

## Impact of digital co-creation on brand equity with special reference to IT Industry

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### Abstract:

The evolution in Information technologies has brought about a change in our economies as well as in our societies because companies endeavor to adapt conditions prevailing in a marketplace. In this scenario, marketing professionals are exploring effective ways to build a strong brand. The research objective explores the impact of digital co-creation on brand equity dimensions through which companies can tailor their strategy to create a greater experience for their consumers in the digital world by exploring attributes regarding brand's perceived quality, interactions, customer involvement, CRM, brand loyalty, customer satisfaction, and brand association. While consumers could achieve a greater experience, transparency and value creation. A framework is proposed based on the approaches to co-creation and its influence on the dimensions of brand equity. . From theoretical perspective, this study contributes to branding literature by exploring approaches to integrated marketing communication, brand image and strategies for value-creation. Additionally from marketing perspective, the drivers will guide managers to understand the desires of their consumers and customers to tailor their strategy according to the attributes that build equity for the brand on online platforms that will save marketing cost, enhance consumer loyalty, raise the return of investment, and providing circumstances for co-creation. Thus, it will provide information about consumer behavior and ways to build strong brands that leads to an ever-lasting consumer-brand relationship.

### Keywords:

Social Media; Digital Marketing; Brand Equity; brand equity models; brand equity evaluation model, consumer approach; co-creation; value creation; co-creation of value ; brand experience ; value chain; consumer engagement; customer involvement; perceived quality

### 1. Introduction:

A brand identifies the seller or manufacturer. It can be defined as "a name, term, sign, symbol, or design, or combination of them which is intended to identify the goods and services of one seller or group of sellers and to differentiate them from those of competitors" (Kotler 1991; p. 442). Brands vary in the amount of power and value they have in the marketplace. Brands are complex entities that reside in consumers' minds. Today, consumers are not passive recipients of marketing activity rather they are a part of the branding activity. With the advent of new media and ubiquitous connectivity a democratic force of participation fostering new social interactions beyond institutional boundaries has been unleashed, breeding new ways of collective engagement and value co-creation. Digital co-creation has emerged as a new practice that is changing how cultural content gets made, used, and exchanged (Katz, 2010). The implication for organizations is that co-creation ought to be viewed as a process that gives an opportunity for on-going interaction, where the organization is willing to share its world with external stakeholders and can generate in return the insight that can be derived from their engagement with an objective to generate, refine or create. Companies engage in co-creation projects because they want to them to foster the discovery of customer interest and value, which they can turn into innovation and competitive advantage. Also, they involve into improving brand's equity as the relationship between a brand and its consumers is becoming more complex and gives a critical understanding of the strengths and weaknesses of the brand and defines what drives brand value, revenue and profitability and consequently what components of the brand could be leveraged. Thus, help tailoring the brand strategy.

Armed with new connective tools, consumers want to interact and co-create value"

(Prahalad and Ramaswamy 2004, p.5)

Co-creation is a joint, collaborative, concurrent, peer-like process of producing new value, both materially and symbolically. The massive use of the internet and the development of interactive platforms, online communities and toolkits offer the potential to co-create with a large number of customers or consumers. Companies, such as Apple, Nike, Nestlé, Lego, Starbucks, Mahindra and Microsoft have developed such strategies successfully.

With Apple generating over \$1 billion for its App-Store partner-developers in two years, and overtake Microsoft in market value or Unilever revitalizing growth by redesigning Sunsilk Product line. Also, Starbucks launched its online platform MyStarbucksIdea.com to tap into ideas from customers and turbocharged a turnaround. Nike achieved remarkable success with its Nike+, which enables a community of over a million runners to interact with one another and the company's co-creation initiative increased its market share by 10 percent in the first year. There is an ongoing debate in the literature about the differences between co-creation and co-production and the need to distinguish between them (Groenroos and Voima, 2013; Cova et al., 2013). Hundreds of published papers acknowledge a different and more constructive role for the customer in the market value creation process. Co-creation is an important paradigm in which a common body of theoretical statements has been developed and applied to a diverse set of empirical contexts. Although, papers to discuss the role of co-creation in IT industry is not been found. Also, there have been no researchers found that empirically determines the impact of co-creation on Brand Equity.

Thus, the aim of this study is to empirically determine the impact of co-creation on Brand Equity with special reference to IT Industry. The reason to restrict the research to IT Industry is to fill the research gap found in subject concerned.

### 2. Objectives:

- To identify the different theoretical perspectives and research streams that characterize and define the co-creation literature with reference to IT Industry
- To understand the interaction between Co-creation and Brand Equity in IT industry

- To empirically formulate a framework that determines the interrelationship between digital co-creation; as a process and brand equity.

### 3. Literature review:

Co-creation is a concept in which companies and customers generate value through interaction (Vargo and Lusch, 2008). Over the last two decades, co-creation as a concept has been reviewed, critiqued, researched, analyzed on two levels– company-centered vs. customer experience-centered; Magala (2009) called it to be “postmodern pattern of sense making” where there is open-ended flow of social communication, built around transparent collaborative negotiation of meanings that leads to a networked, evolving social world.

Most cited definition of co-creation was provided by Prahalad and Ramaswamy (2000) as - “a form of market or business strategy that emphasizes the generation and ongoing realization of mutual firm-customer value. It views markets as forums for firms and active customers to share combine and renew each other’s resources and capabilities to create value through new forms of interaction, service and learning mechanisms”. As Peter Drucker reputedly said, “the best way to anticipate the future is to create it.” Even better- “Co-create it.” Unpredictable transformations have introduced complexity in the business environment.

Today, Business and society are moving towards an individual- and experience-based view of co-creative engagement where stakeholder in their role as consumers, employees, or any other race to implement co-creation value with their approaches to competitive advantage. Thorsten Roser,

Robert De Fillippi and Alain Samson suggested a long term business philosophy in relation to brand management and value creation. They also discussed approaches to co-creation and its applications-

- **Interactions:** Cost effective, frequent interactions with stakeholders
- **Community:** building large, diverse community of people inside and outside the firm that enhances engagement
- **Platform:** a physical or virtual discussion platform to generate new ideas, design physical objects, processes or places. Also, these platforms help develop analytically based insight.
- **Experience:** a unique, individualized experience for stakeholders
- **Economic value:** create economic value as a network

To help promote stakeholder participation these five processes are employed to initiatives in a variety of ways and to various degrees. Innovation projects were started as experiments by inviting employees from functions other than just R&D to share their ideas. This was a revolutionary step in the industry. Other firms started their co-creation experiments by making common cause with customers through online platforms.

Digital co-creation has emerged as a new practice that is changing how cultural content gets made, used, and exchanged (Katz, 2010). The implication for organizations is that co-creation ought to be viewed as a process of outbound and inbound interactions with an objective to engage with consumers and come up with an insight to refine and create ideas etc. Companies engage in co-creation projects because they want them to foster the discovery of customer interest and value, which they can turn into innovation and competitive advantage creating unique customer experience by engaging with them.

According to the literature there are three main **theoretical perspectives to Co-Creation:**

1. **Innovation and technology management-** the interaction between customers and companies, which technological platforms often mediate, leads to innovation, customer participation, and better customer services
2. **Marketing and consumer research-** if consumers are adequately considered and their expectations are met in terms of their engagement, involvement, and empowerment. These perspectives seldom problematize co-creation, but are taken for granted and considered an important element that helps companies produce better results in terms of innovation and customer satisfaction
3. **Service science - SDL Logic**

These perspectives have been discussed on themes including service innovation, co-creating value through customer experience and competence, online and digital customer involvement, the development of service science, SDL, individual consumers and communities collaborating with companies with respect to products & services.

Backhaus et al in 2011 said that “strong brands can help customers improve information collection and processing efficiency, and reduce their perceived purchase risks.”

According to **Francis J. Gouillart , (2014)** in the process of product or service innovation, leading corporations have developed five archetypes of co-creation through an experiment with stakeholders and various approaches to co-creation.

1. **Community building or social marketing**– creating community of interest using content bucketing
2. **Design thinking** – explore consumer journey, understanding mindset of consumer and their behavior, open design or user-led innovation.
3. **Co-creative transformation** – a change derivative
4. **Crowd-sourcing** – soliciting contributions from the masses, open source
5. **Open innovation** – a paradigm for industrial innovation management, intertwining inbound and outbound ideas to accelerate their growth, R & D or product development

The concept of “*value-in-use*” given by Monika Skaržauskaitė (2013) suggested both customer and organization are equally important in the process of co-creation creating value by resource integration and deep interactions between consumer and company. The analysis lead to suggestion that value co-creation includes:

1. Customer involvement & engagement
2. Consolidation or assimilation of resources
3. Cooperation; to interact
4. A spectrum of potential form of collaboration

Gaurav Bhalla(2014) highlighted the process of co-creation that enables an organization to influence the customer centric value creating,

dialogical process through interactions as:

1. Identifying business opportunities for future strategic decision making
2. Transforming an organization's culture
3. Customer solutions as a business proposition than technologies

The organization open its world, engaging customers and other stakeholders to be a part of the value chain, which allows it to expand into new and uncharted territory pushing boundaries which brings forth effective insights that are deeply connected.

**Co-creative communities** offer various **benefits**:

- Giving velocity to market
- Providing better insights and communication
- Helps designing focused to customer experience and journey
- Focus on value creation, instead of providing technological solutions
- Positive word-of-mouth recommendation
- Increased adaptability
- Lower risk of market failure

Thus, Co-creation is the process of co-discovery through interaction (Shotter, 2005) that generates new ways of seeing the world and leads to the opportunity for self-development.

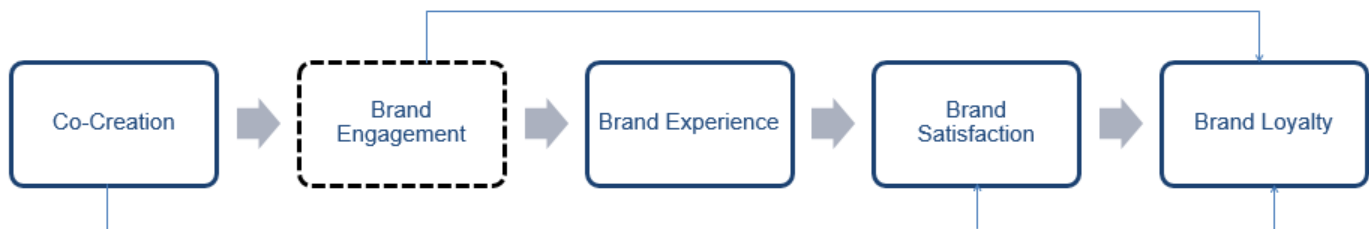
Co-creation can also be defined as a construct working in a context with an addressable community being one of the stakeholders forming an ecosystem to achieve a common objective thus becoming a co-creative organization is about changing the very nature of engagement and relationship making dimensions like "Whom to involve" very important and the reasons they are being part of the process may also be an area of concern. Also, Companies over year have been giving incentives to consumers' like-

- **A sense of belonging** – The act of joining forces to co-create is incentive enough to participate. E.g. HOG (Harley Owners Group) motorcycle riders wear their badge as a group identity with honor
- **Monetary rewards** –rewards as coupons and sweepstakes prizes
- **Help develop a Self-image** – Hallmark's "Circles of Conversation"
- **Consumption** – First users; Nokia beta labs
- **Need for a solution** – The need for a solution is a potent motivator for collaborating. They are looking for solutions before actual markets come into existence.
- **Supporting causes**

The DART model facilitates a company to engage with consumers as co-creators more effectively. An overview of existing models has revealed a theoretical and an empirical research concerns in the co-creation process. Brand advantages are understood as brand value for customer. Thus brand equity enhances the way a customer perceives the brand, leading to consumer loyalty and protects from competitive threats.

Over years of research the construct of brand value has been discussed with two views. From the customer's point of view, Leek and Christodoulides in 2011 stated brand value as the functional and emotional value delivered by brand that leads to brand acknowledgement, trust and loyalty also, suppliers suggest brand value to be the premium the firm can earn from a strong brand.

According to Keller and Lehmann, 2006, brand value chain model the value based on customers is an antecedent of brand value of the company. They urged brand managers to establish a relationship of reciprocating interactions that determines a brand value on both rational and emotional levels. Brodie et al (2011a, 2011b) emphasized on constructs like customer participation and involvement are roots to brand engagement. They also suggested that, 87% of a brands value and 79% a firm's performance is explained by brand value co-creation.



Hollebeek (2011b), proposed brand experience, loyalty and satisfaction as potential consequences of customer-brand engagement which is influenced by quality relationship to trust, commitment that eventually adds up to loyalty.

Co-creation is particularized as "the process by which mutual value is expanded together" (Ramaswamy 2011, p. 195). Engaging in co-creation activities strengthens the brand experience of the consumer that increases the level of association. Thus, Co- Creation; the futuristic approach to branding has certain influence on Brand Equity that might help create successful campaigns and improve brand value. Successful branding means lower uncertainty in purchasing which in turn improves a Brand's position in the market, creating a strong brand.

With this inter-relationship between co-creation and a brand's equity, it is important to translate the concept, the construct of **Brand equity and its models of measurement**.

"Brand Equity is the added value endowed by the brand to the Product"

- Farquhar, 1989.

The idea of using a name or a symbol that enhances a product's value has been used by marketers for years. In the globalization and information age, brand equity is that crucial point that helps differentiate and render an additional value as a competitive weapon that helps to cope with price wars. Brand equity has been examined majorly from two different perspectives –

1. **Financial perspective-** This train of thought views brand equity in terms of incremental discounted future cash flows that would result from branded product revenue. When the consumer buys a Brand, he/she buys future value, which is why the Brand can charge premium value. This was an example when compared with the revenue that would occur if the same product did not have the brand status.
2. **Customer based perspective-** the concept of brand equity in the context of marketing decision-making

My readings into the financial perspective of Brand equity finds that the commonly used financial measures, mostly focuses on **stock prices** or **brand replacement**. Various techniques to measure brand equity from the financial perspective include the use of movements in stock prices to capture the dynamic nature of brand equity based on the theory that the stock market reflects future prospects for brands by adjusting the price of firms. (Simon & Sullivan, 1993). In the stock market, to an acquiring firm, the potential value of a listed Brand is an indicator of brand equity. In reality, while launching a new product, the financial measure is based on brand replacement cost, or the requirements for funds to establish a new brand, together with the probability of success.

One of the most publicized financial methods in use by *Financial World (FT)* in its annual listing of world-wide brand valuation, calculates net brand-related profits. They then assign a multiple based on brand strength, which is defined as a combination of leadership, stability, trading environment, internationality, ongoing direction, communication support, and legal protection. So while financial markets do not ignore marketing factors and stock prices reflect marketing decisions, there are other estimation techniques that can extract the value of brand equity from the value of the firm's other assets, such as:

1. The **macro-economic approach:** The assigning of an objective value to a company's brands and relates this value to the determinants of brand equity.
2. The **micro-economic approach:** Which isolates changes in brand equity at the individual brand level by measuring the response of brand equity to major marketing decisions.

Initially, brand equity was conceptualized as consisting of consumers' brand associations that include brand awareness, knowledge and mental image (Keller, 1991, 1993). Another school of thought suggested brand equity consists of two components – brand strength and brand value (Srivastava and Shocker, 1991). Some researchers view brand equity as perceived brand quality of both the brand's tangible and intangible components (Kamakura and Russell, 1991).

In the marketing literature, operationalizing brand equity generally falls into two groups:

1. **Involving consumer perceptions** such as awareness, brand associations, or perceived quality
2. **Involving consumer behavior** such as brand loyalty and the focus on paying a price differential

There are various **Brand equity models** that have been discussed under the two schools of thoughts as discussed above. **Aaker (1991)** has given the most inclusive definition of brand equity:

**“A set of brand assets and liabilities linked to a brand, its name and symbol that adds to or detracts from the value provided by a product or service to a firm and/or to the firm's customers.”**

**Aaker (1991)** incorporated both perceptual and behavioral dimensions with his Brand equity model. Wherein behavioral measures of purchase describe the existence of equity, and do not reveal what is in the hearts and minds of consumers that actually drive equity. He suggested a model using a brand-earnings multiplier that is based on a weighted average of the brand on five key components of brand equity:

1. awareness;
2. associations;
3. perceived quality;
4. loyalty; and
5. Other proprietary assets such as patents and trademarks



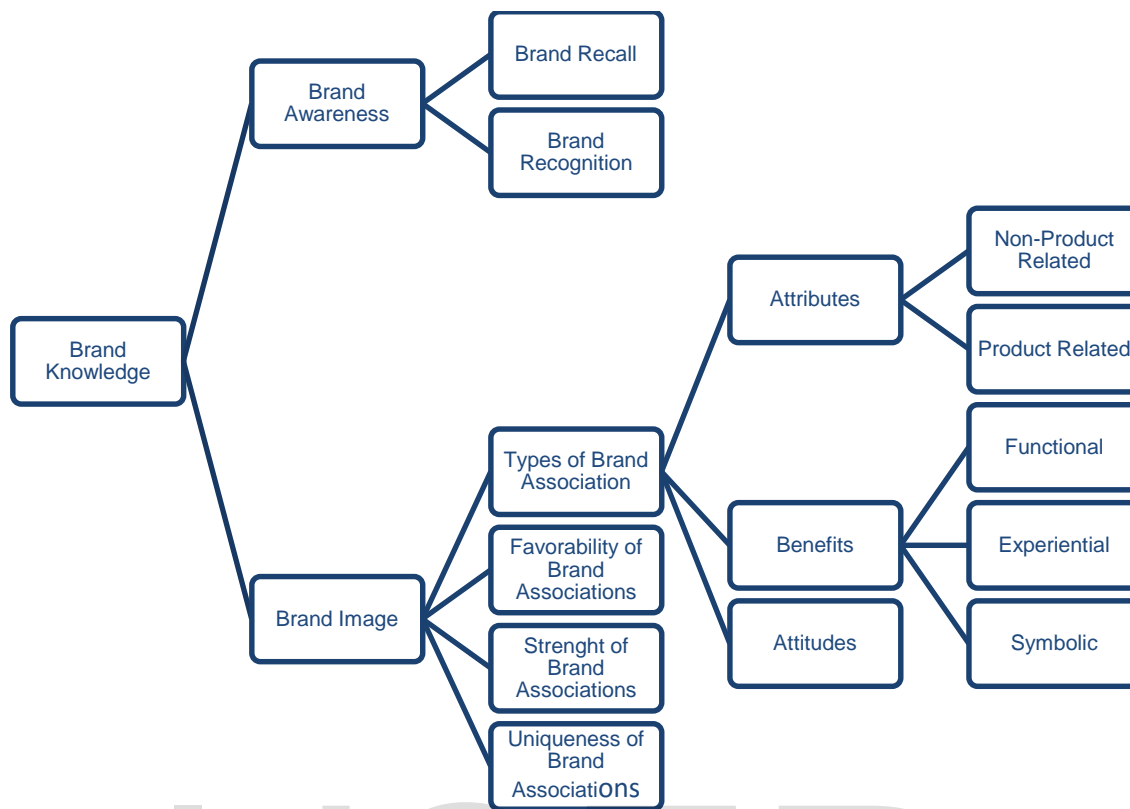
**Kamakura and Russell (1993)** with his model suggested three components of brand equity

1. perceived value;
2. brand dominance; and
3. Intangible value

As Biel (1992) observed

***“Consumer behavior is, at root, driven by perceptions of a brand. While behavioral measures of purchase describe the existence of equity, they fail to reveal what is in the hearts and minds of consumers that are actually driving equity. ”***

Thus, the focus of equity study relied on both a perceptual look and behavioral-based examination of brand equity. **Thiripurasundari, Dr. P. Natarajan (2011)**, gave a framework with five underlying factors - brand knowledge, brand application, brand relationship, brand preference and brand loyalty which make up measures of Brand Equity. The researchers recommend that these dimensions should be the integral components in designing brand equity studies.



