chart is prepared.

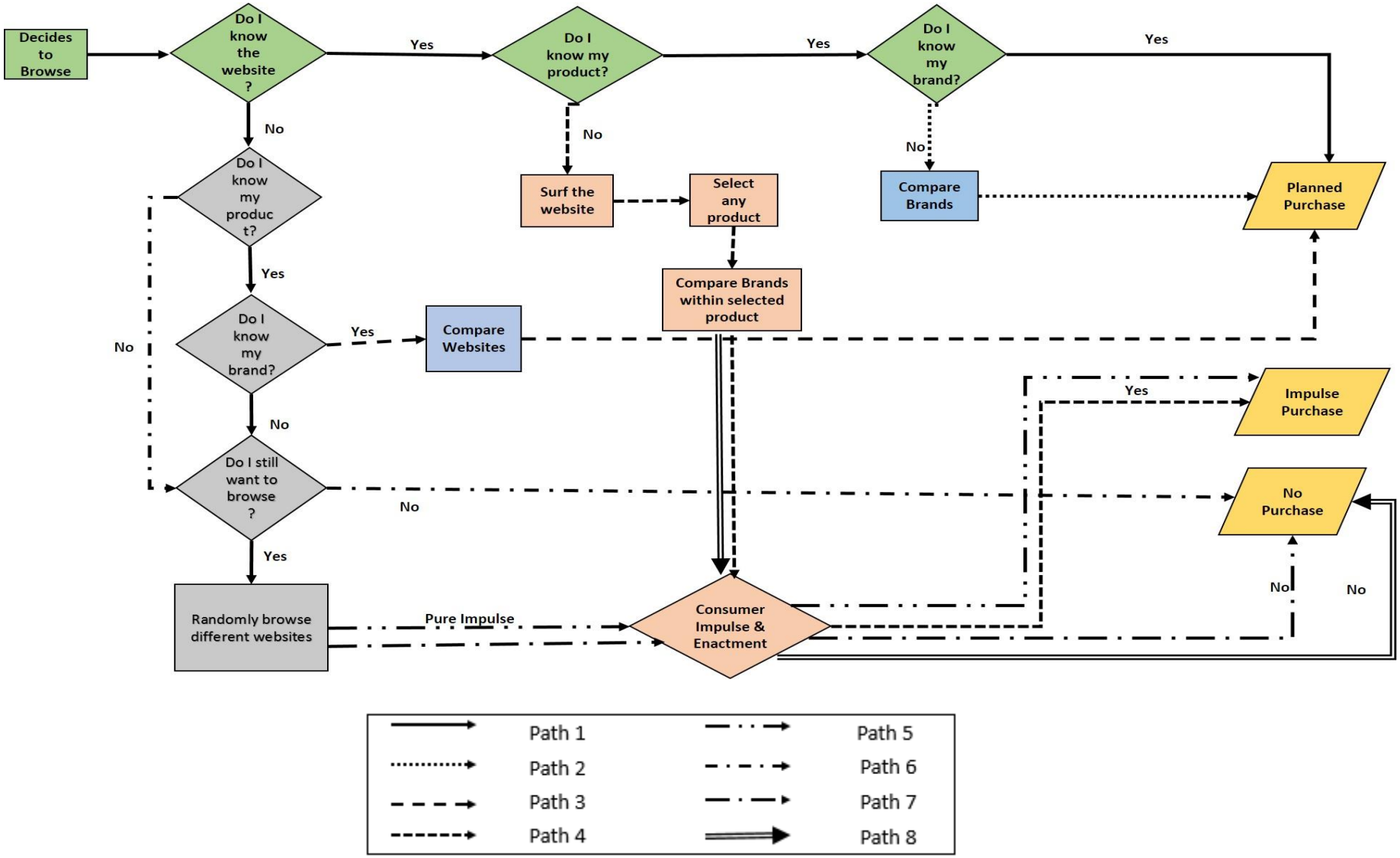


Figure 55: Consumer decision journey

The eight mutually exclusive paths from Figure 55 Refer to each of the following purchase behaviours described below:

- *Planned Purchase Paths*
  - *Path 1*: Planned purchase, attributed with consumer's complete awareness of the website, product and brand to buy
  - *Path 2*: Here the consumer compares the brands. It can also be termed as planned purchase as the decision with respect to brand only has been kept open
  - *Path 3*: The consumer has three pre-purchase decisions to make, related to the website, product and brand. If the consumer is sure about any two of this criteria, the purchase is more and less planned
- *Unplanned Purchase Paths*
  - *Path 4*: The consumer enters a fixed website without any aim
  - *Path 5*: Attributed to browsing different website aimlessly
- *No Purchase Paths*
  - *Paths 6, 7 & 8*: Refers to exit from the Internet without buying anything

7.5 Observations

The following observations can be made from the decision flow chart

There are only two paths associated with impulse behaviour. Both Paths 4&5 leading to impulse behaviour are indifferent with respect to the time spent and are outcomes of emotions and person's impulsivity traits, associated with attributes like random browsing behaviour

- No purchase and impulse purchase has a thin difference associated with the formation of consumer impulse (CI) and enactment.
- Planned purchase and no purchase has three paths each.
- Whether the consumer knows the website or does not know has the probability of entering the impulse purchase equally, therefore, we can say impulse purchase is independent of the 'know the website decision'. Hence, for our further analysis, the decision flow chart is now converted into Graphs G1&G2 as shown in Figures 57 and 58 respectively and graph G as shown in Figure 56. Acronyms for each node in the graphs is given in Table 33 below.

- The optimal point will be when the consumer along with planned purchase may opt for an impulse purchase.

Now with the help of nodal depth calculations, we try to establish these observations for an in-depth study

7.6 Decision Net Approach

As we already discussed that impulse purchase behaviour is independent of 'know the website decision' therefore the first nodes of the two graphs (G1 &G2) starts with the 'know the product' decision. Later we joined both the graph and derived graph G with added 'know the website decision' node to represent the complete decision making process.

We calculated nodal depth for graph G1, G2 and G. Also longest and shortest paths are calculated are given in the respective tables.

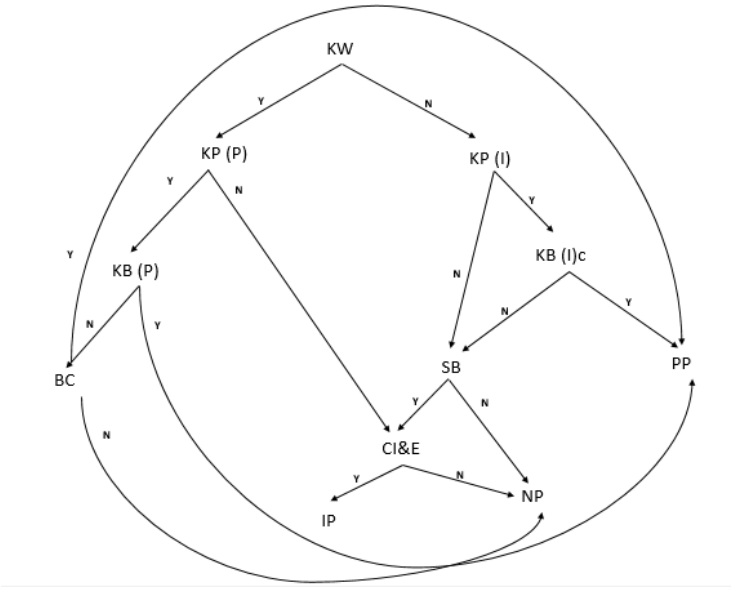


Figure 56: Directional graph for online purchase decision flowchart (G)

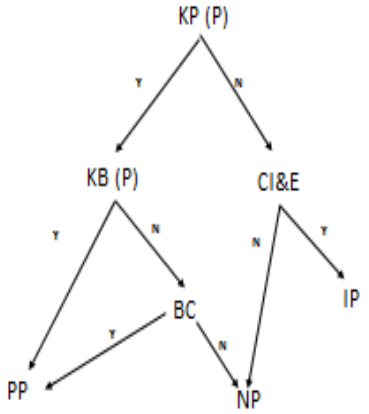


Figure 57: Directional graph for online purchase with pre decided website (G1)

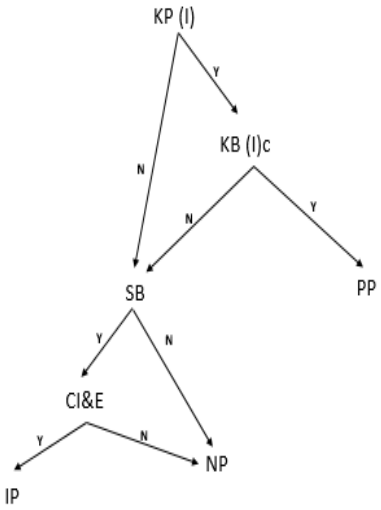


Figure 58: Directional graph for online purchase decision with un-decided website (G2)

Table 33: Node description for graphs in Figures 56, 57, 58

Node	**Decision Node Description**	**Present in**
KW	*The customer knows the website?*	G
KP(P)	*The customer knows the product (with the prior known website)?*	G, G1
KP(I)	*The customer knows the product (with the unknown website)?*	G, G2
KB(P)	*The customer has brand information (with the prior known website)?*	G, G1
KB(I)	*The customer has brand information (with the unknown website)?*	G, G2
BC	*Band selection criteria satisfactory (for planned purchase)?*	G, G1
SB	*The customer still wants to randomly browse?*	G, G2
CI&E	*Formation of consumer impulse and enactment*	G, G1, G2
NP	*No purchase?*	G, G1, G2
PP	*Planned purchase?*	G, G1, G2
IP	*Unplanned/ Impulse purchase?*	G, G1, G2

Tables 34, 34, and 35 depict the acceptable path distance matrices and node depths for graphs G, G_1 and G_2 respectively.