Dimensions of Brand Knowledge

## Customer-Based Brand Equity

Customer-based brand equity is defined as the **differential effect of brand knowledge on consumer response to the marketing of the brand**. Keller suggested CBBE to include three important constructs-

1. **Differential effect** - determined by comparing consumer response to the marketing of the brand and a fictitiously named or unnamed version of the product or service.
2. **Brand knowledge** – Brand knowledge is defined in terms of brand awareness and brand image and is conceptualized according to the characteristics and relationships of brand associations
3. **Consumer response to marketing** - consumer perceptions, preferences, and behavior arising from marketing mix activity (e.g., brand choice, comprehension of copy points from an ad, reactions to a coupon promotion, or evaluations of a proposed brand extension)

Thus, a brand is said to have positive or negative customer-based brand equity if consumers react more or less favorably to the product, price, promotion, or distribution of 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. Favorable consumer response and positive customer-based brand equity, can lead to enhanced revenue, lower costs, and greater profits.

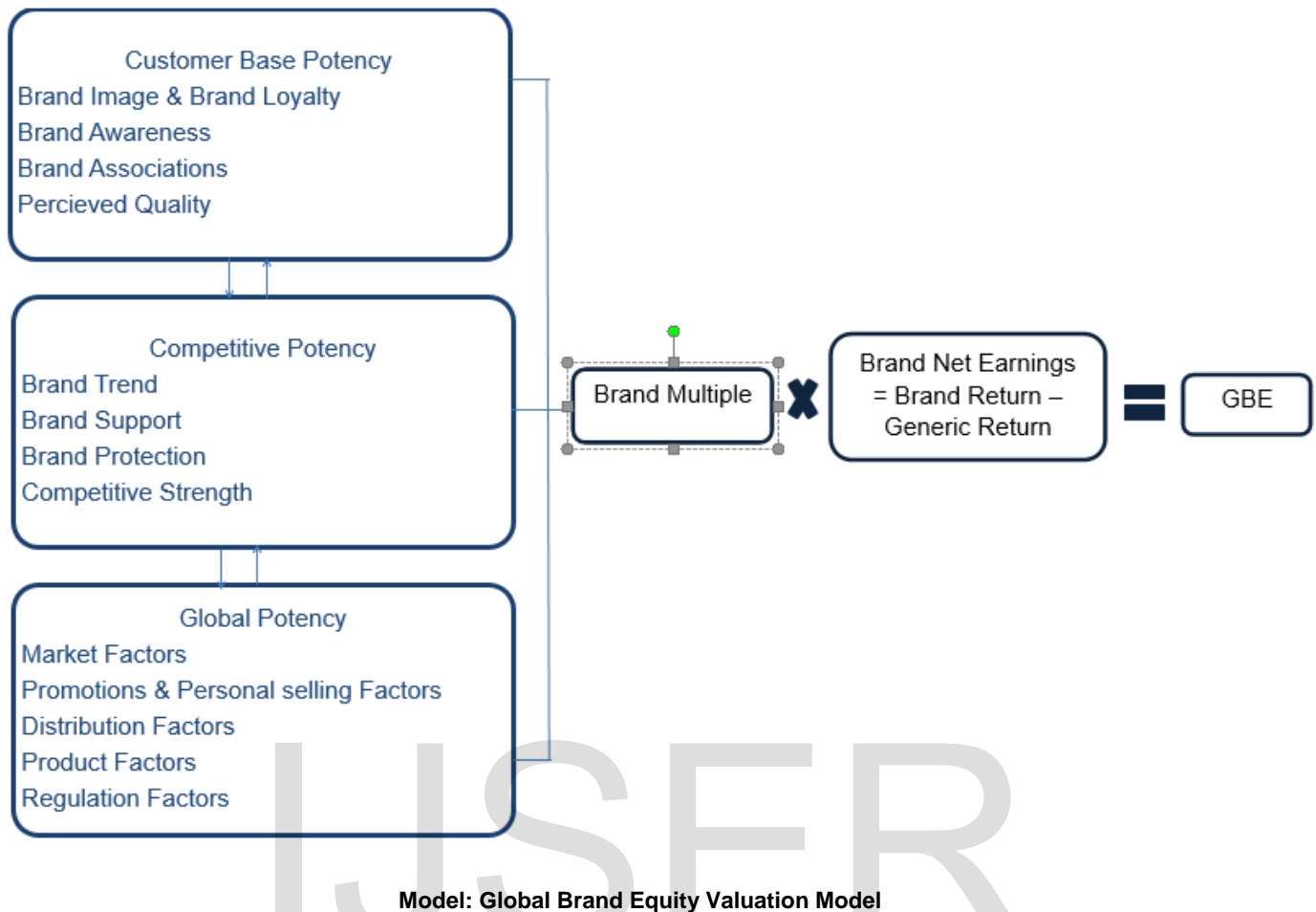
## Global Brand Equity Model

Global brand equity (GBE) is the product of brand's net earnings and brand's multiple; it is very similar to the Interbrand model. The brand's net earnings are - the differential earnings of a branded and an unbranded (generic) product. The advantage of the model is that it quantifies all the components and applies generally accepted financial techniques. The brand multiple is determined based on brand strength which is derived from an in-depth assessment.

The global brand equity model can be expressed symbolically as: — n m n m n m

$$GBE = \{M [(W CBPF) + (W CPF) + (W GPF)]/30\} BNE$$

$$i=1 \ j=1 \ ijj \ i=1 \ j=1 \ ijj \ i=1 \ j=1 \ ijj$$



Where:

GBE = global brand equity

M = maximum possible multiple in the industry

$W_{ij}$  = the importance of factor J in country I

CBPF  $ij$  = the value of customer base potency factor j in country I

CPF  $ij$  = the value of competitor potency factor j in country I

GPF  $ij$  = the value of global potency factor j in country I

BNE = brand net earning

**Notes:** The brand strength percentage will not be directly multiplied by M. It will be determined through application of S-curve

### The Brand Equity Ten

The Brand Equity Ten includes sets of measures grouped into five categories. The first four categories represent customer perceptions of the brand along the four dimensions of brand equity—loyalty, associations, perceived quality, and awareness. The fifth includes two sets of market behavior measures that represent information obtained from market based information rather than directly from customers. The model includes measures that incorporate tangible and intangible constructs like price premium the consumer is ready to pay versus the satisfaction. It discusses metrics that accounts for consumer perception & consumer behavior.

There has been an interaction amongst various marketing criteria driven brand equity conceptual models which can be explained through figure below.

**TABLE 1. The Brand Equity Ten**

#### Loyalty Measures

Price Premium  
Satisfaction/Loyalty

#### Perceived Quality/ Leadership Measures

Perceived Quality  
Leadership

#### Associations/ Differentiation Measures



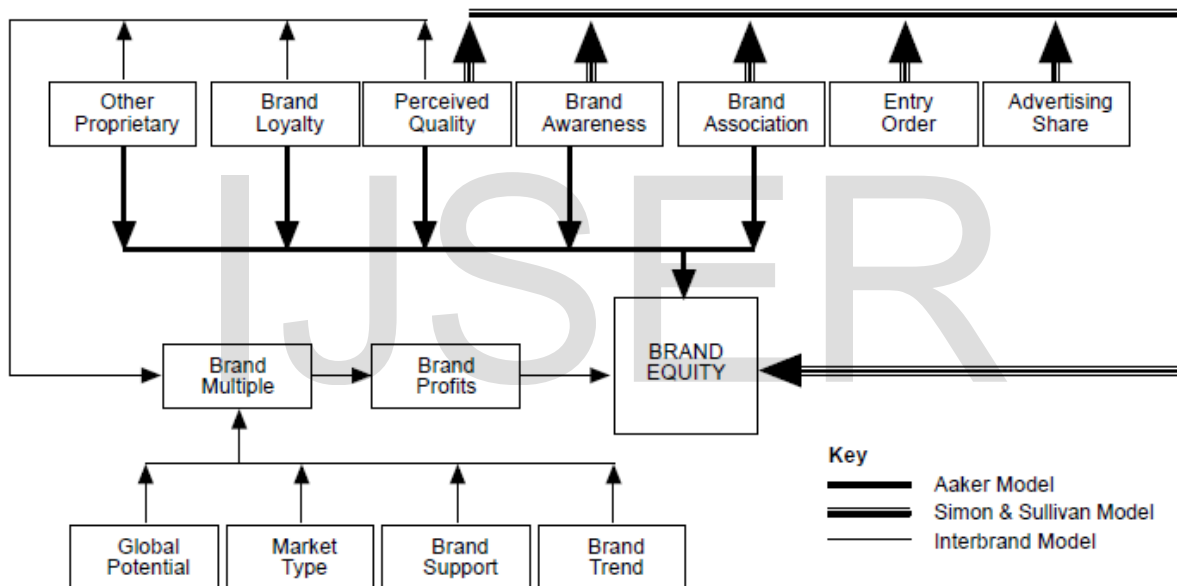
Perceived Value  
Brand Personality  
Organizational Associations

#### Awareness Measures

Brand Awareness  
Market Behavior Measure

Market Share  
Price & Distribution Indices

This interaction gives a framework which can help determine the interaction between brand equity and co-creation quantitatively. From the discussed literature it is clear that co-creation impacts brand performance, identity etc. Thus, co-creation affects Brand equity can very well be established theoretically which can be empirically validated through improvement in Brand value of a brand with financial methods using market capitalization and sales of a company as well as with a conjoint analysis of Survey collected data for brand equity components.



*Figure 1. Interrelationship among leading conceptual models of brand equity*

The technological advancements facilitate connectedness, empowering consumers that foster collaborations and value co-creation which leads to consumer brand engagement. Though there are various studies on consumer brand engagement, there is still a lack of research that empirically analyses how it helps persuading consumers increasing brand equity. Today, consumers are active participants in value creation. This interaction has been investigated from the various perspectives like S-D logic. According to the Service Dominant logic a company not only needs to analyze, track a market or consumer's needs, but have to provide additional benefits to consumers as well. Thus, stressing the importance of motivation factors, both social and functional for consumer engagement. Fuller in 2006 proposed a few personal characteristics that motivate consumers, such as curiosity, freedom to express ideas & interest in innovation.

Porter's et al. (2011) study suggested "motivators, as information, relationship building, social identity/self-expression, helping others, enjoyment, belongingness, status/influence, which influence consumer engagement in virtual brand community "

Analysis of existing studies on the approaches to digital co-creation, constructs of brand equity, relationship between customer engagement and value creation, co-creation and consumer brand engagement, influence of consumer brand engagement, brand experience on brand equity has highlighted a research gap to empirically study the impact of digital co-creation on brand equity.

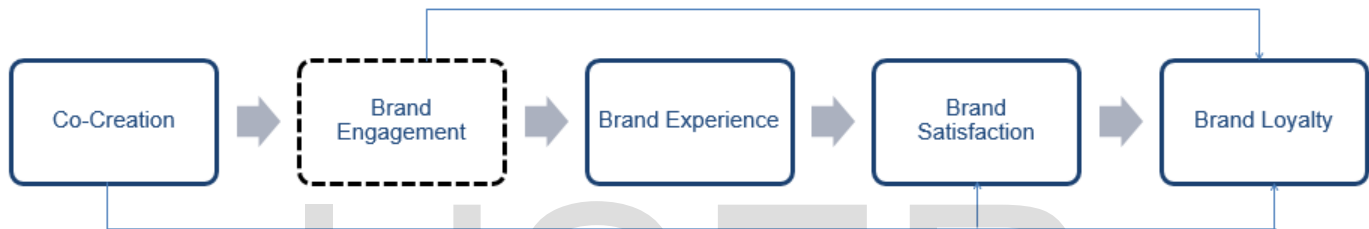


In this research the main focus will be devoted to quantitatively determine the impact of digital co-creation on Brand equity and the inter-relationship amongst the variables of these major constructs using common scientific research methods, validating proposed framework and MANOVA, generalizing analysis for IT industry.

#### 4. Conceptual framework:

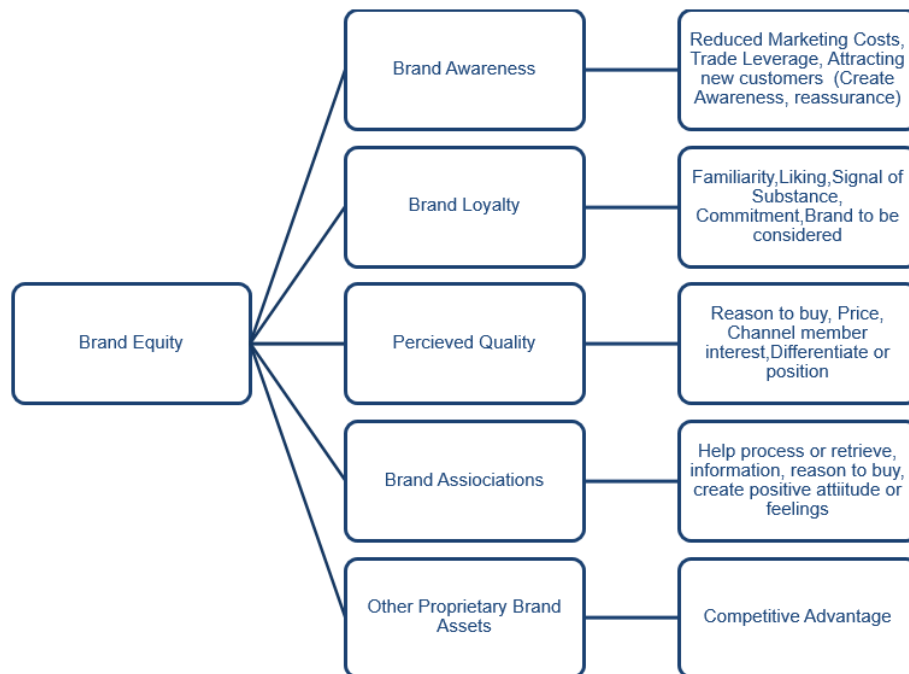
Based on theoretical analysis of existing studies on co-creation and consumer brand engagement, brand equity and consumer brand engagement the conceptual model of consumer engagement in brand equity creation could be developed, using various models like brand value chain model proposed by Keller and Leehman, 2006, Aekar brand equity model 1991, Causal model discussed by Jing Zhang, RizwanShabbir, ChatchaiPitsaphol&Waseem Hassan, 2015 and a conceptual framework proposed by Helm & Jones in 2010 that offers a holistic perspective for creating brand equity and its governance. Jing Zhang, RizwanShabbir, ChatchaiPitsaphol&Waseem Hassan, 2015 concluded that “consumers could actively participate in brand value creation through engagement into the process of new product and brand marketing communications creation, and brand buying behavior”

Discussing the Keller and Leehman, Herbjørn Nyssen & Per Egil Pedersen suggested the effects of co-creation to be partly direct and partly indirect. Also, co-creation is directly influenced by satisfaction and loyalty which in turn leads to strong brand experiences. Chinomona 2013, suggested brand satisfaction is associated with higher levels of brand trust. He also said that it is positively influences Brand Loyalty.

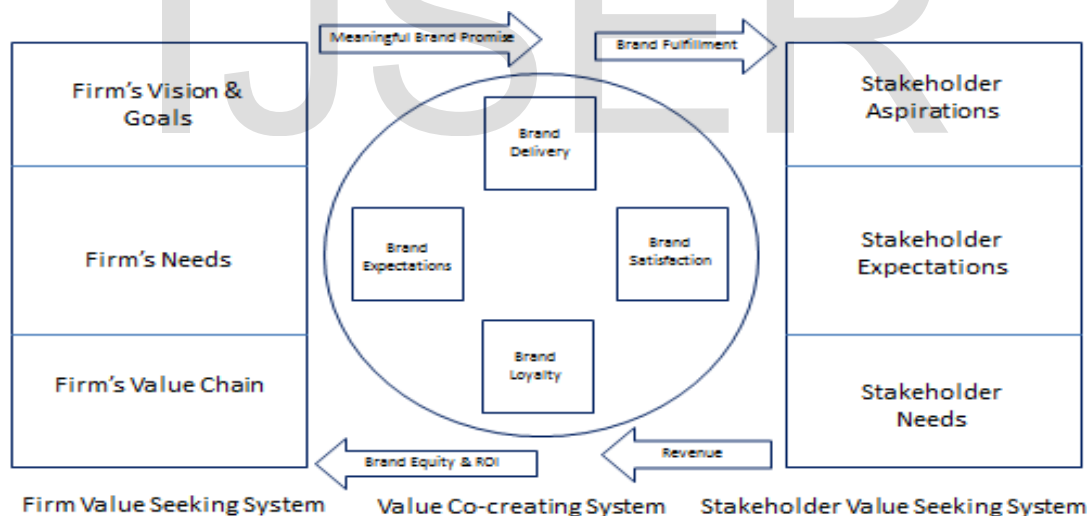


Critical analysis of scientific literature suggests that brand equity increases brand preference, leads to consumer loyalty and protects from competitive threats. Aekar in 1991 incorporated both behavioral and perceptual dimensions with his Brand Equity model. He suggested a model using a brand earnings multiplier that is based on a weighted average on five key components:

1. Brand Awareness
2. Brand Associations
3. Perceived Quality
4. Brand Loyalty
5. Other proprietary assets like patents and trademarks



Helm and Jones explained the importance of brand equity elements like loyalty and satisfaction in the value creation cycle in context of a firm and stakeholder interactions.



Roser, Robert De Fillippi and Alain Samson with their long term philosophy for brand management and co-creation suggested approaches like interactions, platform, community formation, consumer experience and the economic value. A key research study by IgorsSkute, discussed the causal model that determines a relationship between brand engagement, brand equity and co-creation potential. Rita Kuvykaitea\*, ZanetaPiligrimiene model 2015, reflects the inter-relations between levels of consumer engagement (cognitive, affective and behavioural) and the brand equity dimensions (familiarity, perceived quality, associations and brand loyalty) after engagement. It also takes into consideration the personal consumer characteristics like awareness that are important to identify consumers who should be made part of the process of brand equity creation. Relationship between brand equity and brand engagement measures was identified by Boyle (2007) as the five stages of consumer engagement that creates brand equity:

1. new product development with perceived product attributes
2. Increasing brand awareness through marketing & communication activities
3. Increase in pre-consumption brand association by interpreting various marketing and communication activities.
4. Formation of post-consumption associations after consumption of the product

5. Improving perception of consumers leading to brand loyalty and increase in repurchase

Therefore, the research paper is intended to address the following research questions:

**RQ1:** What are the factors influencing brand equity and co-creation in the Digital Environment?

**RQ2:** What is the impact of interaction on Brand equity?

**RQ3:** What is the impact of Community building on brand equity?

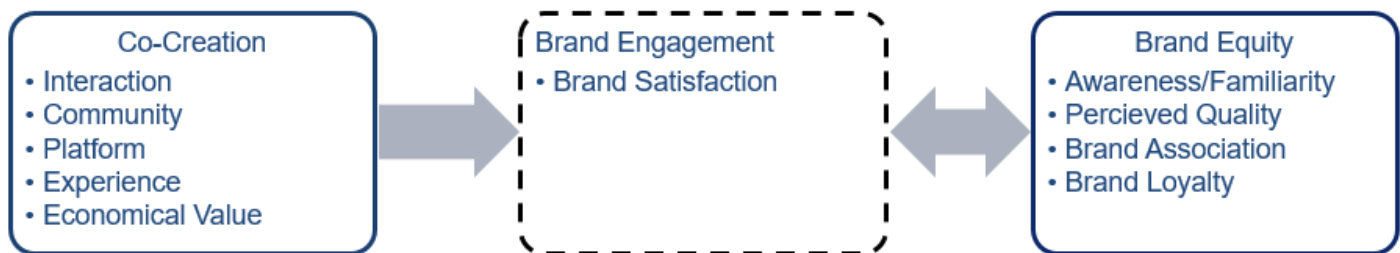
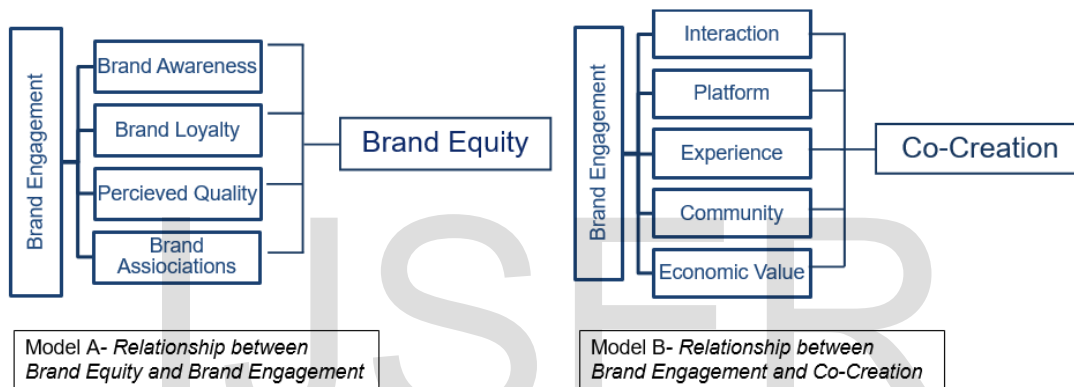
**RQ4:** What is the impact of presence of a digital platform of the brand on its equity?

**RQ5:** What is the impact of experience on brand equity?

**RQ6:** What is the impact of economic benefits provided by a brand on brand equity?

### 5. Model and hypotheses:

Research findings and theoretical insights can be summarized in the following proposed model and subsequent hypotheses. The Model A explores the relationship between brand equity dimensions like familiarity, brand loyalty, perceived quality, brand associations and brand engagement, while Model B explores the impact of brand engagement on co-creation and its variables. Model C incorporates Model A and Model B to explain the impact of co-creation on brand equity.



**Model C- Causal model explaining relationship between Brand Equity and Co-creation**

**H1a.** Interaction has a positive impact on Awareness

**H1b.** Interaction has a positive impact on Perceived Quality

**H1c.** A positive interaction improves Brand Association

**H1d.** A positive interaction leads to strong brand loyalty

**H2a** Community Building has a positive impact on Awareness

**H2b** Community Building has a positive impact on Perceived Quality

**H2c.**A Community increases Brand Association

**H2d.** A community helps build brand loyalty

**H3a.** A platform helps build Brand Awareness

**H3b.** A platform has a positive impact on perceived quality

**H3c.** A platform builds Brand Association

**H3d.** A platform helps build Brand loyalty

**H4a.** A pleasant experience has a positive impact on Brand Awareness

**H4b.** A positive experience has a positive impact on perceived quality

**H4c.** A positive experience builds Brand Association

**H4d.** A pleasant experience helps build Brand loyalty

**H5a.** The economic value helps build Brand Awareness

**H5b.** An economic benefit has a positive impact on perceived quality

**H5c.** An economic benefit builds Brand Association

**H5d.** An economic exchange helps build Brand loyalty

## 6. Process:

The models are formulated basis the content analysis of previous researches and are validated using Cronbach alpha methodology, to check its reliability and KMO and Bartley's test of sphericity is done for the sample adequacy test. A survey of 130 people from the sample is been analyzed using multivariate analysis of variance and covariance.

Based on the research it is expected to empirically determine the impact of co-creation and its dimensions on brand equity using the proposed conceptual framework. To test the models and proposed hypotheses, linear regression analysis to predict and understand the relationship of one variable to another is used. Also, SPSS 20 software package is used to carry out statistical programs like multivariate analysis of variance and covariance or structural equation modeling (AMOS or STRATA). MANOVA is carried out to predict the interdependence of the constructs is an applicable method of analysis. MANOVA analysis is suitable to predict the tests for the difference in two or more vectors of means and since the hypotheses in this research study are focused on investigating the impact of one construct on another (i.e. Interaction and its impact on brand awareness hence brand equity or interaction and its impact on perceived quality). MANOVA with Levenes test for error differentiation followed by an exploration of plots of normality and descriptive analysis of the observed power is a validating and apt method for the research.

## 7. Sample:

The panel of 130 respondents is designed to be representative for the online population of age group 15- 25 years, SEC A1, A2, and B1 in Pune. Sampling is controlled by the social media usage levels to ensure that the sample is exposed to branding activities (community and social media interactions) by various brands, education level and Household income.

## 8. Data measurements:

The key focus of this research paper is to investigate how digital co-creation (community building and social media interactions) improves brand's engagement (Brand Satisfaction) and affects Brand's equity (perceived quality, brand loyalty, associations and familiarity) in IT industry.

### *Independent variable*

The independent construct studied in this study is Co-creation with its dimensions like interaction, experience, community, platform and Economical tradeoffs (for working definitions see table 1) and this is be measured by a survey of 150 people as well as validated by content analysis of previous years research.

### *The Mediating variable*

The Mediating variable is Brand Engagement and it is measured by using content analysis technique to conduct a descriptive analysis of the brand engagement and its various types .Thus, a new typology model was designed, based on the previous research studies. (For working definitions see table 1)

### *The Dependent variable*

The Dependent variable studied in this research is Brand Equity (for working definitions see table 1) which is measured by a survey of 130 people, belonging to Gen Y and Gen Z category as **according to research by Forrester and IAMAI maximum % of adoption of social media /chat platforms come from Gen Y thus, Population is the Gen Y community.**

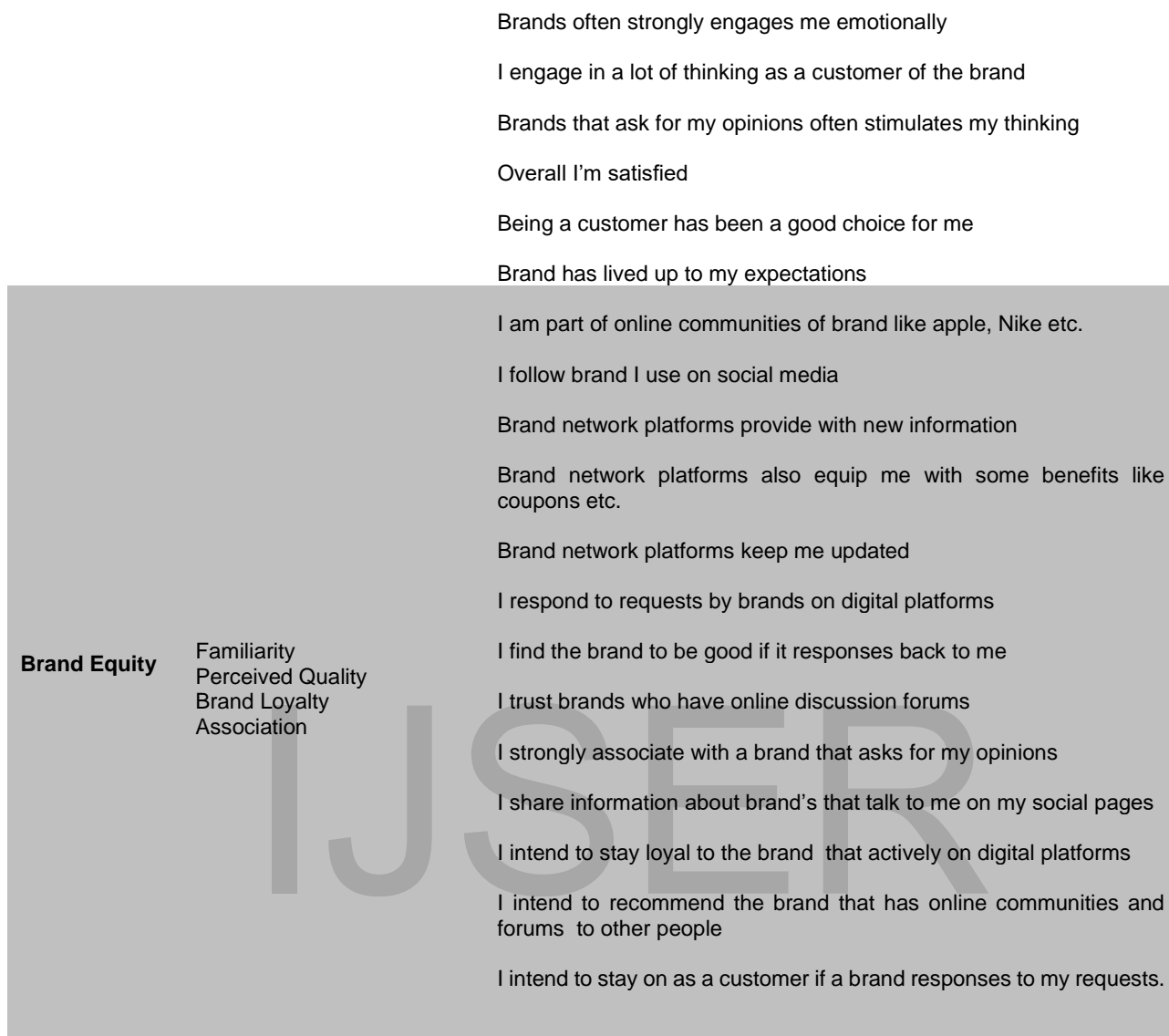
**Table : Data measurement table & definitions**

VARIABLES	METRICS	DEFINITIONS
<b>Co-Creation (independent variable)</b>	Interaction	The number of posts in a day by the brand
	Community	The number of community building activities brand is involved in
	Platform	The number of platforms a brand is using to connect to consumers
	Experience	The positive interaction the consumer has on various digital platforms
	Economical Tradeoff	The economic benefit offered by brands

<b>Brand Engagement</b>	Brand Satisfaction	Brand satisfaction is associated with higher levels of brand and consumer intension to repurchase
<b>Brand Equity</b>	Familiarity Perceived Quality Brand Loyalty Association	<p>A consumer is aware about the brand and its communities or social network pages</p> <p>The consumers opinion of a brand's capability to fulfill his/her expectations</p> <p>The tendency of a consumer to repurchase a brand</p> <p>A feeling to stay put with the brand, share about it to others.</p>

#### 9. Questionnaire items:

VARIABLES	METRICS	ITEMS
<b>Co-Creation (independent variable)</b>	Interaction Community Platform  Experience Economical Tradeoff	<p>I often express my personal needs on network platforms</p> <p>I often give feedback for the brand to improve</p> <p>I participate in conversations on various platforms</p> <p>I often find solutions with the brand</p> <p>I am actively involved when a brand develops solutions for me</p> <p>Brands encourages customers to create solutions</p> <p>I feel like I am a part of a community</p> <p>I feel as I am part of a brand family</p> <p>As a customer I never feel being left alone</p> <p>I feel motivated to be part of a brand if it offers me discounts, coupons etc.</p> <p>I feel brands offer allot of benefits online</p> <p>I find brand platforms to be informative</p> <p>I follow brands on social media platforms</p> <p>I find it engaging, to have an conversation with a brand</p> <p>Social media platforms is the best way to connect to brands</p>
<b>Brand Engagement</b>	Brand Satisfaction	<p>As a customer I am rarely passive</p> <p>Brands social media platforms make a strong impression on me</p> <p>Being involved in various brand activities on brand network platforms gives me an interesting sensory experience.</p> <p>Brands active on social platforms and communities appeal strongly to my senses.</p> <p>Brand communities induces my feelings</p> <p>I have strong emotions for brands active on digital platforms</p>

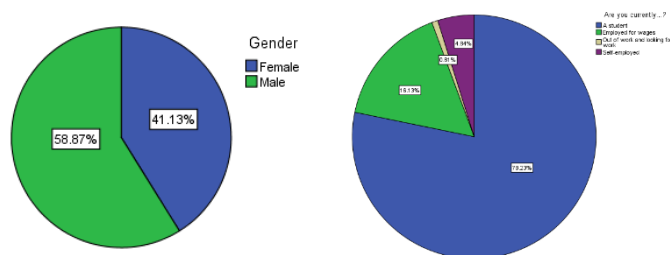


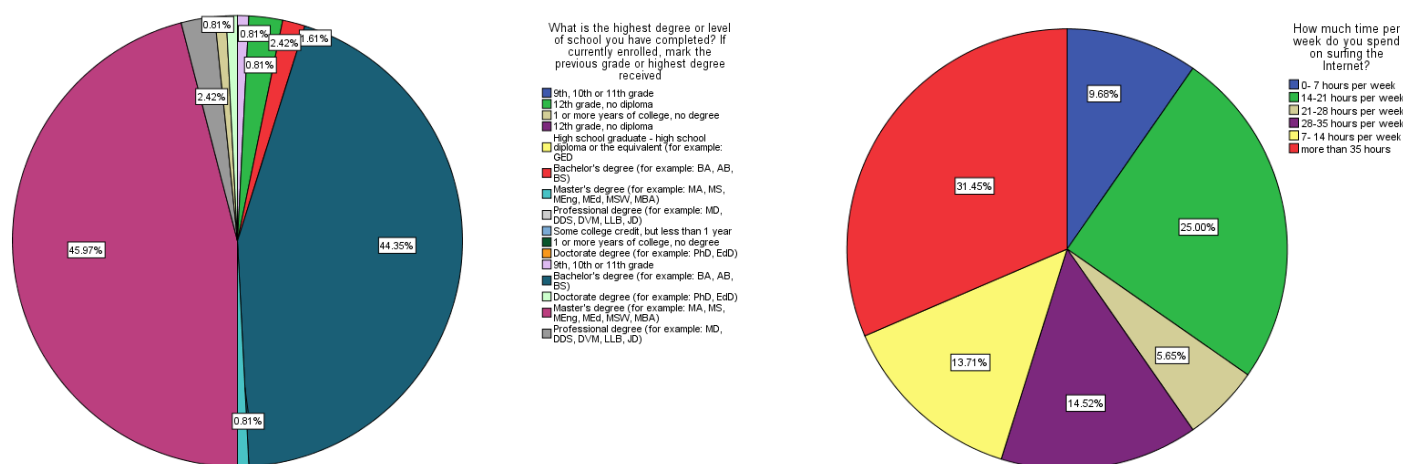
## 10. Empirical Study:

### Methodology

To verify the hypothesis proposed, over 100 millennial (130) were personally interviewed and were made to fill questionnaires.

### Composition of the sample





They had to be regular users of social media for being in touch with friends and interact online with people, brands etc. The interviews were carried out between December 2015 and January 2016 by researcher herself. The data collection finished with 130 respondents out of which 5 were discarded due to missing and inappropriate data. The SPSS 20 statistical programs were used for the data analysis.

### 11. Data analysis

The study to be done is an empirical study of the impact of co-creation and its various constructs on brand equity in the minds of the customer. The relationship between the dependent and independent variables have been inbuilt within the questionnaire and to verify the model Factor analysis for data reduction and to find underlying relationship is carried out. Also, Co-relation analysis & linear regression has been carried out to determine the validity of the proposed model.

The Cronbach alpha was determined first to understand the reliability of the questionnaire and the data.

#### Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.945	.945	39

**The Cronbach's Alpha value is .945 which suggests the data to be highly reliable and co-related to each other.**

Before evaluating the cross – relationship (co-relation) amongst various factors, we analyze the measurement model. Following the theoretical guidelines suggested by Hair *et al.* in 1999, we carry out a factorial analysis using co-relations and linear regressions. Factor Analysis is a multivariate statistical technique which can be used for three main reasons:

1. Reduce number of variables
2. Establish relationship between measured variables and various discussed constructs
3. Validate construct

KMO & Bartlett's Test of Sphericity is a measure of sampling adequacy helps check the case to variable ratio for the analysis being conducted. In most academic and business studies, KMO & Bartlett's test play an important role for accepting the sample adequacy. While the world-over accepted index is over 0.6. According to the SPSS statistical test of Factor analysis suggests KMO value to be .870. Thus, the sample has an acceptable level of adequacy.