Table 34: Acceptable distances and depth for nodes in Graph G

Graph G (No. of nodes = 11, Shortest Acceptable Distance = 1, Longest Acceptable Distance = 4)												
Shortest Acceptable Path Distance Matrix (with Inf as distance for disjoint nodes)												Node Depth
	KW	KP(P)	KP(I)	KB(P)	KB(I)	SB	BC	I	NP	PP	IP	
KW	0	1	1	2	2	2	3	2	3	3	3	0.00
KP(P)	Inf	0	Inf	1	Inf	Inf	2	1	2	2	2	1.00
KP(I)	Inf	Inf	0	Inf	1	1	Inf	2	2	2	3	1.00
KB(P)	Inf	Inf	Inf	0	Inf	Inf	1	Inf	2	1	Inf	2.00
KB(I)	Inf	Inf	Inf	Inf	0	1	Inf	2	2	1	3	2.00
SB	Inf	Inf	Inf	Inf	Inf	0	Inf	1	1	Inf	2	2.50
BC	Inf	Inf	Inf	Inf	Inf	Inf	0	Inf	1	1	Inf	3.00
CI & E	Inf	Inf	Inf	Inf	Inf	Inf	Inf	0	1	Inf	1	3.00
NP	Inf	Inf	Inf	Inf	Inf	Inf	Inf	Inf	0	Inf	Inf	3.60
PP	Inf	Inf	Inf	Inf	Inf	Inf	Inf	Inf	Inf	0	Inf	3.33
IP	Inf	Inf	Inf	Inf	Inf	Inf	Inf	Inf	Inf	Inf	0	4.00

Table 35: Acceptable distances and depth for nodes in Graph G1

Graph G1 (No. of nodes = 7, Shortest Acceptable Distance = 1, Longest Acceptable Distance = 3)								
Shortest Acceptable Path Distance Matrix (with Inf as distance for disjoint nodes)								**Node Depth**
	KP(P)	**KB(P)**	**I**	**BC**	**NP**	**PP**	**IP**	
KP(P)	0	1	1	2	2	2	2	0.00
KB(P)	Inf	0	Inf	1	2	1	Inf	1.00
CI & E	Inf	Inf	0	Inf	1	Inf	1	1.00
BC	Inf	Inf	Inf	0	1	1	Inf	2.00
NP	Inf	Inf	Inf	Inf	0	Inf	Inf	2.50
PP	Inf	Inf	Inf	Inf	Inf	0	Inf	2.50
IP	Inf	Inf	Inf	Inf	Inf	Inf	0	2.00

Table 36: Acceptable distances and depth for nodes in Graph G2

Graph G2 (No. of nodes = 7, Shortest Acceptable Distance = 1, Longest Acceptable Distance = 4)								
Shortest Acceptable Path Distance Matrix (with Inf as distance for disjoint nodes)								**Node Depth**
	KP(I)	**SB**	**KB(I)**	**I**	**NP**	**PP**	**IP**	
KP(I)	0	1	1	2	2	2	3	0.00
SB	Inf	0	Inf	1	1	Inf	2	1.50
KB(I)	Inf	1	0	2	2	1	3	1.00
CI &E	Inf	Inf	Inf	0	1	Inf	1	2.50
NP	Inf	Inf	Inf	Inf	0	Inf	Inf	2.67
PP	Inf	Inf	Inf	Inf	Inf	0	Inf	2.00
IP	Inf	Inf	Inf	Inf	Inf	Inf	0	3.50

The complete impulse purchase behaviour can be derived from the individual graphs (G2 and G3) is found to hold true. A few additional observations based on the depth of common nodes are provided below:

- The nodal depth of no-purchase decision node (NP) in G_2 is 2.67 compared to 2.5 in G_1, indicating that for random surfing behaviour on the Internet, no purchase option is considered much later in the decision making process.
- The nodal depth of unplanned-purchase decision node (IP) in G_1 is 2.00 compared to 3.50 in G_2, indicating that contrary to belief, for customers with fixed website choices, unplanned purchase option is considered much earlier in the decision making process.
- The nodal depth of planned-purchase decision (PP) in G1 is 2.5 and in G2 is 2.00. It means that planned purchase in pre-decided website occur much later with respect to the situation when the consumer browses randomly.

7.7 Insights about Consumer Decision Heuristics

Specific task situation of online impulse buying has provided insights that how an individual process information and how do they manipulate and combine data to reach a particular decision. The details of the processes are the first approximation towards unplanned purchase.

It can clearly be understood that when a consumer starts shopping online with no time constraint and is ready to browse more than one website then the chances of no purchase decision is delayed. Similarly, when a consumer enters a website with a goal, then the chances of impulse behaviour attributed with a quick purchase may occur more frequently as compared to unplanned purchases. We also observed a contradictory result that planned purchase decision is taking more time in the pre-decided website situation in comparison to when the consumer looks for many websites. But it is also important to observe the number of paths reaching planned purchase in G1 is more than G2, which clearly indicates that when the consumer is sure about the website, product and brand the chances of planned purchase increases. The most important finding is regarding the ‘know the brand decision’. If the consumer is aware of his/her brands in both the situation of the pre-decided and undecided website, then the probability of purchase increases.

Chapter 8: Discussion and Conclusion

The Chapter is divided into five sections. Section 8.1 discusses parsimonious structuring of e-Marketing Mix variables followed by reflections on proposed generic framework in section 8.2. The theoretical meaningfulness of the tested online Brand Equity model is discussed in section 8.3. In section 8.4, we outline the consumer brand choice in the context of online retailing. In the concluding section, we discuss managerial implications of our research and the contribution to the body of knowledge on consumer equity and branding strategy. We close by acknowledging the limitations of this research as well as discuss its future scope.

8.1 Parsimonious Structuring of e-Marketing Mix Elements

All the contributions associated with e-marketing mix elements are presented in this section. First, an exhaustive literature review allowed us to identify a list of seventeen e-marketing mix variables. These e-marketing mix elements identified were mutually exclusive and collectively represent the marketing activities carried out to build online Brand Equity. Arriving at a standardized definition for each one of these variables is a contribution of this research

Further validation of these seventeen e-marketing mix elements was carried out using content analysis resulting in thirteen e-marketing mix elements. The thirteen elements are:

1. Information available at the website
2. Website characteristics s
3. Security-privacy of the website
4. Customization/personalization
5. Delivery related
6. Responsiveness
7. Product related
8. Price related
9. Sharing
10. Entertainment
11. Policies
12. Virtual-real
13. Goodwill

Without sacrificing the comprehensiveness and explanatory power, the goal to create even a simpler model, this list of thirteen e-marketing mix elements was further reduced to six e-marketing mix elements through factor analysis. This streamlined list of six e-marketing mix elements has been named as C^3IS^2 framework. C^3IS^2Framework consist of the following elements:

1. Customer value and Benefit
2. Customer care and Relationship
3. Content of the website
4. Interactivity feature of website
5. Speed of service provided by the website
6. Security-reliability

A close observation and analysis unfolded yet another higher order dimensions for these six e-marketing mix elements. We found that these six e-marketing mix elements could be explained better under an overarching framework. Therefore, another unique contribution of this research is towards proposing an overarching framework for e-marketing mix elements consisting of two types of dimensions (primary and secondary). The details of this overarching framework are given in the next section (8.2).

Following the above literature, the parsimonious structuring of the e-marketing mix elements can be seen in figure no. 59. Now we extend our discussion to provide the further insights obtained from these e-marketing mix elements.

It may be useful to note that we have considered an exhaustive list of e-marketing mix elements that may contribute towards building online Brand Equity. But it doesn't in anyway mean that all the marketing variables contribute equally to sources of online Brand Equity. Though it may be a fact that certain elements could be very crucial for building a brand but contradictorily, the low citation of such elements may project them inequitably. We also identified a pattern in the use of the e-marketing mix variables in the literature. For example, personalization and customization have not been used as much as the security and privacy of a website. Whereas customer relationship and responsiveness has been used consistently over the years. Variables "entertainment" and "sharing" have evolved with time and were not discussed in the literature until recently. The use of this elements may be traced back to the technology development.