#### KMO and Bartlett's Test

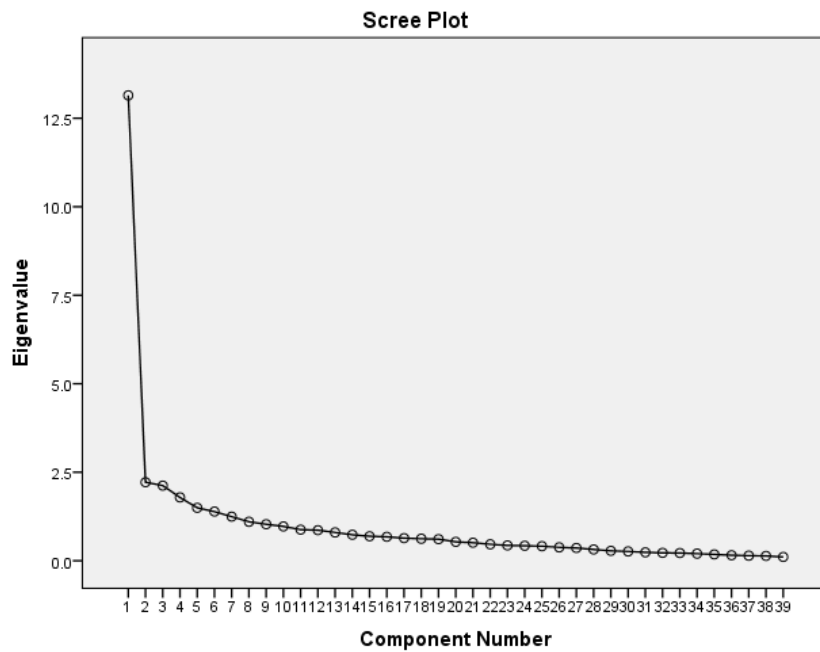
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.	.870
Approx. Chi-Square	2533.211
Bartlett's Test of Sphericity	df
	741
	Sig.
	.000



Communalities		
	Initial	Extraction
I often express my personal needs on network platforms	1.000	.677
I often give feedback for the brand to improve	1.000	.697
I participate in conversations on various platforms	1.000	.680
I often find solutions with the brand	1.000	.671
I am actively involved when a brand develops solutions for me	1.000	.597
Brands encourages customers to create solutions	1.000	.744
I feel like I am a part of a community	1.000	.586
I feel as I am part of a brand family	1.000	.682
I feel motivated to be part of a brand if it offers me discounts, coupons etc.	1.000	.620
I feel brands offer allot of benefits online	1.000	.760
I find brand platforms to be informative	1.000	.704
I follow brands on social media platforms	1.000	.598
I find it engaging, to have an conversation with a brand	1.000	.600
Social media platforms is the best way to connect to brands	1.000	.648
As a customer I am rarely passive	1.000	.582
Brands social media platforms make a strong impression on me	1.000	.582
Being involved in various brand activities on brand network platforms gives me an interesting sensory experience	1.000	.571
Brands active on social platforms and communities appeal strongly to my senses.	1.000	.616
Brand communities induces my feelings	1.000	.657
Brands often strongly engages me emotionally	1.000	.636
Brands that ask for my opinions often stimulates my thinking	1.000	.692
Overall I'm satisfied	1.000	.691
Being a customer has been a good choice for me	1.000	.544
I engage in a lot of thinking as a customer of the brand	1.000	.602
Brand has lived up to my expectations	1.000	.564
I am part of online communities of brand like apple, Nike etc.	1.000	.646
I follow brand, I use on social media	1.000	.613
Brand network platforms provide with new information	1.000	.660
Brand network platforms also equip me with some benefits like coupons etc.	1.000	.568
Brand network platforms keep me updated	1.000	.624
I respond to requests by brands on digital platforms	1.000	.641
I find the brand to be good if it responses back to me	1.000	.708
I trust brands who have online discussion forums	1.000	.687
I strongly associate with a brand that asks for my opinions	1.000	.751
I share information about brand's that talk to me on my social pages	1.000	.721
I intend to stay loyal to the brand that actively on digital platforms	1.000	.677
I intend to recommend the brand that has online communities and forums to other people	1.000	.702
I intend to stay on as a customer if a brand responses to my requests	1.000	.735

	Interaction	
	Community	
	Platforms	
	Economic Value	
	Experience	
	Awareness	
	Brand Association	
	Perceived Quality	
	Brand Loyalty	

Extraction Method: Principal Component Analysis



A factor analysis was conducted on 39 different factors was carried out. This scree plot shows that 21 of those factors explain most of the variability because the line starts to straighten after factor 21. The remaining factors explain a very small proportion of the variability and are likely unimportant

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Rotated Component Matrix									
	Component								
	1	2	3	4	5	6	7	8	9
I often express my personal needs on network platforms	.139	.031	.110	.791	.116	-.056	-.034	-.016	.033
I often give feedback for the brand to improve	.124	.382	.175	.565	-.103	-.078	.068	.348	.209
I participate in conversations on various platforms	-.060	.212	.377	.584	.176	.187	-.178	.013	.227
I often find solutions with the brand	.187	.118	.075	.685	.002	.163	.303	.167	.012
I am actively involved when a brand develops solutions for me	.241	.186	.149	.478	-.024	.455	.138	.112	-.120
Brands encourages customers to create solutions	.196	.229	.066	.031	.219	.764	.031	-.005	.120
Brands encourages customers to create solutions	.121	.005	.177	.054	.108	.817	.000	.259	.091
I feel like I am a part of a community	.442	.371	.133	.088	.094	.404	.083	.193	-.105
I feel as I am part of a brand family	.500	.425	.210	.209	.050	.401	-.013	.012	.014
I feel motivated to be part of a brand if it offers me discounts, coupons etc.	.251	.296	-.095	.128	.174	.248	.200	.206	.519
I feel brands offer allot of benefits online	-.118	.447	.051	.076	.183	.188	.183	.657	.052
I find brand platforms to be informative	.326	-.041	.143	-.003	.316	.143	-.016	.654	.165
I follow brands on social media platforms	.291	.016	.316	.127	.437	.171	-.131	.384	.111
I find it engaging, to have an conversation with a brand	.420	.059	.374	.284	.147	.303	.020	.279	.089
Social media platforms is the best way to connect to brands	-.071	.046	-.015	.215	.637	.330	.159	.215	.088
As a customer I am rarely passive	.200	.185	.381	.272	-.070	.235	-.033	.458	-.134
Brands social media platforms make a strong impression on me	.594	.224	-.048	.177	.236	.188	.209	.081	.066
Being involved in various brand activities on brand network platforms gives me an interesting sensory experience	.453	.258	.282	.219	.204	.151	-.140	.273	.113
Brands active on social platforms and communities appeal strongly to my senses.	.649	.181	.001	.105	.327	.009	-.037	.043	.203
Brand communities induces my feelings	.436	.272	.324	.428	.133	.284	.039	-.052	.041
Brands often strongly engages me emotionally	.614	.278	.253	.203	.004	.164	.215	.033	.052
Brands that ask for my opinions often stimulates my thinking	.311	.671	.218	.076	.172	-.030	.112	-.197	.101
Overall I'm satisfied	.243	.730	.055	.122	.134	.087	-.041	.152	.175
Being a customer has been a good choice for me	.151	.635	.165	.198	.084	.152	-.001	.145	.015
I engage in a lot of thinking as a customer of the brand	.579	.229	.281	.117	.062	.207	.256	.074	-.064
Brand has lived up to my expectations	.230	.553	.032	.063	.048	.314	.283	.122	-.070
I am part of online communities of brand like apple, Nike etc.	.169	.096	.183	.493	.511	.159	.151	-.120	-.092
I follow brand, I use on social media	.273	.147	.347	.113	.595	.167	.012	-.014	-.044
Brand network platforms provide with new information	.471	.308	.073	-.057	.465	.063	.212	.253	.068
Brand network platforms also equip me with some benefits like coupons etc.	.150	.384	.151	.192	.453	-.069	.253	.155	-.203
Brand network platforms keep me updated	.261	.115	.131	-.110	.695	.017	.061	.109	.123
I respond to requests by brands on digital platforms	.501	.017	.446	.051	.376	-.021	.132	.101	-.136
I find the brand to be good if it responses back to me	-.002	.289	.215	-.201	.284	-.002	.651	.022	.182
I trust brands who have online discussion forums	.190	.114	.297	.255	.284	-.115	.524	.078	-.332
I strongly associate with a brand that asks for my opinions	.232	-.066	.205	.211	.001	.128	.740	-.015	.207

I share information about brand's that talk to me on my social pages	.049	.115	.786	.123	.088	.098	.111	.205	.032
I intend to stay loyal to the brand that actively on digital platforms	.248	.145	.635	.171	.197	.160	.262	.063	.156
I intend to recommend the brand that has online communities and forums to other people	.157	.172	.697	.210	.220	.087	.230	-.025	.091
I intend to stay on as a customer if a brand responses to my requests	.114	.099	.463	.169	.039	.034	.255	.101	.626
Extraction Method: Principal Component Analysis.									
Rotation Method: Varimax with Kaiser Normalization									

a. Rotation converged in 24 iterations.

To determine the underlying relationship amongst various factors that have been discussed in various research papers over years a statistical factor analysis with Varimax rotation was applied as it maximizes the sum of the variances of the squared loadings which leads to all coefficients to be either large or zero with few intermediate value.

According to the factor analysis, rotated component matrix the co-relation values help determine the underlying relationship and define new constructs eliminating constructs with values lower than .5.

COMPONENT 1		Secondary Research suggested Construct	Research Construct
Brands active on social platforms and communities appeal strongly to my senses.	0.649	Experience	PERCIEVED QUALITY
Brands often strongly engages me emotionally	0.614	Perceived Quality	
Brands social media platforms make a strong impression on me	0.594	Perceived Quality	
I engage in a lot of thinking as a customer of the brand	0.579	Brand Association	

COMPONENT 2		Secondary Research suggested Construct	BRAND SATISFACTION
Overall I'm satisfied	0.73	Brand Satisfaction	
Brands that ask for my opinions often stimulates my thinking	0.671	Brand Association	
Being a customer has been a good choice for me	0.635	Brand Satisfaction	
Brand has lived up to my expectations	0.553	Brand Satisfaction	

COMPONENT 3		Secondary Research suggested Construct	BRAND LOYALTY
I share information about brand's that talk to me on my social pages	0.786	Perceived Quality	
I intend to recommend the brand that has online communities and forums to other people	0.697	Brand Loyalty	
I intend to stay loyal to the brand that actively on digital platforms	0.635	Brand Loyalty	
I intend to stay on as a customer if a brand responses to my requests	0.463	Brand Loyalty	
I respond to requests by brands on digital platforms	0.446	Brand Association	

COMPONENT 4		Secondary Research suggested Construct	INTERACTION
I often express my personal needs on network platforms	0.791	Interaction	
I often find solutions with the brand	0.685	Interaction	
I often give feedback for the brand to improve	0.565	Interaction	
I participate in conversations on various platforms	0.584	Interaction	
I am part of online communities of brand like apple, Nike etc.	0.493	Awareness	
Brand communities induces my feelings	0.428	Perceived Quality	

COMPONENT 5		Secondary Research suggested Construct	AWARENESS
Brand network platforms keep me updated	0.695	Awareness	
Social media platforms is the best way to connect to brands	0.637	Platform	
I follow brand, I use on social media	0.595	Awareness	
I am part of online communities of brand like apple, Nike etc.	0.511	Awareness	
Brand network platforms provide with new information	0.465	Awareness	
Brand network platforms also equip me with some benefits like coupons etc.	0.453	Economic Value	

COMPONENT 6		Secondary Research suggested Construct	CUSTOMER INVOLVEMENT
Brands encourages customers to create solutions	0.817	Interaction	
I am actively involved when a brand develops solutions for me	0.455	Interaction	
I feel like I am a part of a community	0.404	Community	
I feel as I am part of a brand family	0.401	Community	

COMPONENT 7		Secondary Research suggested Construct	BRAND ASSOCIATION
I strongly associate with a brand that asks for my opinions	0.74	Brand Association	
I find the brand to be good if it responses back to me	0.651	Brand Association	
I trust brands who have online discussion forums	0.524	Brand Association	

COMPONENT 8	Secondary Research suggested Construct	VALUE
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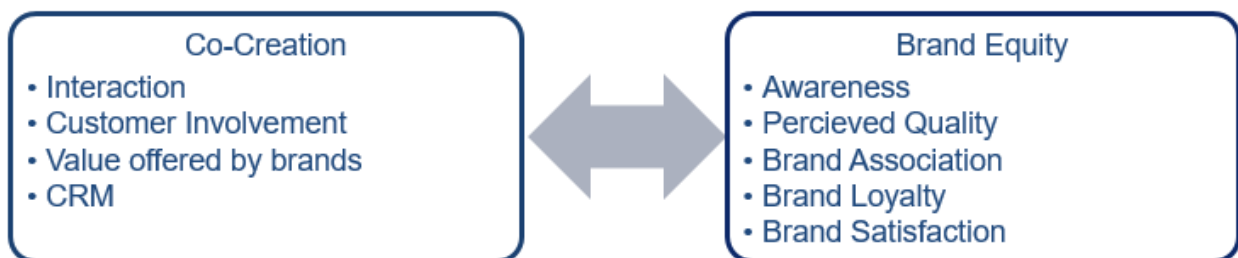
I feel brands offer allot of benefits online	0.657	Economic Value	
I find brand platforms to be informative	0.654	Awareness	
As a customer I am rarely passive	0.458	Brand Association	

COMPONENT 9		Secondary Research suggested Construct	CUSTOMER RELATIONSHIP MANAGEMENT
I intend to stay on as a customer if a brand responses to my requests	0.626	Brand Loyalty	
I feel motivated to be part of a brand if it offers me discounts, coupons etc.	0.519	Economic Value	

This above explained data points suggests a new conceptual model to determine interrelationship between Co-creation and Brand Equity. The new model could be explained as the following



New Model that can be derived after the new relationships found post factor analysis and correlation could be:



This derived model brings about a new set of hypothesis that needs to be verified using structural modeling or MANOVA and checked with normality plot explorations. Thus, the new hypothesis for the research can be:

- H1a.** Interaction has a positive impact on Awareness
- H1b.** Interaction has a positive impact on Perceived Quality
- H1c.** A positive interaction improves Brand Association
- H1d.** A positive interaction leads to strong brand loyalty
- H1e.** A positive interaction leads to higher level of brand satisfaction

**H2a** Customer Involvement improves the Awareness level  
**H2b** Customer Involvement has a positive impact on Perceived Quality  
**H2c.**Customer Involvement increases Brand Association  
**H2d.** Higher the Customer Involvement higher is the brand loyalty  
**H2e.** Greater customer involvement leads to a greater Brand Satisfaction

**H3a.** Greater the Value offered by a brand greater is the Brand Awareness  
**H3b.** Higher the Value offered by a brand a greater the perceived quality  
**H3c** Greater the Value offered by a brand higher the Brand Association

**H3d.** Value offered by a brand has a positive impact on Brand loyalty  
**H3e.** Greater the Value offered by a brand greater is the Brand Satisfaction

**H4a.** CRM helps build Brand Awareness  
**H4b.** CRM has a positive impact on perceived quality  
**H4c.** CRM helps builds Brand Association  
**H4d.** CRM helps build Brand loyalty  
**H4e.** CRM has a positive impact on Brand Satisfaction

## 12. Results:

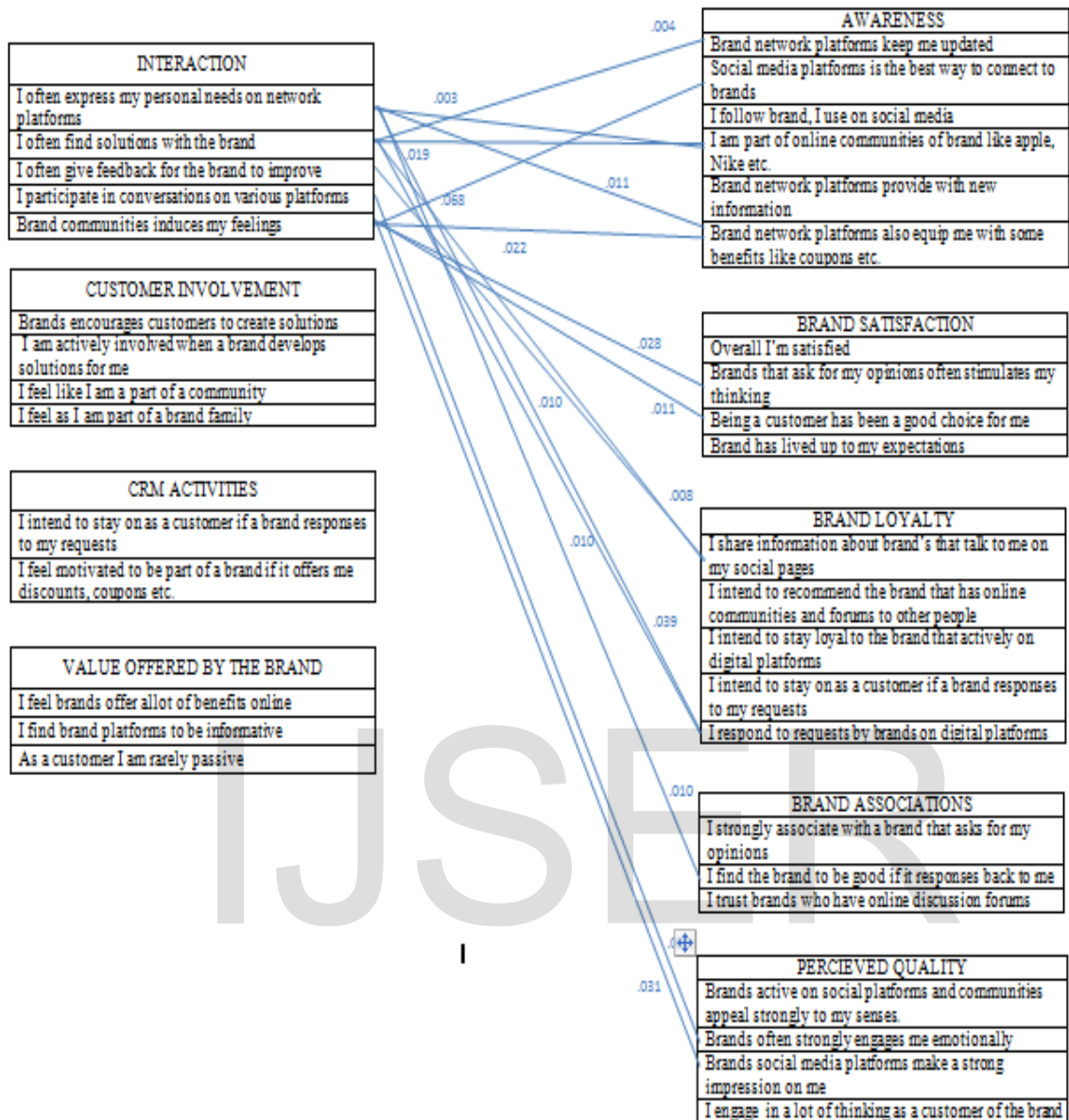
To validate the above hypothesis a statistical program, Multivariate analysis of variance and covariance with a descriptive analysis and homogeneity tests was carried out with SPSS 20 software package. To determine the co- relation between various approaches to co-creation and brand equity attributes. Wherein each factor is selected based the Wilks' Lambda that gives the proportion of variance in the dependent variables not accounted for by variation in the independent variables. A value closer to zero can be interpreted as the acceptance of the hypothesis. The partial eta squared associated with the main factors and the power to detect the main effect validates the hypothesis.

Thus, Brands need to interact with consumers and find solutions with them on digital platforms to increase the level awareness keeping updated at a significance level of 0.04, which is less than 0.05. Brand need to interact with its consumers and induce feelings like feeling of belongingness, which makes social media platforms as the best way to connect to brands with a 0.068 level of significance. Being part of communities and interacting with consumer improves Brand Awareness and it helps consumers share their personal needs on network platforms with a significance level of 0.03. Also, If network platforms equip with conversations, benefits etc. and induce feelings helps improves awareness level with 0.022 significant. Thus we accept the null hypothesis H1a Interaction has a positive impact on Awareness.

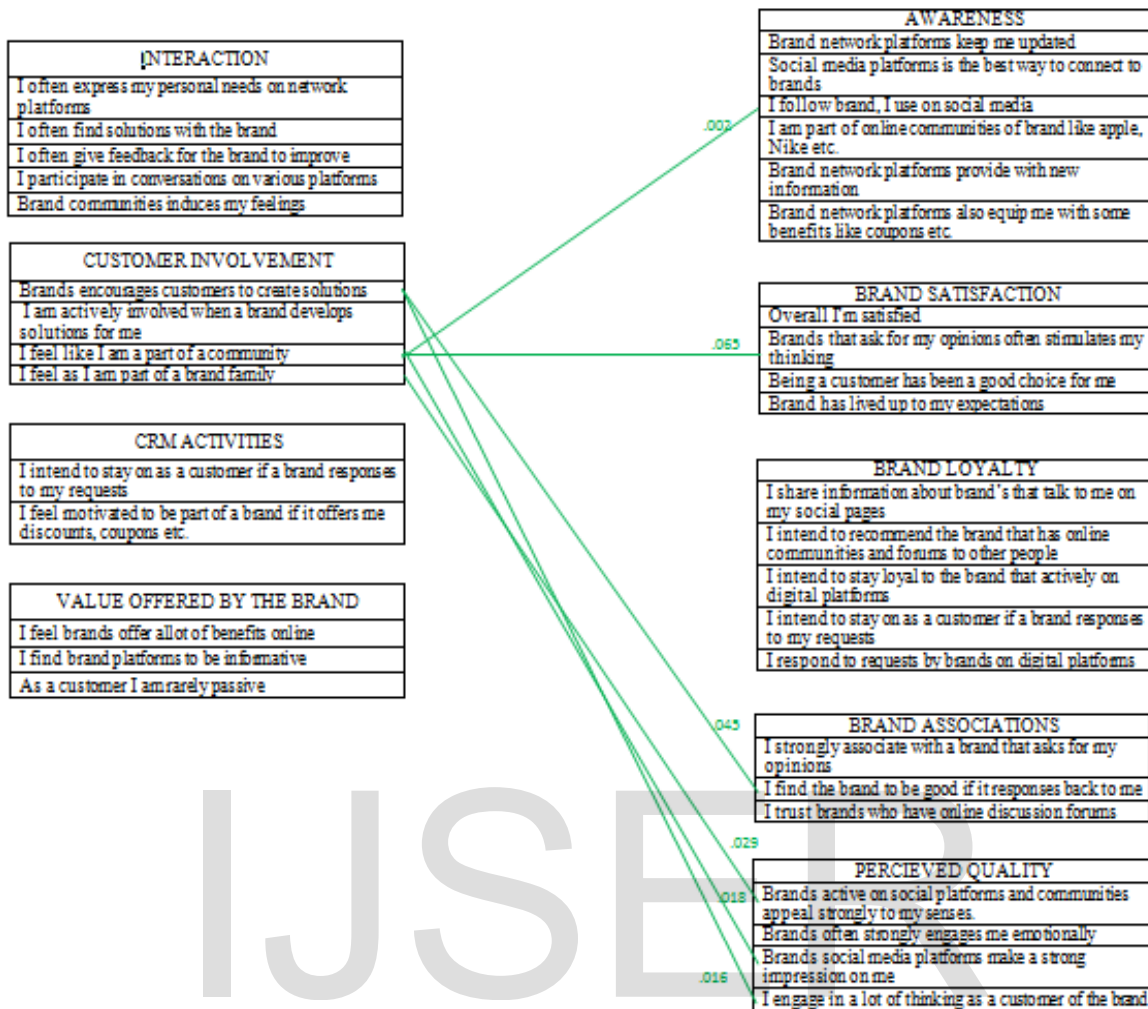
Brands that ask for consumer's opinions and stimulate their thinking having conversations on various platforms, communities etc. help boost the overall satisfaction level. Thus we accept the null hypothesis H1e that suggests a positive interaction leads to higher level of brand satisfaction. Brands that find solutions with their consumers and accept feedback from the brands, increases chances of a consumer to be brand loyalist and respond more on digital platforms with level of significance of 0.010, 0.019 respectively which suggests that a positive interaction leads to build brand loyalty. Thus, we accept the null hypothesis H1d.

A brand that have conversation on digital platforms with their consumers leads to an increment in the perceive quality with a significance of 0.023. Regular interactions on social media platforms make strong impression on the customer which in turn increases the perceived quality at 0.031significance. Thus we accept the null hypothesis H1b.





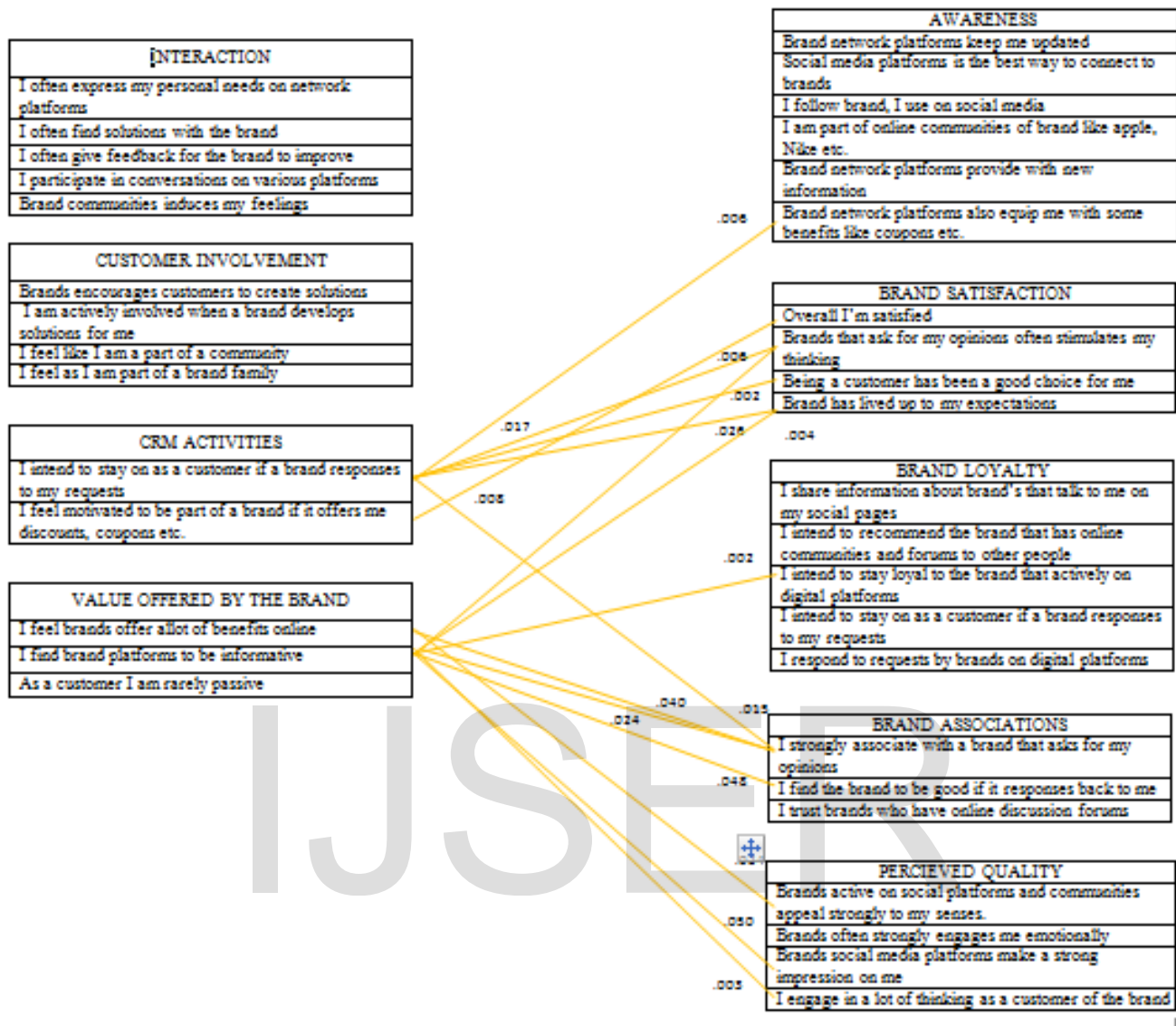
The model with its value of significance suggesting the interaction and its impact of brand equity is as shown above.



Communities help build awareness via pages on social media platforms as F test suggests significance of .002. Thus we accept the null hypothesis H2a. Also, social media platforms create strong impression on consumers with a 0.018 significance level thus improving the overall perception of quality.

If brands encourage consumers to create solution it increases their involvement level and thus, has a significant impact on Brand Association. The multivariate analysis suggests a significance of .045 at a 95% confidence interval. Thus we accept the hypothesis Customer Involvement increases Brand Association H2c.

Brand should involve more customers on social media by encouraging them to create solutions or carry out some crowdsourcing activity or competition as it improves the customers or consumers perception of quality. According to the multivariate analysis, F test suggests a significance of .016 which is  $p < 0.05$ . Brand should involve into activities and create small brand families within the larger cohort of a brand community and it appeals strongly to the customers sensibilities, thus enhancing perceived quality. F-test reveals a 0.029 significance level, which is less than 0.05. Thus, we accept the null hypothesis H2, Customer Involvement has a positive impact on Perceived Quality.



Brands that provide information about offers, coupons etc. on social media platforms and responds well to their queries help improve the awareness level as F-test suggests a 0.006 level of significance at 95 % confidence interval. Thus, we accept the null hypothesis H3a which suggests greater the value offered by a brand greater is the Brand Awareness level

Consumers are satisfied if brands offer benefits online as multivariate analysis suggests a significance of .008 at 95%confidence interval. Also, Brands that ask for opinions from its consumers it improves the overall level of satisfaction with a significance level of 0.006 which is less than 0.05.Thus, we accept the null hypothesis H3e i.e. brand that offer greater value online the greater is the level of Satisfaction.

If a brand responses to the consumers in time that makes consumers feel satisfied as they it makes them feel the brand to live up to their expectations. A 0.026 significance level Brands that provide information and knowledge to their consumers via digital platform helps increase the satisfaction level with a significance level of .004, which is less than 0.05. Thus, Greater the Value offered by a brand greater is the Brand Satisfaction; we accept the null hypothesis H3e.

Also, a brand that actively converse on digital platform and provide consumers with information about the brands etc. increases the chances for them to stay loyal with the brand. F-test suggests a 0.002 level of significance which validates hypothesis H3d; Value offered by a brand has a positive impact on Brand loyalty.

Brands that ask for opinions from consumer increase Brand Association and have.015 significance for the consumer to stay on as a customer. Also, Consumers think the brand to be the right choice for them, if the brand responses spontaneously to their requests, queries

etc. Thus, maintaining a good consumer relationship management is very important for brand with a 0.002 significance level significance which validates hypothesis H4d; CRM helps build Brand loyalty.

A brand needs to response back to consumer with informative solution that has a 0.048 level of significance which entails to H4b; CRM that has a positive impact on perceived quality. Also, if the brands offer benefits online on social media platforms, communities appeal strongly to consumers and brand platforms are informatively engaging and drive a lot of thinking as a customer of the brand at significance of 0.02, 0.03 that improves the perceived quality. Information as a value offered by brands needs to connect to consumer and engage them emotionally to improve the brands perceived quality. The multivariate analysis suggests a 0.05 significance level.

### **13. Discussion:**

#### ***Theoretical contributions***

This work's aim has been the study of the relation between value co-creation and brand equity with special reference to IT industry. Also, critically analyze the suggested conceptual framework from the literature written over years and coming up with a model that encapsulates the concept of co-creation and its impact on brand equity for IT industry digitally. This article conceptually contributes to the literature from different points-of-view. Firstly, by analyzing the consequences for Brand Equity it allows a greater comprehension of the value creation process. This is a fundamental aspect that might help a brand to grow, as it directly influences the customer retention and profitability. Secondly, it is, as far as the authors know, the first attempt to empirically measure value co-creation using Likert scale and a model with special reference to IT industry. This research adopts the point-of-view of the customers themselves, thus, creating it to be more valuable to the brands. The paper might help brands to get their fundamentals right for strategizing and give them a theoretical beat to lead.

#### ***Implications for management***

The findings of the study suggest that firms through their interaction forums should foster the customers' active participation in the value creation process, as this has been shown to have a positive influence on customer satisfaction. Therefore, and according to the results attained, firms should make an effort to favor this interaction. Brands need to interact with consumers and find solutions with them on digital platforms to increase the level awareness keeping updated. They can do so by creating appropriate communication channels and fostering the involvement of the customer in the process of the production of the service. Being part of communities and interacting with consumer improves Brand Awareness and it helps consumers share their personal needs on network platforms. Brand need to interact with its consumers and induce feelings like feeling of belongingness, which makes social media platforms as the best way to connect to brands. Brands that provide information about offers, coupons etc. on social media platforms and responds well to their queries help improve the awareness.

Stimulating the consumer thinking having conversations on various platforms, communities etc. help boost the overall satisfaction level. Consumers are satisfied if brands offer benefits online. Also, Brands that ask for opinions from its consumers it improves the overall level of satisfaction. If a brand responses to the consumers in time that makes consumers feel satisfied as they it makes them feel the brand to live up to their expectations. Brands that provide information and knowledge to their consumers via digital platform helps increase the satisfaction level. Brand that offer greater value online the greater is the level of Satisfaction.

Moreover, the analysis suggests a positive impact of higher level of involvement on perceived quality. Also, a firm must focus on what generates value for customers as it has shown a positive impact on brand loyalty.

On the other hand, the involvement of the customer in the co-creation process could lead to a negative impact wherein customers start blaming themselves for a possible problem. In this case, the dissatisfaction experienced will be less than when a customer is not involved in the process.

A quick response from the brand adds on to the customer's satisfaction i.e. proper CRM practices; connecting, interacting with customers with informative content and engaging with them on an emotional level eventually increases the brand's equity by improving the level of perceived quality. Constant updates and information shared with brands add on to the customer perceived value for the brand. Brand should involve more customers on social media by encouraging them to create solutions or carry out some crowdsourcing activity or competition as it improves the customers or consumers perception of quality. Consumers think the brand to be the right choice for them, if the brand responses spontaneously to their requests; queries etc. which leads to CRM helping build Brand loyalty

#### ***Limitations and future research lines***

The current research poses a series of limitations which can be considered before further studies are carried out on the pertaining subject.

The sample might not be a true representation of the universe. Also, the sample belongs to Pune city and it is evident that consumers in different geographies might have different perceptions about higher order concepts like Digital Co-creation.

Also, the no. of respondents (130) should be increased to at least 250 responses for a holistic picture. As 250 is an effective standard number considered for a quant research. The following are the main lines of future research.

We could compare results and generalize conclusions by replicating this study in other sectors and geographical areas. The study can provide a brand with critical insights and help them to device brand strategies incorporating constructs and the effect of the interdependency of the constructs- Co-creation, Brand equity-and its measures. It can also help quantitatively determine the ROI for a co-creation activity and the Tangible and intangible benefits of the process. Future research can be carried out to determine each proposed sub-construct and their detail influence on the major constructs. Also, the model can be revisited for various other industries and can be critically analyzed. Finally, the study adopts the customer as the analysis unit. It would be interesting to compare the firm's perspective in order to investigate to what extent this contributes to the value generation and what the customer's active participation in the process.

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## APPENDIX I

Multivariate Analysis of Variance and Covariance:

### DATA TABLE1: INTERACTION

Independent variable 1 vs. Dependent Variables

Multivariate Tests <sup>a</sup>									
Effect		Value	F	Hypothesis df	Error df	Sig.	Partial Eta Squared	Noncent. Parameter	Observed Power <sup>d</sup>
Intercept	Pillai's Trace	.907	58.46 <sub>1<sup>b</sup></sub>	5.000	30.000	.000	.907	292.303	1.000
	Wilks' Lambda	.093	58.46 <sub>1<sup>b</sup></sub>	5.000	30.000	.000	.907	292.303	1.000
	Hotelling's Trace	9.74 <sub>3</sub>	58.46 <sub>1<sup>b</sup></sub>	5.000	30.000	.000	.907	292.303	1.000
	Roy's Largest Root	9.74 <sub>3</sub>	58.46 <sub>1<sup>b</sup></sub>	5.000	30.000	.000	.907	292.303	1.000
Brandnetworkplatformsprovidedwith newinformation	Pillai's Trace	.595	1.154	20.000	132.000	.305	.149	23.081	.791
	Wilks' Lambda	.512	1.123	20.000	100.449	.339	.154	18.299	.642
	Hotelling's Trace	.758	1.080	20.000	114.000	.380	.159	21.598	.746
	Roy's Largest Root	.368	2.426 <sub>c</sub>	5.000	33.000	.056	.269	12.132	.692
Socialmediaplatformsis thebestwayto connecttobrands	Pillai's Trace	.865	1.821	20.000	132.000	.024	.216	36.428	.963



	Wilks' Lambda	.356	1.834	20.000	100.449	.027	.227	29.571	.891
	Hotelling's Trace	1.254	1.787	20.000	114.000	.030	.239	35.738	.955
	Roy's Largest Root	.633	4.178 <sub>c</sub>	5.000	33.000	.005	.388	20.888	.922
Ifollowbrandsonsocialmediaplatforms	Pillai's Trace	.688	1.372	20.000	132.000	.148	.172	27.438	.874
	Wilks' Lambda	.458	1.332	20.000	100.449	.177	.177	21.635	.738
	Hotelling's Trace	.894	1.273	20.000	114.000	.212	.183	25.465	.833
	Roy's Largest Root	.458	3.025 <sub>c</sub>	5.000	33.000	.023	.314	15.126	.800
IampartofonlinecommunitiesofbrandlikeappleNikeetc	Pillai's Trace	.838	1.749	20.000	132.000	.033	.209	34.981	.954
	Wilks' Lambda	.364	1.788	20.000	100.449	.032	.223	28.848	.881
	Hotelling's Trace	1.239	1.766	20.000	114.000	.033	.237	35.325	.952
	Roy's Largest Root	.633	4.175 <sub>c</sub>	5.000	33.000	.005	.387	20.877	.922
Brandnetworkplatformskeepmeupdated	Pillai's Trace	.758	1.544	20.000	132.000	.077	.190	30.882	.919
	Wilks' Lambda	.392	1.637	20.000	100.449	.058	.209	26.468	.843
	Hotelling's Trace	1.196	1.705	20.000	114.000	.042	.230	34.091	.943
	Roy's Largest Root	.863	5.694 <sub>c</sub>	5.000	33.000	.001	.463	28.469	.981
Brandnetworkplatformsalsoequipmewithsomebenefitslikecouponsetc	Pillai's Trace	.679	1.350	20.000	132.000	.160	.170	26.991	.867
	Wilks' Lambda	.445	1.389	20.000	100.449	.146	.183	22.541	.761
	Hotelling's Trace	.984	1.402	20.000	114.000	.136	.197	28.042	.876
	Roy's Largest Root	.624	4.120 <sub>c</sub>	5.000	33.000	.005	.384	20.598	.918
OverallI'msatisfied	Pillai's Trace	.730	1.473	20.000	132.000	.101	.182	29.460	.902
	Wilks' Lambda	.416	1.518	20.000	100.449	.091	.197	24.596	.807
	Hotelling's Trace	1.075	1.532	20.000	114.000	.084	.212	30.645	.911
	Roy's Largest Root	.690	4.553 <sub>c</sub>	5.000	33.000	.003	.408	22.767	.944
Brandsthataskformyopinionsoftenstimulatesmythinking	Pillai's Trace	.668	1.322	20.000	132.000	.176	.167	26.445	.858
	Wilks' Lambda	.462	1.316	20.000	100.449	.187	.175	21.380	.731
	Hotelling's Trace	.903	1.286	20.000	114.000	.203	.184	25.721	.837
	Roy's Largest Root	.476	3.145 <sub>c</sub>	5.000	33.000	.020	.323	15.724	.817
Beingacustomerhasbeenagoodchoiceforme	Pillai's Trace	.826	1.716	20.000	132.000	.038	.206	34.325	.949
	Wilks' Lambda	.377	1.716	20.000	100.449	.043	.216	27.714	.864
	Hotelling's Trace	1.173	1.672	20.000	114.000	.048	.227	33.440	.938
	Roy's Largest Root	.658	4.345 <sub>c</sub>	5.000	33.000	.004	.397	21.726	.933