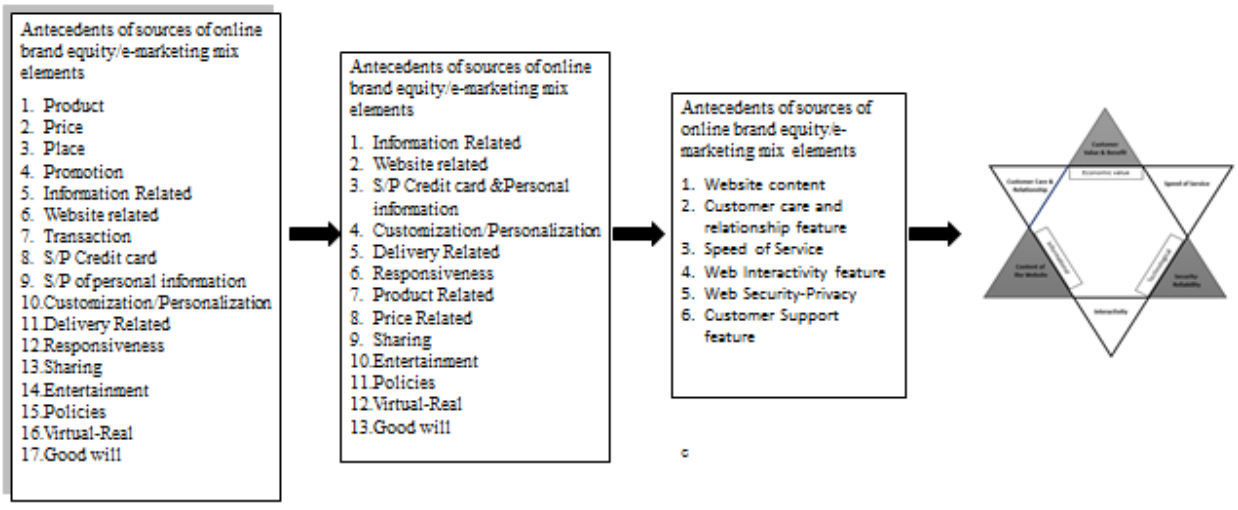


Figure 59: Parsimonious Structuring of e-Marketing Mix Variables

The e-marketing mix variables, customer value and benefit has only been discussed by the 7C's framework and not by the other 4 frameworks. In the first stage of EFA maximum variance has been explained by this component in comparison to the other 5 components. This indicates that the benefits and values that a customer expects are of significant importance in the set of the e-marketing mix variables in the Indian context. This is in consonance with the many studies that have indicated price sensitivity and value consciousness of Indian consumers. Next variable customer care and the relationship is a combination of two different variables 'customer care & service' and 'customer communication & relationship'. These two variables can also be together defined as the "responsiveness of a website towards its customers" and is present in all the earlier extant four frameworks. In our proposed framework, its contribution is significant. This may be because of the penchant of Indian consumers for personalized service as they were till recently using the services of neighborhood retail stores who had a flair for customer care and personalization of relationship.

The content or information available on a website is not used by many of the frameworks but in our proposed framework, the variance explained by the content component is more than that of the speed of service, interactivity or customer care & relationship.

The variable speed of service is included in the variable "site" used by Kirthi & Mclntyre (2002) and in the 4s model. While as the variable "site" comprises of speed, format, and navigation, in our proposed framework only the speed component has contributed significantly. However, the variance explained is least with respect to the other five variables. The security feature is one of the important variables as far as online shopping is concerned. The items underlying the security component include safe transaction, adequate security feature, personalized e-mail and availability of products. However, personalized e-mail and information about one's purchase are the two items that contribute to personalization component but they loaded on two different factors in our study. Personalized e-mails about delivery and transaction help in increasing the perception of reliability of the website. Hence, we have proposed security-reliability as one of the variables of e-marketing mix in our framework. The component that has not been used previously by any of the frameworks is interactivity. This variable has perhaps evolved with the advancement in technology and increasing expectation of consumers towards interactivity features.

As discussed, a few variables are complex and contribute to more than one factor. Variable 'customer value and benefit' is the only variable loading on one factor. However, variables 'Customer care & relationship' and 'content of website' are linked to a factor that captures a website's features to send information relevant to one's purchase decision. Similarly, 'Interactivity' variable and 'speed of the service' variable share one common factor that is related to the fast loading of the webpage. 'Interactivity' variable is also linked with 'security-reliability' variable. The more interactivity an e-commerce website offers the more virtual-real it becomes (Ryan & Jones, 2009).

Based on the overlap of the six variables we observe a unique pattern. We suggest classifying them into three higher order dimensions, which have been discussed in the next section.

8.2 Reflections on Proposed Generic e-Marketing Mix Dimensions' Framework

The proposed generic dimension framework of e-marketing mix variables is the result of logical partitioning through factor analysis. We investigated the phenomenon by following the outlines provided by Hunt (1991) to propose a classification scheme – the first stage for any scientific theory. We first selected the phenomenon, determined the characteristics on which the classification can be based, looked into mutually exclusive categories and determined the

usefulness. We now proceed to classify these six e-marketing variables into two sets of dimensions: primary and secondary.

Primary Dimensions: E-marketing mix variables viz. 'Customer value and benefit', 'security-reliability' and 'content of the website' are the three basic requirements for any e-commerce business to run. We can also relate them with economic value, technological and informational parameters.

Customer value and benefit is an economic value dimension, which considers the cost-benefit aspect. The assumption that consumers make a decision based on their expectation on future price (Doyle & Saunders, 1985) still holds true. The informational dimension has three forms, information of the customer, information for the customer and information by the customer (Chung-Hoon Park & Kim, 2003). Ensuring security feature of a website and making it reliable are technological concerns, which are a mandatory feature for any e-commerce site.

Secondary Dimensions: Customer care and relationship, the speed of service, and website interactivity feature are the additional three e-marketing mix variables that add value to the basic offerings. Customer care and relationship variable are at the intersection between the primary dimension on Information and Economical considerations. Information about the customer is used to give greater value to loyal customers or design offerings for different valuable customers. As a relationship is a two-way process, conversely a customer can opt for offers, self-selecting and opting for loyalty programs and benefits. Suffice it to say that customer care and relationship in e-commerce domain is based on the twin pillars of value and information- information about customers and use of information by the customer. Similarly, speed of service variable enhances the consumer experience. It is at the intersection between the primary dimensions of Economical value and Technology. How the technology can add value through the speed of service is one of the defining features of the success of e-commerce. The last variable under this category is Interactivity feature of the website. It is at the intersection between the primary dimension of Information and Technology. The more interactivity an e-commerce website offers the more virtual-real it becomes (Ryan & Jones, 2009).

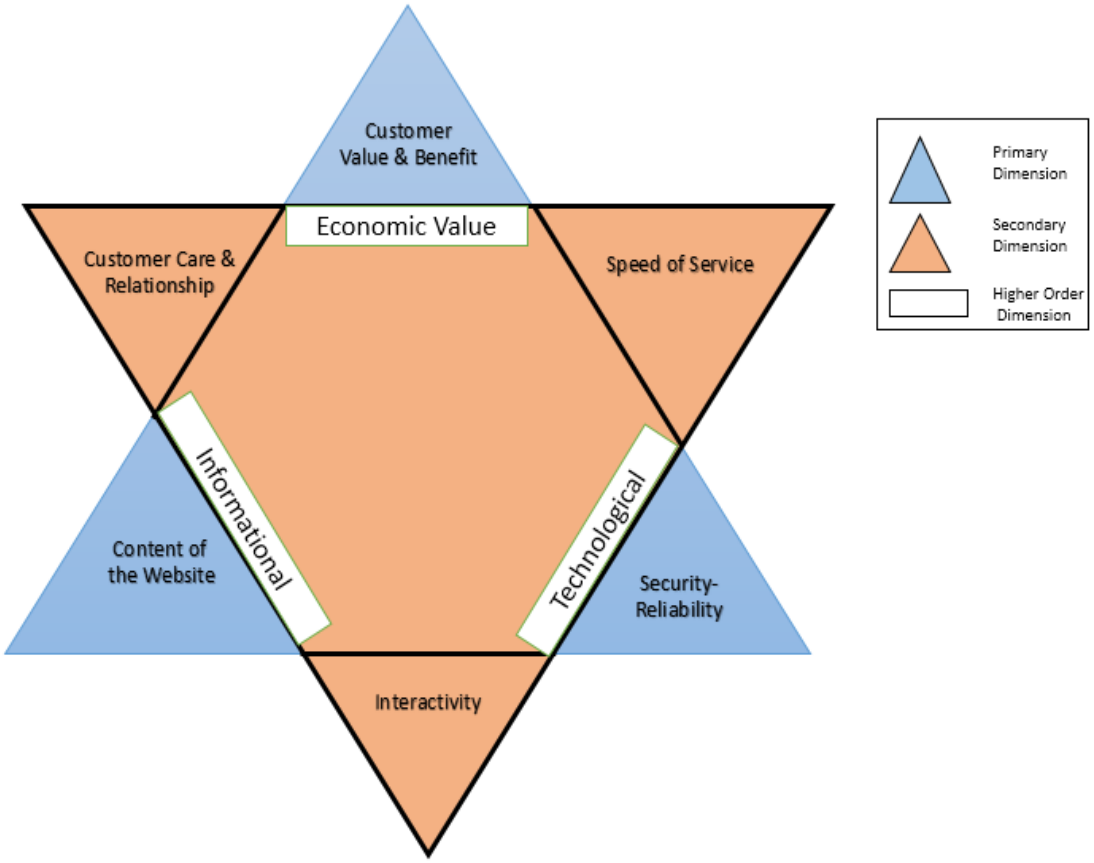


Figure 60: Overarching framework for e-marketing mix elements

The definition of marketing and marketing mix given by Culliton (1948) still holds true that marketing is the blend of myriad marketing decisions that must all be simultaneously set to create a consistent strategy or mix of ingredients. The six proposed e-marketing mix variables are the marketing activities that are bound to information value & technology value and must work towards generating economic value through integration and complete utilization of resources (Ducker F, 1989).