Brandhasliveduptomyexpectations	Pillai's Trace	.729	1.472	20.000	132.000	.102	.182	29.431	.902
	Wilks' Lambda	.415	1.525	20.000	100.449	.089	.197	24.700	.809
	Hotelling's Trace	1.079	1.538	20.000	114.000	.082	.212	30.761	.912
	Roy's Largest Root	.617	4.074 <sub>c</sub>	5.000	33.000	.005	.382	20.369	.915
Ishareinformationaboutbrand'sthattalktomeonmysocialpages	Pillai's Trace	.835	1.741	20.000	132.000	.034	.209	34.823	.953
	Wilks' Lambda	.340	1.933	20.000	100.449	.018	.237	31.127	.910
	Hotelling's Trace	1.469	2.093	20.000	114.000	.008	.269	41.866	.982
	Roy's Largest Root	1.104	7.288 <sub>c</sub>	5.000	33.000	.000	.525	36.440	.996
Iintendstostayloyaltothebrandthatactivelyondigitalplatforms	Pillai's Trace	.409	.751	20.000	132.000	.767	.102	15.017	.548
	Wilks' Lambda	.642	.719	20.000	100.449	.799	.105	11.777	.410
	Hotelling's Trace	.483	.688	20.000	114.000	.831	.108	13.769	.493
	Roy's Largest Root	.253	1.668 <sub>c</sub>	5.000	33.000	.170	.202	8.340	.506
Iintendtorecommendthebrandthathasonlinecommunitiesandforumstooth	Pillai's Trace	.689	1.373	20.000	132.000	.147	.172	27.461	.875
	Wilks' Lambda	.422	1.493	20.000	100.449	.100	.194	24.198	.799
	Hotelling's Trace	1.124	1.602	20.000	114.000	.064	.219	32.034	.925
	Roy's Largest Root	.878	5.794 <sub>c</sub>	5.000	33.000	.001	.467	28.969	.983
Iintendstostayonasacustomerifabrandresponsestomyrequests	Pillai's Trace	.609	1.184	20.000	132.000	.278	.152	23.684	.805
	Wilks' Lambda	.504	1.151	20.000	100.449	.313	.157	18.741	.656
	Hotelling's Trace	.776	1.106	20.000	114.000	.353	.162	22.118	.759
	Roy's Largest Root	.400	2.638 <sub>c</sub>	5.000	33.000	.041	.286	13.189	.734
Irespondtorequestsbybrandsondigitalplatforms	Pillai's Trace	.805	1.664	20.000	132.000	.047	.201	33.274	.941
	Wilks' Lambda	.361	1.804	20.000	100.449	.030	.225	29.107	.885
	Hotelling's Trace	1.330	1.895	20.000	114.000	.019	.249	37.895	.967
	Roy's Largest Root	.897	5.920 <sub>c</sub>	5.000	33.000	.001	.473	29.602	.985
Istronglyassociatewithabrandthatastksformyopinions	Pillai's Trace	.623	1.218	20.000	132.000	.250	.156	24.354	.819
	Wilks' Lambda	.469	1.287	20.000	100.449	.206	.172	20.914	.719
	Hotelling's Trace	.944	1.345	20.000	114.000	.166	.191	26.893	.858
	Roy's Largest Root	.711	4.693 <sub>c</sub>	5.000	33.000	.002	.416	23.464	.951
Ifindthebrandtobegoodifitresponsesbacktome	Pillai's Trace	.886	1.878	20.000	132.000	.019	.221	37.556	.968
	Wilks' Lambda	.350	1.869	20.000	100.449	.023	.231	30.128	.898
	Hotelling's Trace	1.257	1.792	20.000	114.000	.030	.239	35.832	.955

	Roy's Largest Root	.520	3.434 <sub>c</sub>	5.000	33.00 0	.01 3	.342	17.171	.855
I trust brands who have online discussion forums	Pillai's Trace	.354	.642	20.000	132.0 00	.87 4	.089	12.836	.466
	Wilks' Lambda	.675	.631	20.000	100.4 49	.88 0	.094	10.365	.357
	Hotelling's Trace	.439	.625	20.000	114.0 00	.88 7	.099	12.499	.445
	Roy's Largest Root	.323	2.133 <sub>c</sub>	5.000	33.00 0	.08 6	.244	10.663	.627
Brands active on social platforms and communities appeal strongly to my senses	Pillai's Trace	.397	.728	20.000	132.0 00	.79 1	.099	14.563	.532
	Wilks' Lambda	.646	.707	20.000	100.4 49	.81 1	.103	11.592	.403
	Hotelling's Trace	.483	.688	20.000	114.0 00	.83 1	.108	13.764	.493
	Roy's Largest Root	.303	1.998 <sub>c</sub>	5.000	33.00 0	.10 5	.232	9.990	.594
Brands often strongly engage me emotionally	Pillai's Trace	.657	1.298	20.000	132.0 00	.19 1	.164	25.960	.850
	Wilks' Lambda	.474	1.270	20.000	100.4 49	.21 7	.170	20.638	.711
	Hotelling's Trace	.858	1.223	20.000	114.0 00	.24 9	.177	24.455	.812
	Roy's Largest Root	.447	2.949 <sub>c</sub>	5.000	33.00 0	.02 6	.309	14.747	.788
Brands' social media platforms make a strong impression on me	Pillai's Trace	.618	1.207	20.000	132.0 00	.25 8	.155	24.144	.815
	Wilks' Lambda	.482	1.235	20.000	100.4 49	.24 2	.167	20.093	.696
	Hotelling's Trace	.876	1.248	20.000	114.0 00	.23 0	.180	24.955	.823
	Roy's Largest Root	.585	3.859 <sub>c</sub>	5.000	33.00 0	.00 7	.369	19.296	.897
I engage a lot of thought as a customer of the brand	Pillai's Trace	.618	1.205	20.000	132.0 00	.26 0	.154	24.098	.814
	Wilks' Lambda	.493	1.192	20.000	100.4 49	.27 7	.162	19.406	.676
	Hotelling's Trace	.818	1.166	20.000	114.0 00	.29 7	.170	23.310	.788
	Roy's Largest Root	.472	3.118 <sub>c</sub>	5.000	33.00 0	.02 1	.321	15.588	.814
a. Design: Intercept + Brand network platforms provide with new information + Social media platforms is the best way to connect to brands + I follow brands on social media platforms + I am part of online communities of brands like Apple, Nike etc + Brand network platforms keep me up to date + Brand network platforms also equip me with some benefits like coupons etc + Overall I'm satisfied + Brands that ask for my opinion often stimulate my thinking + Being a customer has been a good choice for me + Brand has lived up to my expectations + I share information about brand's that talk to me on my social pages + I intend to stay loyal to the brand that actively on digital platforms + I intend to recommend the brand that has an online community and forum too + I intend to stay on as a customer if a brand responds to my requests + I respond to requests by brands on digital platforms + I strongly associate with a brand that asks for my opinions + I find the brand to be good if it responds back to me + I trust brands who have online discussion forums + Brands active on social platforms and communities appeal strongly to my senses + Brands often strongly engage me emotionally + Brands' social media platforms make a strong impression on me + I engage a lot of thought as a customer of the brand									
b. Exact statistic									
c. The statistic is an upper bound on F that yields a lower bound on the significance level.									
d. Computed using alpha = .05									

#### Levene's Test of Equality of Error Variances<sup>a</sup>

	F	df1	df2	Sig.
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I often express my personal needs on network platforms	.841	118	4	.681
I often find solutions with the brand	3.361	118	4	.121
I participate in conversations on various platforms	3623.649	118	4	.000
I often give feedback for the brand to improve	18.416	118	4	.006
Brand communities induces my feelings	.	118	4	.

Tests the null hypothesis that the error variance of the dependent variable is equal across groups.

Tests of Between-Subjects Effects									
Source	Dependent Variable	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared	Noncent. Parameter	Observed Power <sup>f</sup>
Corrected Model	I often express my personal needs on network platforms	159.686 <sup>a</sup>	88	1.815	1.818	.026	.825	159.968	.984
	I often find solutions with the brand	137.525 <sup>b</sup>	88	1.563	2.092	.009	.844	184.072	.995
	I participate in conversations on various platforms	134.710 <sup>c</sup>	88	1.531	2.082	.009	.843	183.224	.994
	I often give feedback for the brand to improve	142.116 <sup>d</sup>	88	1.615	2.146	.007	.847	188.812	.996
	Brand communities induces my feelings	112.871 <sup>e</sup>	88	1.283	2.898	.000	.882	255.037	1.000
Intercept	I often express my personal needs on network platforms	51.092	1	51.092	51.182	.000	.601	51.182	1.000
	I often find solutions with the brand	75.003	1	75.003	100.389	.000	.747	100.389	1.000
	I participate in conversations on various platforms	63.531	1	63.531	86.411	.000	.718	86.411	1.000
	I often give feedback for the brand to improve	62.910	1	62.910	83.580	.000	.711	83.580	1.000
	Brand communities induces my feelings	68.391	1	68.391	154.532	.000	.820	154.532	1.000
Brandnetworkplatformsprovidewith newinformation	I often express my personal needs on network platforms	1.933	4	.483	.484	.747	.054	1.937	.150
	I often find solutions with the brand	2.123	4	.531	.711	.590	.077	2.842	.206
	I participate in conversations on various platforms	3.399	4	.850	1.156	.347	.120	4.624	.323
	I often give feedback for the brand to improve	.698	4	.174	.232	.919	.027	.927	.094
	Brand communities induces my feelings	3.703	4	.926	2.092	.103	.198	8.368	.560
Socialmediaplatformsisthebestwaytoconnecttobrands	I often express my personal needs on network platforms	5.184	4	1.296	1.298	.290	.133	5.194	.361
	I often find solutions with the brand	5.764	4	1.441	1.929	.128	.185	7.715	.521
	I participate in conversations on various platforms	5.369	4	1.342	1.825	.147	.177	7.302	.496
	I often give feedback for the brand to improve	3.566	4	.891	1.184	.335	.122	4.737	.330
	Brand communities induces my feelings	4.280	4	1.070	2.418	.068	.221	9.671	.631
Ifollowbrandsonsocialmediaplatforms	I often express my personal needs on network platforms	2.381	4	.595	.596	.668	.066	2.386	.177
	I often find solutions with the brand	5.985	4	1.496	2.003	.116	.191	8.010	.539

	I participate in conversations on various platforms	3.587	4	.897	1.220	.321	.125	4.879	.340
	I often give feedback for the brand to improve	2.068	4	.517	.687	.606	.075	2.747	.200
	Brand communities induces my feelings	2.160	4	.540	1.220	.320	.126	4.880	.340
I am part of online communities of brands like Apple, Nike etc	I often express my personal needs on network platforms	19.558	4	4.889	4.898	.003	.366	19.592	.930
	I often find solutions with the brand	10.242	4	2.560	3.427	.019	.287	13.709	.800
	I participate in conversations on various platforms	6.006	4	1.501	2.042	.110	.194	8.169	.548
	I often give feedback for the brand to improve	5.270	4	1.318	1.750	.162	.171	7.002	.478
	Brand communities induces my feelings	2.862	4	.715	1.616	.193	.160	6.466	.444
Brand network platforms keep me updated	I often express my personal needs on network platforms	6.316	4	1.579	1.582	.202	.157	6.327	.435
	I often find solutions with the brand	13.794	4	3.448	4.616	.004	.352	18.463	.913
	I participate in conversations on various platforms	5.370	4	1.343	1.826	.147	.177	7.304	.497
	I often give feedback for the brand to improve	4.009	4	1.002	1.332	.278	.135	5.326	.370
	Brand communities induces my feelings	2.106	4	.527	1.190	.333	.123	4.759	.332
Brand network platforms also equip me with some benefits like coupon sets etc	I often express my personal needs on network platforms	15.340	4	3.835	3.842	.011	.311	15.367	.849
	I often find solutions with the brand	1.450	4	.362	.485	.747	.054	1.940	.151
	I participate in conversations on various platforms	2.153	4	.538	.732	.577	.079	2.928	.211
	I often give feedback for the brand to improve	1.981	4	.495	.658	.625	.072	2.632	.193
	Brand communities induces my feelings	5.837	4	1.459	3.297	.022	.279	13.188	.782
Overall I'm satisfied	I often express my personal needs on network platforms	3.187	4	.797	.798	.535	.086	3.193	.228
	I often find solutions with the brand	6.637	4	1.659	2.221	.087	.207	8.883	.589
	I participate in conversations on various platforms	3.427	4	.857	1.165	.343	.121	4.662	.325
	I often give feedback for the brand to improve	1.549	4	.387	.514	.726	.057	2.058	.158
	Brand communities induces my feelings	2.886	4	.721	1.630	.189	.161	6.520	.447
Brand that ask for my opinion often stimulates my thinking	I often express my personal needs on network platforms	5.088	4	1.272	1.274	.299	.130	5.097	.354
	I often find solutions with the brand	1.647	4	.412	.551	.699	.061	2.204	.166
	I participate in conversations on various platforms	3.762	4	.941	1.279	.297	.131	5.117	.356
	I often give feedback for the brand to improve	3.290	4	.822	1.093	.376	.114	4.371	.306
	Brand communities induces my feelings	5.487	4	1.372	3.099	.028	.267	12.397	.753
Being a customer has been a good choice for me	I often express my personal needs on network platforms	5.727	4	1.432	1.434	.244	.144	5.738	.397
	I often find solutions with the brand	4.554	4	1.138	1.524	.217	.152	6.095	.420
	I participate in conversations on various platforms	3.962	4	.991	1.347	.273	.137	5.390	.374

	I often give feedback for the brand to improve	.894	4	.224	.297	.878	.034	1.188	.108
	Brand communities induces my feelings	6.859	4	1.715	3.875	.011	.313	15.499	.852
Brand has lived up to my expectations	I often express my personal needs on network platforms	7.425	4	1.856	1.859	.140	.179	7.438	.505
	I often find solutions with the brand	3.251	4	.813	1.088	.378	.113	4.352	.305
	I participate in conversations on various platforms	1.633	4	.408	.555	.696	.061	2.222	.167
	I often give feedback for the brand to improve	5.851	4	1.463	1.943	.126	.186	7.773	.525
	Brand communities induces my feelings	2.877	4	.719	1.625	.190	.161	6.501	.446
I share information about brand's that I talk to on my social pages	I often express my personal needs on network platforms	5.695	4	1.424	1.426	.246	.144	5.705	.395
	I often find solutions with the brand	12.288	4	3.072	4.112	.008	.326	16.447	.874
	I participate in conversations on various platforms	.524	4	.131	.178	.948	.021	.713	.083
	I often give feedback for the brand to improve	11.930	4	2.982	3.962	.010	.318	15.850	.861
	Brand communities induces my feelings	.517	4	.129	.292	.881	.033	1.168	.107
I intend to stay loyal to the brand that acts very on digital platforms	I often express my personal needs on network platforms	2.917	4	.729	.731	.577	.079	2.922	.211
	I often find solutions with the brand	4.056	4	1.014	1.357	.269	.138	5.428	.376
	I participate in conversations on various platforms	3.371	4	.843	1.146	.352	.119	4.585	.320
	I often give feedback for the brand to improve	3.230	4	.807	1.073	.385	.112	4.291	.301
	Brand communities induces my feelings	1.808	4	.452	1.021	.410	.107	4.085	.287
I intend to recommend the brand that has an online community and forum to others	I often express my personal needs on network platforms	9.792	4	2.448	2.452	.065	.224	9.809	.638
	I often find solutions with the brand	12.007	4	3.002	4.018	.009	.321	16.071	.866
	I participate in conversations on various platforms	1.950	4	.488	.663	.622	.072	2.653	.194
	I often give feedback for the brand to improve	3.446	4	.861	1.144	.352	.119	4.578	.320
	Brand communities induces my feelings	1.482	4	.370	.837	.511	.090	3.348	.238
I intend to stay on as a customer if a brand responds to my requests	I often express my personal needs on network platforms	2.798	4	.700	.701	.597	.076	2.803	.203
	I often find solutions with the brand	5.775	4	1.444	1.932	.128	.185	7.729	.522
	I participate in conversations on various platforms	1.678	4	.419	.570	.686	.063	2.282	.171
	I often give feedback for the brand to improve	3.620	4	.905	1.202	.328	.124	4.809	.335
	Brand communities induces my feelings	1.789	4	.447	1.010	.416	.106	4.042	.284
I respond to requests by brands on digital platforms	I often express my personal needs on network platforms	11.328	4	2.832	2.837	.039	.250	11.348	.710
	I often find solutions with the brand	11.846	4	2.961	3.964	.010	.318	15.855	.861
	I participate in conversations on various platforms	.641	4	.160	.218	.927	.025	.872	.091
	I often give feedback for the brand to improve	4.407	4	1.102	1.464	.235	.147	5.855	.404

	Brand communities induces my feelings	2.442	4	.610	1.379	.262	.140	5.517	.382
I strongly associate with a brand that asks for my opinions	I often express my personal needs on network platforms	2.987	4	.747	.748	.566	.081	2.992	.216
	I often find solutions with the brand	5.069	4	1.267	1.696	.174	.166	6.784	.464
	I participate in conversations on various platforms	2.065	4	.516	.702	.596	.076	2.809	.204
	I often give feedback for the brand to improve	4.082	4	1.020	1.356	.270	.138	5.423	.376
	Brand communities induces my feelings	2.035	4	.509	1.150	.350	.119	4.599	.321
	I often express my personal needs on network platforms	15.659	4	3.915	3.922	.010	.316	15.687	.857
I find the brand to be good if it responds back to me	I often find solutions with the brand	6.820	4	1.705	2.282	.081	.212	9.128	.602
	I participate in conversations on various platforms	6.200	4	1.550	2.108	.101	.199	8.433	.563
	I often give feedback for the brand to improve	5.421	4	1.355	1.801	.152	.175	7.202	.490
	Brand communities induces my feelings	2.147	4	.537	1.213	.323	.125	4.851	.338
	I often express my personal needs on network platforms	5.657	4	1.414	1.417	.249	.143	5.667	.392
I trust brands who have online discussions on forums	I often find solutions with the brand	1.249	4	.312	.418	.795	.047	1.672	.135
	I participate in conversations on various platforms	.971	4	.243	.330	.856	.037	1.320	.115
	I often give feedback for the brand to improve	1.332	4	.333	.442	.777	.049	1.770	.141
	Brand communities induces my feelings	1.300	4	.325	.735	.575	.080	2.939	.212
	I often express my personal needs on network platforms	2.263	4	.566	.567	.688	.063	2.267	.170
Brands active on social platforms and communities appeal strongly to my senses	I often find solutions with the brand	4.160	4	1.040	1.392	.257	.141	5.568	.386
	I participate in conversations on various platforms	1.228	4	.307	.417	.795	.047	1.670	.135
	I often give feedback for the brand to improve	2.863	4	.716	.951	.447	.101	3.804	.268
	Brand communities induces my feelings	.279	4	.070	.158	.958	.018	.630	.079
	I often express my personal needs on network platforms	4.316	4	1.079	1.081	.381	.113	4.324	.303
Brands often strongly engage me emotionally	I often find solutions with the brand	4.115	4	1.029	1.377	.263	.139	5.508	.382
	I participate in conversations on various platforms	9.575	4	2.394	3.256	.023	.277	13.023	.777
	I often give feedback for the brand to improve	2.834	4	.709	.941	.452	.100	3.765	.266
	Brand communities induces my feelings	.605	4	.151	.341	.848	.039	1.366	.118
	I often express my personal needs on network platforms	9.125	4	2.281	2.285	.080	.212	9.141	.603
Brands social media platforms make a strong impression on me	I often find solutions with the brand	1.809	4	.452	.605	.661	.066	2.421	.180
	I participate in conversations on various platforms	.739	4	.185	.251	.907	.029	1.006	.098
	I often give feedback for the brand to improve	.792	4	.198	.263	.900	.030	1.052	.101
	Brand communities induces my feelings	5.355	4	1.339	3.025	.031	.262	12.099	.742
	I often express my personal needs on network platforms								

I engage in a lot of thinking as a customer of the brand	I often express my personal needs on network platforms	4.694	4	1.173	1.176	.339	.121	4.702	.328
	I often find solutions with the brand	.739	4	.185	.247	.909	.028	.990	.097
	I participate in conversations on various platforms	2.535	4	.634	.862	.497	.092	3.448	.245
	I often give feedback for the brand to improve	3.550	4	.888	1.179	.337	.122	4.716	.329
	Brand communities induces my feelings	4.373	4	1.093	2.470	.063	.225	9.880	.641
Error	I often express my personal needs on network platforms	33.940	34	.998					
	I often find solutions with the brand	25.402	34	.747					
	I participate in conversations on various platforms	24.997	34	.735					
	I often give feedback for the brand to improve	25.591	34	.753					
	Brand communities induces my feelings	15.047	34	.443					
Total	I often express my personal needs on network platforms	1139.000	123						
	I often find solutions with the brand	1252.000	123						
	I participate in conversations on various platforms	1231.000	123						
	I often give feedback for the brand to improve	1311.000	123						
	Brand communities induces my feelings	1333.000	123						
Corrected Total	I often express my personal needs on network platforms	193.626	122						
	I often find solutions with the brand	162.927	122						
	I participate in conversations on various platforms	159.707	122						
	I often give feedback for the brand to improve	167.707	122						
	Brand communities induces my feelings	127.919	122						
a. R Squared = .825 (Adjusted R Squared = .371)									
b. R Squared = .844 (Adjusted R Squared = .441)									
c. R Squared = .843 (Adjusted R Squared = .438)									
d. R Squared = .847 (Adjusted R Squared = .452)									
e. R Squared = .882 (Adjusted R Squared = .578)									
f. Computed using alpha = .05									

**DATA TABLE 2: CUSTOMER INVOLVEMENT**  
Independent Variable 2 vs. Dependent variables

Multivariate Tests <sup>a</sup>									
Effect		Value	F	Hypothesis df	Error df	Sig.	Partial Eta Squared	Noncent. Parameter	Observed Power <sup>d</sup>
Intercept	Pillai's Trace	.895	68.03 <sub>g<sup>b</sup></sub>	4.000	32.000	.000	.895	272.155	1.000
	Wilks' Lambda	.105	68.03 <sub>g<sup>b</sup></sub>	4.000	32.000	.000	.895	272.155	1.000
	Hotelling's Trace	8.505	68.03 <sub>g<sup>b</sup></sub>	4.000	32.000	.000	.895	272.155	1.000



	Roy's Largest Root	8.50 5	68.03 9 <sup>b</sup>	4.000	32.00 0	.00 0	.895	272.155	1.000
Brandnetworkplatformsprovide withnewinformation	Pillai's Trace	.510	1.277	16.000	140.0 00	.22 0	.127	20.439	.784
	Wilks' Lambda	.564	1.269	16.000	98.39 9	.23 3	.133	15.154	.597
	Hotelling's Trace	.649	1.236	16.000	122.0 00	.25 0	.140	19.782	.760
	Roy's Largest Root	.342	2.990 c	4.000	35.00 0	.03 2	.255	11.960	.738
Socialmediaplatformsisthebestway toconnecttobrand	Pillai's Trace	.381	.921	16.000	140.0 00	.54 6	.095	14.742	.602
	Wilks' Lambda	.659	.900	16.000	98.39 9	.57 1	.099	10.820	.424
	Hotelling's Trace	.459	.874	16.000	122.0 00	.60 0	.103	13.985	.565
	Roy's Largest Root	.231	2.024 c	4.000	35.00 0	.11 2	.188	8.095	.546
Ifollowbrandsonsocialmediaplatforms	Pillai's Trace	.603	1.554	16.000	140.0 00	.08 9	.151	24.868	.876
	Wilks' Lambda	.485	1.645	16.000	98.39 9	.07 1	.166	19.524	.740
	Hotelling's Trace	.889	1.695	16.000	122.0 00	.05 6	.182	27.117	.905
	Roy's Largest Root	.656	5.737 c	4.000	35.00 0	.00 1	.396	22.950	.964
Iampartofonlinecommunitiesofbrand likeappleNikeetc	Pillai's Trace	.455	1.122	16.000	140.0 00	.34 0	.114	17.958	.713
	Wilks' Lambda	.608	1.090	16.000	98.39 9	.37 5	.117	13.054	.516
	Hotelling's Trace	.548	1.045	16.000	122.0 00	.41 5	.121	16.724	.666
	Roy's Largest Root	.268	2.344 c	4.000	35.00 0	.07 4	.211	9.374	.617
Brandnetworkplatformskeepmeup dated	Pillai's Trace	.338	.808	16.000	140.0 00	.67 5	.085	12.926	.530
	Wilks' Lambda	.681	.824	16.000	98.39 9	.65 6	.092	9.913	.386
	Hotelling's Trace	.440	.839	16.000	122.0 00	.64 0	.099	13.419	.543
	Roy's Largest Root	.365	3.191 c	4.000	35.00 0	.02 5	.267	12.766	.769
Brandnetworkplatformsalsoequip me withsomebenefitslikecouponsetc	Pillai's Trace	.304	.721	16.000	140.0 00	.76 9	.076	11.530	.471
	Wilks' Lambda	.713	.719	16.000	98.39 9	.76 9	.081	8.665	.334
	Hotelling's Trace	.377	.718	16.000	122.0 00	.77 1	.086	11.493	.464
	Roy's Largest Root	.297	2.602 c	4.000	35.00 0	.05 3	.229	10.410	.669
OverallI'msatisfied	Pillai's Trace	.644	1.681	16.000	140.0 00	.05 7	.161	26.889	.906
	Wilks' Lambda	.477	1.688	16.000	98.39 9	.06 1	.169	20.029	.753
	Hotelling's Trace	.861	1.642	16.000	122.0 00	.06 8	.177	26.267	.893
	Roy's Largest Root	.466	4.082 c	4.000	35.00 0	.00 8	.318	16.327	.873
Brandsthataskformyopinionsoften stimulatesmythinking	Pillai's Trace	.639	1.662	16.000	140.0 00	.06 1	.160	26.594	.902
	Wilks' Lambda	.461	1.774	16.000	98.39 9	.04 6	.176	21.012	.779

	Hotelling's Trace	.958	1.827	16.000	122.000	.035	.193	29.224	.929
	Roy's Largest Root	.659	5.770 <sub>c</sub>	4.000	35.000	.001	.397	23.078	.965
Being a customer has been a good choice for me	Pillai's Trace	.512	1.285	16.000	140.000	.215	.128	20.560	.787
	Wilks' Lambda	.561	1.280	16.000	98.399	.225	.134	15.289	.602
	Hotelling's Trace	.656	1.251	16.000	122.000	.240	.141	20.012	.766
	Roy's Largest Root	.356	3.118 <sub>c</sub>	4.000	35.000	.027	.263	12.470	.758
Brand has lived up to my expectations	Pillai's Trace	.339	.811	16.000	140.000	.672	.085	12.974	.532
	Wilks' Lambda	.695	.778	16.000	98.399	.707	.087	9.370	.364
	Hotelling's Trace	.391	.746	16.000	122.000	.742	.089	11.931	.482
	Roy's Largest Root	.205	1.797 <sub>c</sub>	4.000	35.000	.151	.170	7.189	.491
I share information about brand that I talk to me on my social pages	Pillai's Trace	.390	.946	16.000	140.000	.519	.098	15.135	.616
	Wilks' Lambda	.639	.969	16.000	98.399	.495	.106	11.640	.458
	Hotelling's Trace	.519	.989	16.000	122.000	.474	.115	15.818	.634
	Roy's Largest Root	.419	3.666 <sub>c</sub>	4.000	35.000	.014	.295	14.664	.831
I intend to stay loyal to the brand that actsively on digital platforms	Pillai's Trace	.392	.949	16.000	140.000	.515	.098	15.189	.618
	Wilks' Lambda	.651	.926	16.000	98.399	.542	.102	11.127	.437
	Hotelling's Trace	.472	.899	16.000	122.000	.572	.105	14.385	.581
	Roy's Largest Root	.293	2.562 <sub>c</sub>	4.000	35.000	.055	.227	10.250	.662
I intend to recommend the brand that has an online community and forum to others	Pillai's Trace	.513	1.288	16.000	140.000	.213	.128	20.610	.788
	Wilks' Lambda	.560	1.284	16.000	98.399	.223	.135	15.333	.603
	Hotelling's Trace	.658	1.255	16.000	122.000	.237	.141	20.078	.767
	Roy's Largest Root	.351	3.069 <sub>c</sub>	4.000	35.000	.029	.260	12.274	.750
I intend to stay on as a customer if a brand responds to my requests	Pillai's Trace	.443	1.090	16.000	140.000	.370	.111	17.442	.697
	Wilks' Lambda	.602	1.113	16.000	98.399	.354	.119	13.325	.527
	Hotelling's Trace	.588	1.122	16.000	122.000	.343	.128	17.948	.706
	Roy's Largest Root	.422	3.697 <sub>c</sub>	4.000	35.000	.013	.297	14.787	.834
I respond to requests by brands on digital platforms	Pillai's Trace	.589	1.512	16.000	140.000	.103	.147	24.196	.865
	Wilks' Lambda	.509	1.519	16.000	98.399	.108	.155	18.069	.696
	Hotelling's Trace	.779	1.486	16.000	122.000	.116	.163	23.769	.851
	Roy's Largest Root	.438	3.830 <sub>c</sub>	4.000	35.000	.011	.304	15.318	.849
I strongly associate with a brand that asks for my opinions	Pillai's Trace	.480	1.194	16.000	140.000	.280	.120	19.107	.748

	Wilks' Lambda	.579	1.206	16.000	98.39 9	.27 7	.128	14.425	.570
	Hotelling's Trace	.629	1.198	16.000	122.0 00	.27 9	.136	19.173	.742
	Roy's Largest Root	.392	3.432 c	4.000	35.00 0	.01 8	.282	13.730	.802
Ifindthebrandtobegoodifitresponses backtome	Pillai's Trace	.436	1.072	16.000	140.0 00	.38 8	.109	17.148	.687
	Wilks' Lambda	.610	1.080	16.000	98.39 9	.38 4	.116	12.946	.512
	Hotelling's Trace	.565	1.078	16.000	122.0 00	.38 3	.124	17.243	.683
	Roy's Largest Root	.394	3.445 c	4.000	35.00 0	.01 8	.283	13.781	.804
Itrustbrandswhohaveonlinediscussi onforums	Pillai's Trace	.416	1.016	16.000	140.0 00	.44 4	.104	16.252	.657
	Wilks' Lambda	.632	.997	16.000	98.39 9	.46 7	.108	11.962	.472
	Hotelling's Trace	.509	.971	16.000	122.0 00	.49 2	.113	15.536	.624
	Roy's Largest Root	.320	2.799 c	4.000	35.00 0	.04 1	.242	11.195	.705
Brandsactiveonsocialplatformsandc ommunitiesappealstronglytomysen	Pillai's Trace	.581	1.486	16.000	140.0 00	.11 3	.145	23.783	.857
	Wilks' Lambda	.487	1.632	16.000	98.39 9	.07 4	.165	19.382	.735
	Hotelling's Trace	.918	1.750	16.000	122.0 00	.04 6	.187	27.997	.916
	Roy's Largest Root	.754	6.596 c	4.000	35.00 0	.00 0	.430	26.383	.982
Brandsoftenstronglyengagesmeem otionally	Pillai's Trace	.601	1.548	16.000	140.0 00	.09 1	.150	24.765	.875
	Wilks' Lambda	.496	1.588	16.000	98.39 9	.08 6	.161	18.869	.721
	Hotelling's Trace	.832	1.586	16.000	122.0 00	.08 2	.172	25.384	.880
	Roy's Largest Root	.550	4.815 c	4.000	35.00 0	.00 3	.355	19.261	.926
Brandsocialmediaplatformsmakea strongimpressiononme	Pillai's Trace	.503	1.258	16.000	140.0 00	.23 2	.126	20.136	.776
	Wilks' Lambda	.551	1.324	16.000	98.39 9	.19 8	.138	15.801	.620
	Hotelling's Trace	.719	1.371	16.000	122.0 00	.16 7	.152	21.929	.813
	Roy's Largest Root	.565	4.942 c	4.000	35.00 0	.00 3	.361	19.768	.933
Iengageinalotofthinkingasacustome rofthebrand	Pillai's Trace	.577	1.475	16.000	140.0 00	.11 7	.144	23.594	.854
	Wilks' Lambda	.491	1.612	16.000	98.39 9	.08 0	.163	19.143	.729
	Hotelling's Trace	.902	1.720	16.000	122.0 00	.05 1	.184	27.520	.910
	Roy's Largest Root	.735	6.431 c	4.000	35.00 0	.00 1	.424	25.725	.980

a. Design: Intercept + Brandnetworkplatformsprovidewithnewinformation + Socialmediaplatformsis thebestwaytoconnecttobrands + Ifollowbrandsonsocialmediaplatforms + Iam part ofonlinecommunitiesofbrandlikeappleNikeetc + Brandnetworkplatformskeepmeupdated + Brandnetworkplatformsalsoequipmewithsomebenefitslikecouponsetc + OverallI'msatisfied + Brands thataskformyopinionsoftenstimulatesmythinking + Beingacustomerhasbeenagoodchoiceforme + Brandhasliveduptomyexpectations + Ishareinformationaboutbrand'sthattalktomeonmysocialpages + Iintendstayoutloyaltothebrandthatactivelyondigitalplatforms + Iintendtorecommendthebrandthathasonlinecommunitiesandforumstooth + Iintendstayoutonasacustomerifabrandresponsestomyrequests + Irespondtorequestsbybrandsondigitalplatforms + Istronglyassociatewithabrandthataskformyopinions + Ifindthebrandtobegoodifitresponsesbacktome + Itrustbrandswhohaveonlinediscussionforums + Brandsactiveonsocialplatformsandcommunitiesappealstronglytomysen + Brandsoftenstronglyengagesmeemotionally + Brandssocialmediaplatformsmakeastrongimpressiononme + Iengageinalotofthinkingasacustomerofthebrand
b. Exact statistic
c. The statistic is an upper bound on F that yields a lower bound on the significance level.
d. Computed using alpha = .05

#### Levene's Test of Equality of Error Variances<sup>a</sup>

	F	df1	df2	Sig.
I am actively involved when a brand develops solutions for me	1.253	119	4	.471
Brands encourages customers to create solutions	7.529	119	4	.030
I feel like I am a part of a community	.790	119	4	.712
I feel as I am part of a brand family	5.114	119	4	.060

Tests the null hypothesis that the error variance of the dependent variable is equal across groups.

a. Design: Intercept + Brandnetworkplatformsprovidewithnewinformation + Socialmediaplatformsis thebestwaytoconnecttobrands + Ifollowbrandsonsocialmediaplatforms + Iam part ofonlinecommunitiesofbrandlikeappleNikeetc + Brandnetworkplatformskeepmeupdated + Brandnetworkplatformsalsoequipmewithsomebenefitslikecouponsetc + OverallI'msatisfied + Brands thataskformyopinionsoftenstimulatesmythinking + Beingacustomerhasbeenagoodchoiceforme + Brandhasliveduptomyexpectations + Ishareinformationaboutbrand'sthattalktomeonmysocialpages + Iintendstayoutloyaltothebrandthatactivelyondigitalplatforms + Iintendtorecommendthebrandthathasonlinecommunitiesandforumstooth + Iintendstayoutonasacustomerifabrandresponsestomyrequests + Irespondtorequestsbybrandsondigitalplatforms + Istronglyassociatewithabrandthataskformyopinions + Ifindthebrandtobegoodifitresponsesbacktome + Itrustbrandswhohaveonlinediscussionforums + Brandsactiveonsocialplatformsandcommunitiesappealstronglytomysen + Brandsoftenstronglyengagesmeemotionally + Brandssocialmediaplatformsmakeastrongimpressiononme + Iengageinalotofthinkingasacustomerofthebrand

**DATA TABLE 3 & 4: CRM & VALUE**

Independent variable 3 & \$ vs. dependent variable

Multivariate Tests <sup>a</sup>									
Effect		Value	F	Hypothesis df	Error df	Sig.	Partial Eta Squared	Noncent. Parameter	Observed Power <sup>d</sup>
Intercept	Pillai's Trace	.949	130.013 <sup>b</sup>	5.000	35.000	.000	.949	650.064	1.000
	Wilks' Lambda	.051	130.013 <sup>b</sup>	5.000	35.000	.000	.949	650.064	1.000
	Hotelling's Trace	18.573	130.013 <sup>b</sup>	5.000	35.000	.000	.949	650.064	1.000
	Roy's Largest Root	18.573	130.013 <sup>b</sup>	5.000	35.000	.000	.949	650.064	1.000
Brandnetworkplatformsprovide withnewinformation	Pillai's Trace	.442	.944	20.000	152.000	.533	.110	18.881	.687
	Wilks' Lambda	.609	.945	20.000	117.032	.532	.117	15.473	.557
	Hotelling's Trace	.564	.944	20.000	134.000	.533	.124	18.885	.680
	Roy's Largest Root	.391	2.968 <sup>c</sup>	5.000	38.000	.023	.281	14.840	.801
Socialmediaplatformsisthebest waytoconnecttobrands	Pillai's Trace	.493	1.068	20.000	152.000	.389	.123	21.355	.757
	Wilks' Lambda	.575	1.061	20.000	117.032	.399	.129	17.346	.622
	Hotelling's Trace	.625	1.047	20.000	134.000	.414	.135	20.931	.739
	Roy's Largest Root	.363	2.762 <sup>c</sup>	5.000	38.000	.032	.267	13.811	.767
Ifollowbrandsonsocialmediaplatforms	Pillai's Trace	.542	1.190	20.000	152.000	.270	.135	23.808	.815
	Wilks' Lambda	.522	1.269	20.000	117.032	.214	.150	20.676	.723
	Hotelling's Trace	.798	1.336	20.000	134.000	.167	.166	26.720	.863
	Roy's Largest Root	.611	4.640 <sup>c</sup>	5.000	38.000	.002	.379	23.202	.953
IampartofonlinecommunitiesofbrandlikeappleNikeetc	Pillai's Trace	.507	1.103	20.000	152.000	.352	.127	22.065	.775
	Wilks' Lambda	.571	1.078	20.000	117.032	.382	.131	17.611	.631
	Hotelling's Trace	.623	1.044	20.000	134.000	.417	.135	20.871	.737
	Roy's Largest Root	.283	2.154 <sup>c</sup>	5.000	38.000	.080	.221	10.770	.643
Brandnetworkplatformskeepme updated	Pillai's Trace	.527	1.153	20.000	152.000	.303	.132	23.063	.798
	Wilks' Lambda	.558	1.125	20.000	117.032	.334	.136	18.377	.655
	Hotelling's Trace	.649	1.087	20.000	134.000	.370	.140	21.750	.760
	Roy's Largest Root	.280	2.127 <sup>c</sup>	5.000	38.000	.083	.219	10.636	.636
Brandnetworkplatformsalsoequipmewithsomebenefitslikecouponsetc	Pillai's Trace	.808	1.924	20.000	152.000	.014	.202	38.481	.975
	Wilks' Lambda	.373	2.028	20.000	117.032	.010	.219	32.753	.933
	Hotelling's Trace	1.238	2.073	20.000	134.000	.008	.236	41.468	.983