Technology Acceptance Model of Davis (Davis, 1989), based on perceived usefulness and perceived ease of use validate our proposed generic dimension framework. Perceived usefulness is defined as the degree to which an individual believes that using a particular technology would enhance his/her job performance. Accurate-reliable information and presence of customer care

representatives enhance the job performance of an individual. Similarly, security/reliability of a website and other technological concerns like the navigation speed ensures and establish the belief of a customer that the system is free from physical and mental effort (perceived ease of use).

Cultural Caveat: Another observation with respect to the e-marketing mix variables identified is with respect to the culture aspect. There is enough evidence that indicates that the consumer behavior (whether online or offline) and the culture of a country is closely associated (Jeyashoke, Vongterapak, & Long, 2014; Putit & Arnott, 2007; Tatarchevskiy, 2010; Yeniyurt & Townsend, 2003). Hofstede's model and GLOBE study have been used from time to time to differentiate and compare internet-buying behavior in various countries with respect to their scores on cultural dimensions. India is high on power distance which gives rise to conservatism and maintaining the status quo(Verlegh & Steenkamp, 1999). Therefor as per the conservatism, Indians tend to save money wherever possible, and always look for additional benefits along with the product. Based on the above, customer value and benefit has evolved as one of the very important elements of e-marketing mix variable. Customer care and relationship building are linked with collectivism feature of Indian society. Also, relationship building is important for long-term orientation. The long term orientation and the higher expectation of Indian consumer are backed with the belief of "karma"(Kopalle, Lehmann, & Farley, 2010). However, the uncertainty avoidance among Indian's is low but the low per capita income makes them averse towards financial risk. As a result, of which Indian consumers look for rich, accurate and reliable information on the website while shopping. Security-reliability of a website is also checked upon continuously before making any purchase. The increasing advancement in the technology will slowly decrease the perceived risk among the consumers (Cheol Park & Jun, 2003). With globalization, the materialistic values in Indian consumers have increased (N. Gupta, 2011). The website interactivity element that makes shopping more enjoyable is one of the evidences that Indian consumers are perhaps deviating from Indian cultural values and inclining more towards materialistic values. As economic dynamics and institutional stability of a country affect the cultural dimension scores (Tang & Koveos, 2008), the increasing popularity of e-commerce in India might change the consumer behavior in future.

8.3 Theoretical Meaningfulness of our Proposed Online Brand Equity Model

The final model depicts direct and indirect relationships between the e-marketing mix variables, sources of online Brand Equity and online Brand Equity. The derived e-marketing mix elements are the structural attributes of a retail website. These are the objective measures or the actual marketing activities carried out by a retailer to evoke a perception in the mind of the customer regarding the brand. The perceptual measures are the sources of online Brand Equity and can also be called the subjective measures.

Any re-specification of a model is highly dependent on its theoretical meaningfulness (D.A Kenny, 2011). The six structural elements for any retail website are; the content of the website, navigation speed of the website, security-privacy, customer care & relationship feature, interactivity feature and customer support feature. Our model is better in explaining the collective contribution of e-marketing activities towards building online Brand Equity. The structural elements can be divided into three levels. The first level comprises of content, navigation speed and security-privacy of a website. Accurate, reliable and timely information is the first step when consumer starts his/her search online. The search is facilitated if the website page has a good navigation speed. Also, it is beneficial when the payment gateway is private and secured during the transaction. Customer care & relationship and interactivity feature are part of the second level. Security-privacy and navigation speed precedes customer care and relationship. The ready availability of customer care representatives and allowing them to understand the need of a customer is only possible when a customer finds it secure and private to give his/her personal and financial details. Navigation speed is also one of the important functional aspects of a website. Moreover, functionality and usability are the two important pillars of human computer interaction (HCI). A system is functional when it provides functions that are essential to perform one's task (Goodwin, 1987). The first level elements enable the website's functionality. But the functional elements are not enough for accepting, performing or completing the task for which the technology is being used (Davis, 1985; Goodwin, 1987). The concept of usability is equally important for an interaction. A system is called usable when communication, understanding, memory and problem solving skills are compatible with the system (Bernard et al 1981). Therefore, we can say that the second level elements bring the consumer close to the website using the interactivity feature and customer relationship management. At this level, usability of a website is of utmost importance to perform

the task efficiently. From the organization's point of view, interactivity feature can engage customer for a longer period. Moreover, customer care and relationship help in building a bond with the customer. The third level component; customer support feature is a central construct that is mediating the effect of marketing activities towards sources of online Brand Equity. This e-marketing mix element shows pure usability feature. As we move from left to right in the model, the importance of subjective assessment while making a judgment increases. Customer support feature allows a customer to test, inspect, and enquire (Ivory & Hearst, 2001) about the usability of the website. Characteristics like product comparison and giving right feedback are the additional customer support features that enter the consideration set of a customer while shopping online when a threshold level of functionality and usability of the website is present.

The relationship of sources of online Brand Equity with Brand Equity is complex and different from how these variables behave in the offline context. Brand Awareness does not directly affect Brand Equity, but the significant indirect effect of Brand Awareness on Brand Equity cannot be ignored. The indirect effect of Brand Awareness on Brand Equity is through Value Association and Brand Trust. Awareness of any brand affects the decision making process by strengthening the association (Keller, 1993, 2003). It is also true that the associations or the cues can only be stored in the mind of the customer when the Brand Awareness is already created (Pitta & Katsanis, 1995). The relationship between Brand Awareness and Brand Equity is not significant in the presence of Brand Loyalty, Value Association and Brand Trust but when tested independently Brand Awareness has a positive and significant relationship with Brand Equity. This explains that the effect of Brand Awareness is important when a brand is introduced in the market and other sources of Brand Equity are absent. As the brand matures, the effect of Brand Awareness diminishes.

Interestingly Brand Loyalty mediates two important sources of online Brand Equity. The effect of Brand Trust is only through the attitudinal component of Brand Loyalty. It clearly explains that Brand Trust for online retailers is important for building Brand Loyalty. If an online retailer is successful in acquiring a customer and delivering to him/her in a hassle free environment of shopping, only then it can create and build Brand Trust. Also, it is important to note that mediation effect of Brand Loyalty between Brand Trust and Brand Equity is partial. The effect of Brand Trust

on Brand Equity is positive and significant but the indirect association mediated through Brand Loyalty is higher.

We observed that Value Association is mediating the role of Brand Awareness and Brand Equity. Similarly, another indirect effect of Brand Awareness is mediated through Brand Trust and Brand Loyalty. The total indirect effect of Brand Awareness on Brand Equity is 0.57. The maximum indirect effect is through Brand Trust and Brand Loyalty as compared to Value Association. Brand Loyalty is one of the greater contributors of Brand Equity but the relationship between Value Association and Brand Loyalty is not significant as suggested by the previous literature (Atilgan, Aksoy, & Akinci, 2005; Pappu et al., 2005b).

It is important for marketers to note that when customers are exposed to online retailers for a significant amount of time, trust towards a brand is created leading to Brand Loyalty. But the insignificant relationship of Value Association and Brand Loyalty suggests that likability towards a brand that helps in creating a Brand Association is low (Ye & Van Raaij, 2004). This finding is deviated from the finding of Rios & Riquelme study related to sources of online Brand Equity (Rios & Riquelme, 2008b, Lavidge & Steiner, 1961; L. R. Oliver, 1997) The marketing cues are to be built in a way that it can capture the attention of the customers by instigating the deeper processing nodes in their mind.

8.4 Consumer Heuristics Based on Empirically Derived Dimensions of Consumer Choice in the Context of Online Retail: A Novel Approach

We focused on the importance of online retail brands by testing the difference in the perception of sources of Brand Equity and by investigating the perceptual dimensions of brand choice. It was found that online retail brands are not behaving like the traditional offline brands. A significant difference between association with respect to price, convenience and trust are the unique attributes of an online retailer that may be capitalized on while building a strong brand. As there is no significant difference between awareness, loyalty and association with merchandising, it may be concluded that creating these sources of Brand Equity may be a necessary condition to build Brand Equity but is not a sufficient condition for creating differentiation (that is through price, convenience and trust).

Brand Equity of online stores can be traced to their sources of Brand Equity. In this study when these sources of Brand Equity were mapped through MDS for all the four online stores, it led to two orthogonal dimensions that indicated how consumer perceived online brand store as well as how consumers developed heuristics in terms of decision making vis-a-vis online store. In simple terms, there are four mutually exclusive situations that a consumer faces based on whether she/he is looking for a product brand or just a lowest priced brand (Commodity); next whether this search is as a result of a planned purchase or an unplanned purchase (Impulse buying). Superimposed on these four mutually exclusive situations, is the complexity on account of interactive effects of product brand and online store brand. This again may lead to four types of purchase outcomes. The consumer may buy a particular product brand from a particular online store indicating the highest level of loyalty for both product brand and online store brand. While when a consumer is unconcerned with the product brand (treating it as a commodity) as well as is unmindful from which online store she/he should purchase (as she/he may be looking for the best deal) it, indicates the lowest level of Brand Loyalty. Between these two extremes there is one where the consumer is concerned about the product brand but scouts the online store to get the optimum style/quality (as in "shopping goods" search) and other being where the consumer will stick to a particular online store brand but relax the criteria of a particular product brand as she/he is looking for a good deal. The former indicates more loyalty towards a product brand and the later more loyalty towards the online store brand.

In the flow diagram (Refer figure 55), we observe that if he/she takes path 1, maximum loyalty is created. The consumer knows which product brand to purchase and from which website. Path no 8, is when he/she is unconcerned or unmindful about the product as well as about the website. This is the path with the lowest level of Brand Loyalty. The behavior, when he/she is aware of the product brand but browses through various retail websites to find out the best deal, is depicted by path no 3 and path no.4. Path no 5 & 6, are when the consumer has an affinity towards a particular website and there he/she searches for a product irrespective of the product brand. Consumers taking path no 3&4 show their loyalty towards the product brand than the consumers who take path no 5&6 and are loyal towards the website retail brand.

This study suggests the importance of online brands, a better understanding of brand positioning and adoption of appropriate brand strategies. We conclude that consumer choice heuristics are

influenced by both dispositional (internal) and situational (external) factors. Consumers majorly have two set of rules; one for choosing the product brand and the other for the website brand. There are various loops while making the choice and therefore it is a complex process to understand. It is one of the first attempts to understand the underlying dimensions of sources of online Brand Equity and therefore generating the simplest form of consumers' brand choice rules or heuristics in the online context.

8.5 Conclusion

The investigations were carried out to understand the online Brand Equity antecedents and generate rich insights. Overall, this study proposes a parsimonious list of e-marketing mix elements and its importance in creating online Brand Equity. We close this Chapter by discussing the managerial implications, limitations and future scope of our research.

8.5.1 Managerial Implications

As we discussed above, it has both micro and macro level contribution.

- At Macro level, the overarching framework of e-marketing mix dimensions' framework which has been built on economic, technological and information dimensions can be used as a guide to plan marketing programs. The core of the business should be to provide an economic benefit to its customers. Since this a technology driven industry and we are in the information age, therefore, a balance between these three dimensions turn out to be very essential. The informational dimension, when used effectively, may help the companies to not only provide information to the customer but also to collect information about the customers. The information collected about the customer may lead to a better customer relationship management towards building a bond. The technology dimension is inevitable in this context but an effective and efficient use of technology towards building Brand Loyalty could be of greater importance and may become the unique selling point of a brand.
- It is important for marketers to note that when customers are exposed to online retailers for a significant amount of time, Brand Trust is formed. Therefore, it is crucial to build a significant level of Brand Trust that may lead to Brand Loyalty. Over time when a brand matures, the level of Brand Awareness is almost at the same level for all the brands. To

target the consideration set of a customer, it is essential to create not only strong Brand Associations but also Brand Trust.

- At the micro level, it has been highlighted how a consumer decides to buy online brands. There are too many choices available online when a consumer decides to buy. These choices are not only in terms of product brands but also which online retailers to buy from. The combinations of these choices also depend upon the planned and unplanned purchase behavior. The decision flow diagram which has been built gives an overview of the consumer decision journey. The complete process of this decision making can be used by the marketers to decide which customers to target to and formulate customized promotion strategies. Both macro and micro level perspective can be used for a better and effective consumer profiling. Consumer profiling is categorically distributing or grouping the customers for marketing and advertising purposes. According to the consumer decision flow diagram, consumers can be profiled as a consumer looking for product brand and the consumer looking for the commodity. As it has already been suggested that consumers who are unsure about the product brand and also about the retailer brand are expected to spend more time in browsing. Also, such customers can be profiled according to their goal concreteness. The best marketing cues for such customer could be “low price” or “quick delivery”.

8.5.2 Limitations

- The study is limited to online retailers and travel-ticket booking websites. The consumer decision journey or the consumer heuristics for travel-ticket booking websites have not been proposed. Perception of mobile websites or any mobile application has not been captured.
- The data is collected from a university student population in India. Though the population represent the characteristics of an average Indian online shopper but the generalizability of the model is subjected to further testing.
- The cross-sectional design of this study limits the ability to derive cause and effect relationships between the variables. We only confirm the associations and influences between e-marketing mix elements, sources of OBE and OBE.

8.5.3 Future Scope of Research

Increasing the scope of further research may include the following:

- The study can be extended to other web- based services like banking websites.
- This study can also be done using any other method of data analysis. Pure qualitative data analysis may give in depth and much richer information with respect to sources of OBE.
- A longitudinal study may help in establishing cause and effect relationships between the sources of OBE and e-marketing mix elements.
- As the internet penetration increases in India, the number of first time online shoppers will also increase therefore studying the reasons about no purchase intention could be one of the areas of future research.
- We found that impulse purchase behavior is evolving as one of the important consumer trends. This work can further be extended to a better understanding of such behavior.
- The contribution of allied web based services and mobile applications towards creating sources of OBE and OBE can be explored further.

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Annexure 1: Definitions for antecedents of Online Service Quality, e-loyalty, online satisfaction, online trust, online image, website attitude

Definitions for antecedents of Online Service Quality

S.No	*Authors*	*Antecedents*	*Definitions*
1	Wigand (2012)	Web site efficiency	Minimum scrolls, attractive website, consistent navigation, appropriate use of graphics and animations
		Web site reliability	Site always available, load pages faster
		Information quality	Accurate, relevant, current information. Easy to understand
		Responsiveness	Web site address in every document, prompt customer service, proper email response, resolve problem sincerely
		Assurance	Good reputation, availability of security policy and privacy policy
		Personalization	Understand needs, personalized products, personal attention
		Integrated pick up	Email about the delivery, timely delivery and speedy
2	Nitta Rachjaibun (2007)	Communication function	Important information, marketing of services, responsive to problems, complaints is reviewed and acted swiftly
		Transactional function	Simple & clear direction, easy navigation, security of payments clearly stated
		Relational function	Tailored to the needs, feeling of special customer, feedback is valued
3	Jennifer Rowley (2006)	Site features	NA
		Security	NA
		Communication	NA
		Reliability	NA
		Customer support	NA
		Responsiveness	NA
		Information	NA
		Accessibility	NA
		Delivery	NA
		Personalization	NA
4	Parsuraman, Zeithmal & Malhotra (2005)	Efficiency	Quick transaction, well organized information, page loads fast, site is simple, easy to find things
		Fulfilment	Quick and timely delivery, truthful, stocks are maintained
		System availability	Always available, the site does not crash, do not freeze
		Privacy	Protects web shopping behaviour, no sharing of personal information and credit card information
		Responsiveness	Has return policy, meaningful grantee, transaction problems and other problems are take care

		Compensation	**Compensate for the problems it creates, also for late delivery, pick up items to be returned**
		Contact	**Available telephone numbers, customer service representative present online, offer to speak to a live person if required**
5	Wolfinbarger & Gilly (2003)	**Fulfilment /reliability**	**Packaging good, products in stock, reasonable shipping and handling cost, return policy, timely delivery, error-free transaction, actual product matches the website product**
		Web site design	**Visually appealing, wide variety of appealing product, quick and easy transaction, in-depth information, right level of personalization, no waste of time**
		Privacy/security	**Safe transaction, trusting the website, privacy is protected, adequate security features**
		Customer service	**Personnel are always ready to help, prompt answers, return policy**
6	Julie (2002)	**Web store functionality**	**The web site should always be accessible, locating information should be easy, pages should download quickly, should work right at the first time, easy to place an order online**
		Product attributes description	**Provide pictures, clear descriptions, easy to calculate the total purchase cost**
		Ownership conditions	**Terms and condition of sale should be explained, confirmation of each product,**
		Delivered products	**Delivery in expected time, convenient delivery time, correct product ordered at the first time, good working orders,**
		Customer service	**Easy to contact staffs, quick replies to emails, personal communication, easy to fix problems, easy to exchange damaged products**
		Security	**Clearly explain security information, guarantee that the credit card details are safe, the intention of using personal information should be clear**

Definitions for Antecedents of E-Loyalty

S.No	Authors	Antecedents	Definitions
1	Xiaoping Fan & Rongjia Su (2011)	**Web security**	**Safe electronic payment system, protects transactional information, safe procedures, verify consumer's identity**
		Web design	**User friendly, easy to use, easy to follow search paths, logical structure, pleasing to the eye**
		Interactivity	**Can contact anytime, easy to give feedback**
		Order fulfilment	**Timely and quick delivery, no damage, exact product**
		Marketing communication	**Promotes itself & products frequently, use of pop ads and banner ads, various advertising media**
2	Lawson-body and Willoughby (2010)	**Level of presence on the internet**	**Accurate, up-to-date information, fast loading of pages, information about products, services, price, press release, images and photos of product**
		Level of interactivity on the internet	**Personalized customer support, security for transaction and privacy, password protected account, safe feeling.**
		Level of security on the internet	**Interact with other customers, e-mail link, provides feedback form, page of faqs, problems get solved quickly**
3	Zui Chih Lee (2010)	**Service efficiency**	**Loads fast, well organized information, easier search option, simple to use,**
		Service fulfilment	**Timely delivery, quick delivery, truthful about its offering, deliver the exact product**

		Service-system availability	**The site is always available for business, site doesn't crash, no freezing**
		Perceived attractiveness	**Layout of the website, colour, design is attractive and eye-catching**
		Informativeness	**Good source of information, relevant information, information about the company's product**
4	Jayendra Sinha (2010)	**Product risk**	**The risk of not getting the exact product, or malfunctioning merchandise, judging the quality**
		Financial risk	**Risk of personal information and credit card information**
		Convenience risk	**Waiting till it arrives is difficult, difficult to settle disputes, problem in returning products, orders cannot be cancelled online**
		Nondelivery risk	**Not receiving the product ordered, non-availability of reliable, well equipped shipper**
		Service and infrastructural risk	**Strict cyber laws and punishing to frauds, shipping charges are not required,**
		Return policy	**Money back guarantee required, free return shipping is must**
5	Orose Leelakulthanit & Boonchai Hongcharu (2010)	**Convenience**	NA
		Price	NA
		Trust	**Information is clear and transparent, the suggestion is according to the need, often keeps the promises**
		Reputation	NA
		Internet	**Availability of information, ease of use, error free transaction, up to date information, attractive website, up-to-date information**
6	Jamel-Eddine Gharbi (2008)	**Telepresense**	**Virtual atmosphere which makes people feel real**
		Flow state	**Seamless sequence of responses facilitated by machine interactivity,**
		Perceived value	**The experience, visual appeal, entertainment value, intrinsic enjoyment, economic value**
7	Samuel Otim and Varun Grover (2006)	**Support of product search & evaluation**	**Product comparison , availability of information (pre-purchase dimension)**
		Web site aesthetics	**Convenient website (pre-purchase dimension)**
		Delivery arrangements	**During the transaction, opting appropriate courier or delivery services.**
		Transparency of billing	**No hidden cost**
		Order tracking	**Post purchase concern for customers**
		On-time delivery	**Post purchase concern for customers**
		Customer support	**Proper response, on time**
8	Hyun, Min, and Hie (2006)	**System quality**	**Proper navigation, system response quickly**
		Product quality	**Accurate product information, information for alternative product, competitively priced product, high quality and well diversified products**
		Service quality	**Safe transaction to inspire trust and confidence, understand needs and gives attention, support communication for helping customers**
9	Gao and Koufaris (2006)	**Informativeness**	**Good source of information, relevant information**
		Entertainment	**The website is entertaining, pleasing and enjoyable**

		Irritation	**The website is frustrating, irritating and annoying**
10	Srinivasan, Anderson, and Ponnavolu (2002)	**Customization**	**Purchase recommendation, tailor made products and advertisements, feeling of unique customer, customization of needs**
		Contact interactivity	**Dynamic, engaging website, product comparison is available, search tool**
		Cultivation	**Cultivate relationship, focus on increasing market share, reminders about making purchases, relevant information**
		Care	**Billing problems handling, timely delivery, responsive to problems, return policies, good care**
		Community	**Sharing experience online, branding, website sponsors the community, helps in gathering information**
		Choice	**Wide range of products, one-stop-shop, a lot of choices**
		Convenience	**Easy navigation, very convenient, user-friendly, first time buyer can shop without much help, quick shopping**
		Character	**Appealing , attractive website, comfortable shopping, shopping is fun at this website**

Definitions for Antecedents of Online Satisfaction

S.No	Authors	Antecedents	Definitions
1	Susan Rose, Moira Clark, Phillip Samuel & Neil Hair (2012)	Interactive speed	Interaction with the website is fast and its load quickly
		Telepresence	It gives altogether a different feeling of a different world while browsing the internet shopping website
		Challenge	It brings challenge and a good test of the skills
		Skill	Knowledgeable and good search techniques for internet shopping
		Ease of use	Building confidence while internet shopping, it's easy to use internet shopping, quick learn for the navigation
		Customization	Customizing the website with own liking and feels like personal area
		Connectedness	Connect with other people, share information and help with product recommendation
		Aesthetics	The third party advertiser is not required, consistent branding and perception of quality
		Perceived benefits	Comparing the products clear the need and benefits for the product
2	Rolph E. Anderson and Srinivasan Swaminathan (2011)	Adaptation	Order tailored made product, give recommendations, feeling of unique and valued customer
		Interactivity	Very informational, product price comparison is easy, search stool is effective,
		Nurturing	Purchase reminders, helpful information
		Commitment	Good return policy, no billing problem, proper delivery
		Network	The network of customers has the same pReference, sharing experience
		Assortment	Wide range of product for selection
		Transaction ease	User friendly website, convenient, quick shopping without help
		Engagement	Appealing website, very attractive website, comfortable
3	S Kabadayi & R Gupta (2011)	Content	Superiors updated very accurate quality of information
		Customization	Tailor need according to the customer, customized offerings
		Convenience	User friendly website, easy to navigate, quick navigation
4	Ki-Han Chung & Jae-Ik Shin (2010)	Shopping convenience	Convenient website, short time of shopping, easy ordering procedure, without help
		Site design	Visually appealing, professional appearance, quick and easy to complete a transaction
		Informativeness	Rich and accurate information on features, quality of products and peripheral information like payment and delivery
		Security	Privacy is protected, trust that personal information will not be shared
		Communication	Exchange of opinions, ideas and complaints, can actively review products
5	Arpita Khare (2010)	Quality attributes	Correct account information, active server personnel
		Technology-related attributes	Secure transaction medium, easy accessibility
		Customer relationship attributes	Transparency of the service

S.No	Authors	Antecedents	Definitions
6	Tianxiang Sheng & Chunlin Liu (2010)	**Efficiency**	**Organized information, easy site, good structure**
		Requirement fulfilment	**Timely delivery, rapid delivery, inventory of the listed goods**
		Accessibility	**Available for business, can operate at once,**
		Privacy	**Personal information and credit card information are safe**
7	Jyh-Shen Chiou & Lee-Yun Pan (2009)	**Web site format**	**Easy to browse, compare products, abundant information**
		Web site content quality	**Easy to download, fast download, clear presentation, good sorting system**
		Price/value	**Save purchasing effort and time, competitive pricing, fast to receive the product**
		Perceived service quality	**Intangible people factor combination**
8	Grace T.R. Lin & Chia-Chi Sun (2009)	**Technology acceptance factors**	**Easy browsing, credit function is good, operations easy to understand, save shopping time**
		Web site service quality	**Consumption habits are recorded, secure, feeling of appropriate service and confidence**
		Specific holdup cost	**Spend time and energy in learning the site and confirm that this suits need and pReference**
9	Xia Liu et al. (2008)	**Information quality**	**The available piece of information is understandable, accurate, complete and is relevant to the user**
		Web site design	**The website is easy to use, the layout is good, navigate to other linked pages with a soothing colour combination**
		Merchandise attribute	**Considerable low price including the delivery price. Also a complete product range which leads to more choices of goods.**
		Transaction capability	**All transactions are completed online saving the time of customers and enhance the convenience**
		Response time	**The website respond quickly and also loads fast**
		Security/privacy	**The credit card information can be easily shared with the website, the site is trustworthy and all the transactions are safe**
		Payment	**All the options of payment are available**
		Delivery	**Time, the product, delivery mode, packaging is taken care of**
		Customer service	**The customer service personnel are willing to help and queries solved within the time**
10	Michel Rod (2008)	**Tangibles**	**Visually appealing, provide valuable information easily**
		Reliability	**The Sincere interest of the company to solve the problem and within the time limit**
		Responsiveness	**Prompt response**
		Empathy	**Personal attention and understanding the need requirement**
		Ease of use	**Easy layout of information, no delays, less effort**
		Accuracy	**Accuracy of the online transaction**
		Security/privacy	**Safe and secure while the transaction and provide sensitive information, low risk**
		Contents	**The account information is well maintained and clear**
		Timeliness	**The information available is up-to-date**
		Aesthetics	**The website is attractive**
		Service product quality	**Wide range of service, according to the need**

S.No	Authors	Antecedents	Definitions
11	A Floh & H Treiblmaier (2006)	**Web site quality**	**Design, structure and content of the website**
		Service quality	**Satisfied and happy with the services**
12	H Bansal, G McDougall, S Dikolli, K Sedatole (2004)	**Ease of use**	**Ease of navigation, effectiveness of layout, organized information and graphics**
		Information available	**That describes that the product is available and for selling**
		Product selection	**The number and type of the products which they lost**
		Price	**The amount paid including shipping, handling tax etc.**
		Transaction duration	**The time between the information searched and the actual purchase**
		Customer service	**Solution to problems**
		Shipping and handling	**Receipt of the product and timeliness**
13	D Ribbink, R Allard, V Liljander, S Streukens (2004)	**Assurance**	**Trustworthy, secure about payment and personal information**
		Ease of use	**Easy to navigate, find way, user friendly**
		Escape	**Attractive display of the information, appealing layout and colour**
		Responsiveness	**Easy to contact, interested in feedback, respond quickly**
		Customization	**Display products according to need and value,**
15	Elzbieta Lepkowska-White (2004)	**Vendor characteristics**	**Customer service, privacy, security**
		Web site characteristics	**Reliable, good navigation, Product comparison, personalization, enjoyment, easy to order, good download speed**
		Consumer characteristics	**Shopping enjoyment, Price consciousness, time pressure and skill**
		Product/service characteristics	**Quality product and services, broad range of product, reasonable prices**
16	Szymanski & Hise (2000)	**Convenience**	**Browsing lot of categories without leaving home**
		Merchandising	**Product offerings and product information available online, it allows customers to decide upon the quality in better way, lower the costs**
		Site design	**Uncluttered screen, simple search paths, and fast presentation**
		Financial security	**Credit card security, and the legitimacy of the company**

Definitions for Antecedents of Online Trust

S.No	Authors	Antecedents	Definitions
1	C Richard, L Meredith & S Bishnu (2010)	**Product attributes**	**Simple purchase, standard goods, readily available**
		Product information	**Current information, relevant, accurate information, ease of comparison**
		Price information	**Best price, associate cost, no hidden cost**
2	Ruparelia et al., 2010	**Security**	**Concerns about credit card safety when purchasing**
		Privacy	**Influence of the perception of the risk of private details being shared on purchase**
		Brand name	**Influence of brand name familiarity on purchase**
		Word of mouth	**Influence of positive word of mouth on purchase**
		Website design and navigation	**Influence of website design and navigation on purchase.**
		Information	**Comprehensive, clear delivery, high quality information about brand and product**
		Return Policy	**Clear and easy return policies**
3	Beldad, De Jong, & Steehouder, 2010	**Perceived ease of use of the website**	**Referring to the degree to which people believe that using a particular system would be relatively easy**
		Information quality	**Websites that contain accurate, current, and complete information.**
		Graphical characteristics	**Website's graphical characteristics such as clip arts and colors in the design of an online banking website.**
		Social presence cues	**Social presence Refers to the degree of salience of the person in the interaction and the consequent salience of the interpersonal relationships**
		Customization and personalization capacity	**Ability to tailor products, services, and transactional environments to their target users**
		Privacy assurances and security features	**Privacy of personal data and security of credit card information**
		Organization based trust	**Organizational reputation , offline presence, perceived sized of the organization**
4	Boudhayan Ganguly,Satya Bhusan Dash & Dianne Cyr (2009)	**Website informational design**	**Right information, updated information and organized information**
		Website navigation design	**Easy browsing, ease in searching information, it should save time**
		Website visual design	**Aesthetic beauty like use of graphics, colors, photographs, various font**
		website enabled communication	**presence of online sales person, timely feedback to the online store and availability of reviews from other shoppers**
		Website social presence	**Social presence of websites speaks of human touch in the website, possibility of interaction in the website, friendliness and belongingness to the web store.**

		Website privacy	**Privacy of personal information**
		Webiste security	**Security of the transaction related information**
5	Hong- Youl Ha (2004)	**Security**	**Safety on sanction, guarantee**
		Privacy	**Personal data, credit card information**
		Brand name	**Good will, reputation**
		Word-of-mouth	**Recommendation, reliance on information**
		Experience	**Community, chat, game, event**
		Information	**Benefit, attention**

Definitions for Antecedents for Online Brand Image

S.No	Authors	Antecedents	Definitions
1	Da silva & Alwi (2008)	**Security**	**Privacy protected, enough security features available, secured in giving credit card details**
		Ease of use	**Easy to navigate, easy to search information, fast interaction**
		Personalization	**Purchase recommendation, relevant information which is needed, close relationship**
		Customer care	**Solving the problem with interest, inquiries are answered promptly**
		Reliability	**Delivery on time, the site represent the accurate product**
2	Christine Page & White (2002)	**Market communications**	**Ad, direct marketing, promotions, public relations**
		Non-market communication	**Word of mouth**
		Web design features	**Consistent site, easy navigation, quality information, product comparison, customized information, site is enjoyable, speed of downloads, ease of ordering**
		Vendor characteristics	**The vendor is accessible and responsive to consumer needs, privacy, security, trustworthy**
		Product/service characteristics	**Quality of products, suitable selection is offered, reasonable price**
3	Hilde A.M. Voorveld, Peter C. Neijens and Edith G. Smit (2009)	**General user characteristics**	**Demographics, familiarity**
		Psychological user characteristics	**Motives, involvement, interactivity**
		Web site characteristics	**Interactivity, features, design, modality, fit, usability, used functions**
		Message characteristics	**Type, complexity, argument strength, product type**
		Exposure characteristics	**Exposure and time**

Definitions for Antecedents of Website Attitude

S.No	Authors	Antecedents	Definitions
1	Jamie Carlson and Aron O'Cass (2011)	**Web site communications performance**	**Affective information, in-depth information, information according to the pReference,**
		Web site aesthetic performance	**Visually pleasing, looks attractive, colours and appealing graphics,**
		Web site transaction efficiency performance	**Easy transaction, security features like trust marks, safe personal information**
		Retail brand image-web site image congruence	**Image of the retailer,**
2	Dianne Cyr, Gurprit S. Kindra &Satyabhusan Dash (2008)	**Menu Layout**	**NA**
		Access to product information	**NA**
		Professional design	**NA**
		Logical presentation of product information	**NA**
		Screen design	**NA**
		Navigation	**NA**
		Sequencing	**NA**
		Presentation of product attributes	**NA**
		Product availability	**NA**

Definitions for Antecedents of Online Brand Equity

S.No	Authors	Antecedents	Definitions
1	George Christodoulides & Leslie de Chernatony (2010)	**Online brand experience**	**The overall virtual experience**
		Interactivity	**Interactivity in terms of download, site survey, keyword search, user groups, surveys. Utilizing the private time**
		Customization	**Individual level pReference to provide unique content**
		Relevance	**Relationship in the over-communicated virtual world**
		Site design	**Ease of use and navigation**
		Customer service	**Furnish product, security, shipping info, inventory check links, emails, quick response to customers**
		Order fulfilment	**On time delivery, the product delivered which is ordered**
		Quality of brand relationships	**NA**
		Communities	**The close relationship between the company and the customers**
		Web site logs	**Web logs metrics, click through rate etc**
2		**Competitive price**	**Frequent updated price list, comparison of price, lowest price for quality brand**

	Rosa E. Rios & Hernan E. Riquelme (2010)	**Shopping convenience**	**Alternative form of payments, order tracking**
		Breadth & depth merchandise	**Broadest range of products, specialized assortment**
		Functionality	**Fast download, easy navigation, consistent accessibility, easy to order products,**
		Customer service	**Respond quickly, live individual for support, specialized customer support**
		Fulfillment	**On time delivery, the product delivered which is ordered**
3	George Christodoulides, Leslie de Chernatonya Olivier Furrerb, Eric Shiua and Temi Abimbolac (2006)	**Emotional connection**	**Affiliation, care, empathy**
		Online experience	**Ease of use, navigation, speed**
		Responsive service nature	**Responsive to the customers, talk back option**
		Trust	**Personal information safe, safe transaction**
		Fulfilment	**On time delivery, the product delivered which is ordered**
4	WoonBong Na & Roger Marshall (2005)	**Marketer's perspective**	**Brand familiarity, Strategic alliances, word of mouth and marketing efforts**
		Consumer's perspective	**Convenience, reduced cost, enjoyable, sociable, Privacy, ease of navigation, instant interactivity**
		Web constructor's perspective	**Design layout, web interface**

Annexure 2 : SAS Code used for CFA

```
Proc import datafile="/folders/myfolders/sasuser.v94/sources.xlsx"
out=work.sources
dbms=XLSX;
run;
Proc calis data=WORK.sources plot=pathdiagram MOD;
pathdiagram
arrange=grip;
factor
Awareness=>A1-A5,
PriceAsso=>VAP1-VAP5,
ConvMerchCompAsso=>VAC1 VAC2 VAC3 VAM1 VAM2 VAComp,
Brandtrust=>TRUST1-TRUST3,
Brandloyalty=>LOY1-LOY3,
Brandequity=>BE1-BE2;
Run;
```

```
Proc import datafile="/folders/myfolders/sasuser.v94/CFAnew.xlsx"
out=work.CFAnew
dbms=XLSX;
run;
Proc calis data=WORK.CFAnew plot=pathdiagram MOD;
pathdiagram
arrange=grip;
factor
Webcontent=>V1-V3 V12,
webspeed=>V4 V13,
Securityprivacy=>V5 V8 V9,
Customercare=>V7 V10,
CustomerValue=>V14-V15,
Interactivity=>V6 V16 V17 V11;
Run;
```

Annexure 3: Website Classification given by various Authors

Author	Year	Categories	Context
Torrente et al	2013	Public administration/Institutional	Usability
		Online banking	
		Blog	
		E-commerce	
		Communication/News	
		Corporate/Company	
		Downloads	
		Education/Training	
		Collaborative environments/Wikis	
		Virtual Community/Internet Forum	
		Leisure/Entertainment	
		Personal	
		Service Portal	
		Image-based interactive services	
		Non-image based interactive services	
		Webmail/mail	
		Hybrid	
Selcuk Cebi	2013	Commercial website	Design parameters
		Service	
		Mixed type	
Lim Wern Han & Saadat M. Alhashmi	2010	Business Economy	Web mining and search engines
		Entertainment	
		Government	
		Health	
		News	
		Sports	
Sangwon Lee & Richard J . Koubek	2009	Entertainment	Usability and User PReference
		Informational	
		Communication	
		Commercial	
Hasan & Abuelrub	2008	Business to business	Quality
		Business to consumer	

		Consumer to business	
		Consumer to Consumer	
Author	Year	Categories	Context
Vidulin et al	2007	Adult	
		Blog	
		Children	
		Commercial-promotional	
		Community	
		Content-delivery	
		Entertainment	
		Error-message	Search engine
		FAQs	
		Gateway	
		Index	
		Informative	
		Journalistic	
		Official	
		Personal	
		Poetry	
		Prose-fiction	
		Scientific	
		Shopping	
		User-input	
Marina Santini	2007	Blog	Usability
		E-shop	
		FAQs	
		Online newspaper front page	
		Listing	
		Personal homepages	
		Search Page	
Christoph Lindemann & Lars Littig	2006	Academic	Structure and Functionality
		Blog	
		Corporate	
		Personal	
		Shop	
Moshe Zviran, Chanan Glezer & Itay Avni	2005	Publish/subscribe	Usability
		Online shopping	

		Customer self service website	
		Trading Website	
		Business to business	
Author	Year	Categories	Context
Lim , Lee and Kim	2005	Personal homepages	
		Public Homepages	
		Commercial Homepages	
		Bulletin collection	
		Link collection	Search engine
		Images collection	
		Simple table/list	
		Input pages	
		Journalistic materials	
		Research reports	
		Official materials	
		Informative materials	
		FAQs	
		Discussion	
		Product specification	
		Others	
S.Hong and J. Kim	2004	General Shopping mall	Usability
		Speciality Shopping mall	
		Auction	
		Reservation service	
		Health and Medical	
		Computer and Internet	
		Economy and Industry	
		Women and children	
		Games	
		Portals	
		Web hosting	
		Community	
		Personal Homepages	
		Organization Homepage	
		Online Education	

		Web Casting	
Suhit Gupta et al.	2005	International news	Search Engine
		Shopping	
		Regional news	
		Tech news	
		Tech blogs	
		Astronomy	
Author	Year	Categories	Context
Gitte Lindgaard & Cathy Dudek	2003	Entertainment	Satisfaction and usability
		Informational	
		Communication	
		Commercial	
Deshpande et al.	2002	Informational	Web engineering
		Interactive	
		Transaction	
		Workflow	
		Collaborative work environment	
		Online community marketplaces	
		Web Portals	
		Web Pages	
Lee and Myaeng	2002	Reportage	
		Editorial	
		Technical paper	
		Critical review	Genre Classification
		Personal homepages	
		Q & A	
		Product specification	
Coutin	2002	E-commerce	
		E-learning	
		Business	
		Government	
		Institutional	
		News	
		Personal	
		Contents and service provider	
		Social network	

		Services	
Philip Auld	2001	Cable Programme	
		Database	Internet law
		Collection of literary & Artistic Works	
		Goods	
Hoffman et al.	2000	Online storefront	Commercial website and marketing communication
		Internet Presence	
		Content	
		Mall	
		Incentive site	
		Search Agent	
Author	Year	Categories	Context
P.K. Korgaonkar, L.D. Wolin, Kraut et al	1999 1996	Entertainment	Family online behaviour
		Informational	
		Communication	
		Commercial	

Annexure 4: Questionnaire

Kindly Indicate your degree of agreement & disagreement with the following statement with respect to the website (_____) that you frequent most. You may choose a website from any of these categories ([ ]online shopping website [ ]online travel-ticket booking website [ ]online banking website).

	Strongly Agree	Agree	Somewhat Agree	Neither Agree nor Disagree	Somewhat Disagree	Disagree	Strongly Disagree
1. I know what it looks like	O	O	O	O	O	O	O
2. I can recognize it among other competing online businesses	O	O	O	O	O	O	O
3. I can quickly recall the name of the website	O	O	O	O	O	O	O
4. Some characteristics of it come quickly to my mind	O	O	O	O	O	O	O
5. I have difficulty in imagining it	O	O	O	O	O	O	O
6. I prefer it because price deals are frequently offered	O	O	O	O	O	O	O
7. I have a preference for it because it frequently offers an updated list of product promotions	O	O	O	O	O	O	O
8. Using it, I can make the most of the least money	O	O	O	O	O	O	O
9. In it I can find the lowest prices for a quality brand	O	O	O	O	O	O	O
10. I cannot find quality products at an affordable price on it	O	O	O	O	O	O	O
11. I have a preference for it because it allows the comparison of product prices across online stores	O	O	O	O	O	O	O
12. I like it because it allows to track my orders	O	O	O	O	O	O	O
13. I like it because it offers alternative forms of payments, cash on delivery, credit cards, money order etc.	O	O	O	O	O	O	O
14. I like it because one can find the broadest range of products	O	O	O	O	O	O	O
15. I have a preference for it because it provides the deepest specialized assortments	O	O	O	O	O	O	O
16. It is good because it allows returns to be shipped back at retailer's cost	O	O	O	O	O	O	O
17. It feels safe to disclose personal information on it	O	O	O	O	O	O	O
18. It feels safe to conduct transactions on it	O	O	O	O	O	O	O
19. It has my confidence	O	O	O	O	O	O	O
20. It makes sense to buy from it instead of any other online business, even if they are the similar to it	O	O	O	O	O	O	O
21. Even if another businesses has same feature as it has I would prefer to buy from it only	O	O	O	O	O	O	O
22. I would definitely recommend it people near to me	O	O	O	O	O	O	O
23. I am willing to pay a premium price of up to 10 percent when purchasing from it as opposed to a less well known website	O	O	O	O	O	O	O
24. In future, I would definitely buy from it	O	O	O	O	O	O	O

Also mention, how often you visit the website in a month _____

Publications & Conferences

Peer Reviewed Publication

- Rana, A., Bhat, A., & Rani, L. 2015. A classificatory scheme for antecedents of the sources of "online Brand Equity." ***Journal of Research in Interactive Marketing***, vol. 9, issue 4. **(ABDC, Scopus indexed)**

Manuscripts under Review

- Paper titled "Proposed Generic Dimensions' Framework for e-Marketing Mix Variables" is in the initial review stage with **Electronic Commerce Research Application (Elsevier Publication)**.

- Paper titled "Investigating Path to Purchase for Online Impulse Buying: A Decision Net Approach" is in the initial review stage with **Journal of Consumer Marketing (Emerald Publication).**

- Paper titled "E-Marketing Mix Framework for Creating Online Brand Equity" is in the initial review stage with **Journal of Product and Brand Management (Emerald Publication)**.

- Paper titled "Sources of Online Brand Equity: An Empirical Test for Mediation Effect" is in the initial review stage with **Marketing Intelligence and Planning** (Emerald Publication)

International Conferences and Proceedings

- Paper titled "Interaction Effects of Sources of Online Brand Equity: An Investigation" presented at **7th IIMA Conference on Marketing in Emerging Economies**, 2017 held at **IIM, Ahmedabad** during 11-13 January, 2017.

- Paper titled "Centrality of Some Salient Variables in Creating Online Brand Equity" presented at presentation in the 2017 Annual Conference of **Emerging Markets Conference Board** held at **IIM Lucknow (Noida Campus)** during **7-9** January 2017.

- Paper titled "Investigating Point of Purchase and Path to Purchase for online impulse buying: A Decision net approach" presented at COSMAR 2016 held at **IISc Bangalore** during 10-11 November, 2016. The same paper has also been accepted to be presented at

the 8th International Conference on Advances in Information Technology (IAIT2016) to be held at **University of Macau** during 19-22 December, 2016.

- Paper titled "The Underlying Dimensions of Brand Equity: Multidimensional Scaling Approach in the Indian Online Retail Segment" presented at 30th Annual Conference of British Academy of Management hosted by **Newcastle University, England** during 6th-8th September 2016. (ISBN: 978-0-9549608-9-6

- Paper titled "The Impact of e-Marketing Mix Elements on Brand Association: A Comparative examination in the Indian e-commerce segment" *to be* presented in Conference on Brand Management organized by **IIT Delhi** during 16th -17th April, 2016.

- Extended abstract titled "The Underlying Dimensions of Online Retails Brands: A Multidimensional Scaling Approach" presented at Third International Communication Management Conference (ICMC) 2016 at **MICA** during 18th-20th February 2016 and published in the conference booklet "Marketing Reborn" (ISBN: 978-93-5254-84-0).

- Presented a paper titled "Facebook Content Strategy of Industry Leaders in India: An Exploratory Analysis" at **1st International Conference on Evidence Based Management**, 2015 at **BITS Pilani**, Pilani Campus. (**ISBN**: 978-93-84935-18-4)

- Presented a paper titled "An e-marketing perspective for M&A: A case of Flipkart- Myntra Merger" at the Third International Marketing Conference (MARCON 2014), held at **IIM Calcutta** during Dec 18-20, 2014

- Presented a paper titled "Online Brand Equity: A Review and Agenda for Future Research" in the **Tenth AIMS International Conference** jointly organized by Indian Institute of Management, Bangalore **(IIM-B)** and the Association of Indian Management Scholars (AIMS) at IIM Bangalore Campus during 6-9 January, 2013.

- Paper titled "Consumer Heuristics for Online Travel Portal brands: IRCTC vs. Private brands" accepted to be presented as poster at **PAN IIM WMC Conference 2016** to be held at **IIM, Ahmedabad** during 13-14 December, 2016.

VITA

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Prof. Anil Bhat graduated in Mechanical Engineering in 1982 from REC, (now NIT) Srinagar and obtained his doctorate (fellowship) from IIM-Bangalore. His specialization is Marketing Research and his methodological contribution has been in the area of "Cluster analysis of rank order data". He is a member of Academy of Management (AOM), American Marketing Association (AMA) and a Fellow of Institution of Engineers (India). He has been trained at international workshops conducted by Haas School of Business, University of California, Berkeley and STVP, Stanford & has completed "10,000 Women Program: Tools for Growing your Business" organized by Goldman Sachs in partnership with London Business School. Prof. Bhat has worked in managerial capacity for organizations before turning to academics and has headed the Department of Management at BITS Pilani for almost a decade. He has more than eighty publications to his credit and has conceptualized, designed and conducted many MDP's both for private as well as for public sector companies. He has served as a management expert on Union Public Service Commission expert panel. STVP Stanford, NEN and IIMB have certified him as an Entrepreneur Educator. Besides guiding many Ph. D's, he has co-authored a book on management published by Oxford University Press. He is presently Professor Department of Management BITS Pilani, Member Department Research Committee and Faculty Advisor, Center

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