	Roy's Largest Root	.776	5.897 <sup>c</sup>	5.000	38.000	.000	.437	29.486	.986
Overall I'm satisfied	Pillai's Trace	.692	1.590	20.000	152.000	.062	.173	31.805	.933
	Wilks' Lambda	.444	1.621	20.000	117.032	.059	.184	26.309	.850
	Hotelling's Trace	.965	1.617	20.000	134.000	.057	.194	32.331	.934
	Roy's Largest Root	.567	4.312 <sup>c</sup>	5.000	38.000	.003	.362	21.560	.936
Brand that ask for my opinion soft en stimulates my thinking	Pillai's Trace	.829	1.988	20.000	152.000	.011	.207	39.758	.979
	Wilks' Lambda	.342	2.234	20.000	117.032	.004	.235	35.991	.957
	Hotelling's Trace	1.456	2.439	20.000	134.000	.001	.267	48.772	.995
	Roy's Largest Root	1.084	8.240 <sup>c</sup>	5.000	38.000	.000	.520	41.199	.999
Being a customer has been a good choice for me	Pillai's Trace	.780	1.841	20.000	152.000	.021	.195	36.819	.967
	Wilks' Lambda	.369	2.051	20.000	117.032	.009	.221	33.110	.936
	Hotelling's Trace	1.331	2.229	20.000	134.000	.004	.250	44.582	.990
	Roy's Largest Root	1.007	7.650 <sup>c</sup>	5.000	38.000	.000	.502	38.251	.998
Brand has lived up to my expectations	Pillai's Trace	.751	1.755	20.000	152.000	.030	.188	35.107	.958
	Wilks' Lambda	.411	1.800	20.000	117.032	.028	.199	29.144	.893
	Hotelling's Trace	1.072	1.795	20.000	134.000	.027	.211	35.906	.960
	Roy's Largest Root	.591	4.493 <sup>c</sup>	5.000	38.000	.003	.372	22.465	.946
I share information about brand's that talk to me on my social pages	Pillai's Trace	.430	.915	20.000	152.000	.569	.107	18.299	.669
	Wilks' Lambda	.611	.937	20.000	117.032	.543	.116	15.331	.552
	Hotelling's Trace	.571	.957	20.000	134.000	.518	.125	19.138	.688
	Roy's Largest Root	.438	3.328 <sup>c</sup>	5.000	38.000	.014	.305	16.640	.851
I intend to stay loyal to the brand that actively on digital platforms	Pillai's Trace	.560	1.236	20.000	152.000	.232	.140	24.723	.833
	Wilks' Lambda	.513	1.304	20.000	117.032	.190	.154	21.244	.739
	Hotelling's Trace	.813	1.362	20.000	134.000	.153	.169	27.237	.872
	Roy's Largest Root	.618	4.696 <sup>c</sup>	5.000	38.000	.002	.382	23.479	.955
I intend to recommend the brand that has online communities and forum's too	Pillai's Trace	.280	.571	20.000	152.000	.927	.070	11.426	.418
	Wilks' Lambda	.741	.553	20.000	117.032	.936	.072	9.106	.316
	Hotelling's Trace	.322	.539	20.000	134.000	.945	.075	10.790	.387
	Roy's Largest Root	.200	1.520 <sup>c</sup>	5.000	38.000	.207	.167	7.599	.474
I respond to requests by brand on digital platforms	Pillai's Trace	.772	1.819	20.000	152.000	.023	.193	36.373	.965
	Wilks' Lambda	.405	1.831	20.000	117.032	.025	.202	29.633	.899

	Hotelling's Trace	1.067	1.787	20.000	134.000	.028	.211	35.744	.959
	Roy's Largest Root	.498	3.787 <sup>c</sup>	5.000	38.000	.007	.333	18.934	.898
Istronglyassociatewithabrandthataasksformyopinions	Pillai's Trace	.576	1.278	20.000	152.000	.202	.144	25.563	.849
	Wilks' Lambda	.496	1.376	20.000	117.032	.148	.161	22.392	.768
	Hotelling's Trace	.871	1.459	20.000	134.000	.106	.179	29.185	.900
	Roy's Largest Root	.665	5.056 <sup>c</sup>	5.000	38.000	.001	.399	25.279	.968
Ifindthebrandtobegoodifitrespon-sesbacktome	Pillai's Trace	.505	1.098	20.000	152.000	.357	.126	21.969	.772
	Wilks' Lambda	.570	1.081	20.000	117.032	.379	.131	17.659	.632
	Hotelling's Trace	.629	1.053	20.000	134.000	.406	.136	21.068	.742
	Roy's Largest Root	.303	2.305 <sup>c</sup>	5.000	38.000	.064	.233	11.524	.677
Itrustbrandswwhoaveonlinediscussionforums	Pillai's Trace	.431	.917	20.000	152.000	.566	.108	18.348	.671
	Wilks' Lambda	.617	.916	20.000	117.032	.569	.114	14.991	.540
	Hotelling's Trace	.544	.911	20.000	134.000	.574	.120	18.225	.659
	Roy's Largest Root	.367	2.787 <sup>c</sup>	5.000	38.000	.031	.268	13.936	.772
Brandsactiveonsocialplatformsandcommunitiesappealstronglyto mysen	Pillai's Trace	.572	1.269	20.000	152.000	.208	.143	25.373	.846
	Wilks' Lambda	.509	1.322	20.000	117.032	.179	.155	21.533	.746
	Hotelling's Trace	.813	1.362	20.000	134.000	.152	.169	27.243	.872
	Roy's Largest Root	.588	4.466 <sup>c</sup>	5.000	38.000	.003	.370	22.329	.945
Brandsoftenstronglyengagesmeemotionally	Pillai's Trace	.299	.614	20.000	152.000	.898	.075	12.285	.452
	Wilks' Lambda	.727	.590	20.000	117.032	.913	.077	9.703	.339
	Hotelling's Trace	.340	.570	20.000	134.000	.927	.078	11.393	.411
	Roy's Largest Root	.185	1.407 <sup>c</sup>	5.000	38.000	.244	.156	7.033	.440
Brandsocialmediaplatformsmakeastrongimpressiononme	Pillai's Trace	.532	1.166	20.000	152.000	.292	.133	23.313	.804
	Wilks' Lambda	.538	1.203	20.000	117.032	.264	.144	19.622	.693
	Hotelling's Trace	.735	1.231	20.000	134.000	.239	.155	24.625	.825
	Roy's Largest Root	.535	4.064 <sup>c</sup>	5.000	38.000	.005	.348	20.321	.920
Iengageinalotofthinkingasacustomerofthebrand	Pillai's Trace	.642	1.453	20.000	152.000	.106	.161	29.066	.903
	Wilks' Lambda	.462	1.534	20.000	117.032	.083	.176	24.921	.824
	Hotelling's Trace	.953	1.596	20.000	134.000	.062	.192	31.918	.930
	Roy's Largest Root	.694	5.275 <sup>c</sup>	5.000	38.000	.001	.410	26.374	.975

a. Design: Intercept + Brandnetworkplatformsprovideinformation + Socialmediaplatformsisthebestwaytoconnecttobrands + Ifollowbrandsonsocialmediaplatforms + Iam part of online communities of brand like apple Nike etc + Brandnetworkplatformskeepmeupdated + Brandnetworkplatformsalsoequipmewithsomebenefitslikecouponsetc + Overall I'm satisfied + Brands that ask for my opinion soften stimulates my thinking + Being a customer has been a good choice for me + Brand has lived up to my expectations + I share information about brand's that talk to me on my social pages + I intend to stay loyal to the brand that actively on digital platforms + I intend to recommend the brand that has online communities and forum stooth + I respond to requests by brands on digital platforms + I strongly associate with a brand that asks for my opinions + I find the brand to be good if it responds back to me + I trust brands who have online discussion forums + Brands active on social platforms and communities appeal strongly to my sense + Brands often strongly engage me emotionally + Brands social media platforms make a strong impression on me + I engage in a lot of thinking as a customer of the brand
b. Exact statistic
c. The statistic is an upper bound on F that yields a lower bound on the significance level.
d. Computed using alpha = .05

#### Levene's Test of Equality of Error Variances<sup>a</sup>

	F	df1	df2	Sig.
I feel motivated to be part of a brand if it offers me discounts, coupons etc.	5.543	119	4	.052
I feel brands offer a lot of benefits online	.	119	4	.
I intend to stay on as a customer if a brand responds to my requests	.	119	4	.
As a customer I am rarely passive	4.093	119	4	.087
I find brand platforms to be informative	.	119	4	.

Tests the null hypothesis that the error variance of the dependent variable is equal across groups.

a. Design: Intercept + Brandnetworkplatformsprovideinformation + Socialmediaplatformsisthebestwaytoconnecttobrands + Ifollowbrandsonsocialmediaplatforms + Iam part of online communities of brand like apple Nike etc + Brandnetworkplatformskeepmeupdated + Brandnetworkplatformsalsoequipmewithsomebenefitslikecouponsetc + Overall I'm satisfied + Brands that ask for my opinion soften stimulates my thinking + Being a customer has been a good choice for me + Brand has lived up to my expectations + I share information about brand's that talk to me on my social pages + I intend to stay loyal to the brand that actively on digital platforms + I intend to recommend the brand that has online communities and forum stooth + I respond to requests by brands on digital platforms + I strongly associate with a brand that asks for my opinions + I find the brand to be good if it responds back to me + I trust brands who have online discussion forums + Brands active on social platforms and communities appeal strongly to my sense + Brands often strongly engage me emotionally + Brands social media platforms make a strong impression on me + I engage in a lot of thinking as a customer of the brand



Tests of Between-Subjects Effects									
Source	Dependent Variable	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared	Noncent. Parameter	Observed Power <sup>f</sup>
Corrected Model	I feel motivated to be part of a brand if it offers me discounts, coupons etc.	93.703 <sub>a</sub>	84	1.116	1.372	.138	.747	115.223	.943
	I feel brands offer allot of benefits online	109.99 <sub>1b</sub>	84	1.309	2.160	.004	.823	181.412	.998
	I intend to stay on as a customer if a brand responses to my requests	106.20 <sub>1c</sub>	84	1.264	2.532	.001	.845	212.659	1.000
	As a customer I am rarely passive	119.02 <sub>6d</sub>	84	1.417	1.230	.240	.726	103.289	.906
	I find brand platforms to be informative	97.853 <sub>e</sub>	84	1.165	2.842	.000	.860	238.737	1.000
Intercept	I feel motivated to be part of a brand if it offers me discounts, coupons etc.	116.768	1	116.768	143.585	.000	.786	143.585	1.000
	I feel brands offer allot of benefits online	87.213	1	87.213	143.843	.000	.787	143.843	1.000
	I intend to stay on as a customer if a brand responses to my requests	105.076	1	105.076	210.407	.000	.844	210.407	1.000
	As a customer I am rarely passive	70.588	1	70.588	61.255	.000	.611	61.255	1.000
	I find brand platforms to be informative	89.441	1	89.441	218.214	.000	.848	218.214	1.000
Brandnetworkplatformsprovide withnewinformation	I feel motivated to be part of a brand if it offers me discounts, coupons etc.	.902	4	.225	.277	.891	.028	1.109	.105
	I feel brands offer allot of benefits online	2.496	4	.624	1.029	.404	.095	4.117	.294
	I intend to stay on as a customer if a brand responses to my requests	1.618	4	.405	.810	.526	.077	3.241	.235
	As a customer I am rarely passive	1.718	4	.429	.373	.827	.037	1.491	.126
	I find brand platforms to be informative	2.488	4	.622	1.517	.216	.135	6.069	.425
Socialmediaplatformsisthebest waytoconnecttobrand	I feel motivated to be part of a brand if it offers me discounts, coupons etc.	1.853	4	.463	.570	.686	.055	2.279	.173
	I feel brands offer allot of benefits online	4.879	4	1.220	2.012	.112	.171	8.047	.549
	I intend to stay on as a customer if a brand responses to my requests	1.589	4	.397	.796	.535	.075	3.182	.231
	As a customer I am rarely passive	5.596	4	1.399	1.214	.320	.111	4.856	.344
	I find brand platforms to be informative	.921	4	.230	.562	.692	.054	2.248	.171
Ifollowbrandsonsocialmediaplatforms	I feel motivated to be part of a brand if it offers me discounts, coupons etc.	.769	4	.192	.237	.916	.024	.946	.096
	I feel brands offer allot of benefits online	4.554	4	1.138	1.878	.134	.161	7.510	.517
	I intend to stay on as a customer if a brand responses to my requests	4.164	4	1.041	2.084	.101	.176	8.338	.566
	As a customer I am rarely passive	2.490	4	.623	.540	.707	.053	2.161	.166
	I find brand platforms to be informative	2.936	4	.734	1.791	.150	.155	7.164	.496

I am part of online communities of brands like Apple, Nike etc.	I feel motivated to be part of a brand if it offers me discounts, coupons etc.	5.332	4	1.333	1.639	.184	.144	6.557	.457
	I feel brands offer a lot of benefits online	2.523	4	.631	1.040	.399	.096	4.161	.297
	I intend to stay on as a customer if a brand responds to my requests	2.023	4	.506	1.013	.413	.094	4.051	.289
	As a customer I am rarely passive	1.627	4	.407	.353	.840	.035	1.412	.121
	I find brand platforms to be informative	3.197	4	.799	1.950	.121	.167	7.799	.535
Brand network platforms keep me updated	I feel motivated to be part of a brand if it offers me discounts, coupons etc.	3.401	4	.850	1.045	.396	.097	4.182	.298
	I feel brands offer a lot of benefits online	2.679	4	.670	1.105	.368	.102	4.419	.314
	I intend to stay on as a customer if a brand responds to my requests	2.212	4	.553	1.107	.367	.102	4.429	.315
	As a customer I am rarely passive	6.775	4	1.694	1.470	.230	.131	5.879	.413
	I find brand platforms to be informative	3.241	4	.810	1.977	.117	.169	7.908	.541
Brand network platforms also equip me with some benefits like coupons etc.	I feel motivated to be part of a brand if it offers me discounts, coupons etc.	1.895	4	.474	.583	.677	.056	2.330	.176
	I feel brands offer a lot of benefits online	3.591	4	.898	1.481	.227	.132	5.923	.415
	I intend to stay on as a customer if a brand responds to my requests	8.439	4	2.110	4.225	.006	.302	16.898	.890
	As a customer I am rarely passive	9.665	4	2.416	2.097	.100	.177	8.387	.569
	I find brand platforms to be informative	3.673	4	.918	2.240	.082	.187	8.960	.601
Overall I'm satisfied	I feel motivated to be part of a brand if it offers me discounts, coupons etc.	3.448	4	.862	1.060	.389	.098	4.240	.302
	I feel brands offer a lot of benefits online	9.850	4	2.463	4.061	.008	.294	16.246	.877
	I intend to stay on as a customer if a brand responds to my requests	2.541	4	.635	1.272	.297	.115	5.088	.360
	As a customer I am rarely passive	3.727	4	.932	.809	.527	.077	3.234	.235
	I find brand platforms to be informative	2.016	4	.504	1.230	.314	.112	4.919	.348
Brands that ask for my opinion so far stimulate my thinking	I feel motivated to be part of a brand if it offers me discounts, coupons etc.	3.167	4	.792	.974	.433	.091	3.894	.279
	I feel brands offer a lot of benefits online	1.799	4	.450	.742	.569	.071	2.966	.217
	I intend to stay on as a customer if a brand responds to my requests	6.840	4	1.710	3.424	.017	.260	13.697	.807
	As a customer I am rarely passive	4.920	4	1.230	1.067	.386	.099	4.269	.304
	I find brand platforms to be informative	6.924	4	1.731	4.223	.006	.302	16.892	.890
Being a customer has been a good choice for me	I feel motivated to be part of a brand if it offers me discounts, coupons etc.	3.462	4	.866	1.064	.387	.098	4.258	.303
	I feel brands offer a lot of benefits online	1.242	4	.311	.512	.727	.050	2.049	.159
	I intend to stay on as a customer if a brand responds to my requests	10.334	4	2.583	5.173	.002	.347	20.693	.947

	As a customer I am rarely passive	8.733	4	2.183	1.895	.131	.163	7.578	.521
	I find brand platforms to be informative	2.498	4	.624	1.524	.214	.135	6.094	.427
Brandhasliveduptomyexpectations	I feel motivated to be part of a brand if it offers me discounts, coupons etc.	2.289	4	.572	.704	.594	.067	2.815	.207
	I feel brands offer allot of benefits online	3.730	4	.933	1.538	.210	.136	6.152	.431
	I intend to stay on as a customer if a brand responses to my requests	6.219	4	1.555	3.113	.026	.242	12.454	.764
	As a customer I am rarely passive	1.837	4	.459	.399	.808	.039	1.594	.132
	I find brand platforms to be informative	7.600	4	1.900	4.635	.004	.322	18.541	.919
Ishareinformationaboutbrand'st hattalktomeonmysocialpages	I feel motivated to be part of a brand if it offers me discounts, coupons etc.	1.671	4	.418	.514	.726	.050	2.055	.159
	I feel brands offer allot of benefits online	.310	4	.078	.128	.971	.013	.512	.074
	I intend to stay on as a customer if a brand responses to my requests	3.553	4	.888	1.779	.153	.154	7.115	.493
	As a customer I am rarely passive	4.236	4	1.059	.919	.463	.086	3.676	.264
	I find brand platforms to be informative	1.889	4	.472	1.152	.347	.106	4.608	.327
Iintendtostayloyaltothebrandthat activelyondigitalplatforms	I feel motivated to be part of a brand if it offers me discounts, coupons etc.	.995	4	.249	.306	.872	.030	1.224	.111
	I feel brands offer allot of benefits online	3.209	4	.802	1.323	.278	.120	5.293	.373
	I intend to stay on as a customer if a brand responses to my requests	2.500	4	.625	1.252	.305	.114	5.006	.354
	As a customer I am rarely passive	2.033	4	.508	.441	.778	.043	1.764	.142
	I find brand platforms to be informative	8.246	4	2.062	5.030	.002	.340	20.118	.941
Iintendtorecommendthebrandth athasonlinecommunitiesandforu mstooth	I feel motivated to be part of a brand if it offers me discounts, coupons etc.	1.857	4	.464	.571	.685	.055	2.283	.174
	I feel brands offer allot of benefits online	1.293	4	.323	.533	.712	.052	2.132	.164
	I intend to stay on as a customer if a brand responses to my requests	1.768	4	.442	.885	.482	.083	3.540	.255
	As a customer I am rarely passive	2.585	4	.646	.561	.693	.054	2.243	.171
	I find brand platforms to be informative	.261	4	.065	.159	.958	.016	.636	.080
Irespondtorequestsbybrandson digitalplatforms	I feel motivated to be part of a brand if it offers me discounts, coupons etc.	3.337	4	.834	1.026	.406	.095	4.103	.293
	I feel brands offer allot of benefits online	6.743	4	1.686	2.780	.040	.222	11.121	.709
	I intend to stay on as a customer if a brand responses to my requests	3.286	4	.821	1.645	.182	.144	6.580	.458
	As a customer I am rarely passive	4.227	4	1.057	.917	.464	.086	3.668	.264
	I find brand platforms to be informative	5.178	4	1.294	3.158	.024	.245	12.632	.771
Istronglyassociatewithabrandth atasksformyopinions	I feel motivated to be part of a brand if it offers me discounts, coupons etc.	.748	4	.187	.230	.920	.023	.920	.095

	I feel brands offer allot of benefits online	3.934	4	.983	1.622	.188	.143	6.488	.453
	I intend to stay on as a customer if a brand responses to my requests	7.062	4	1.766	3.535	.015	.266	14.142	.821
	As a customer I am rarely passive	1.240	4	.310	.269	.896	.027	1.076	.103
	I find brand platforms to be informative	.809	4	.202	.493	.741	.048	1.973	.154
Ifindthebrandtobegoodifitrespon sesbacktome	I feel motivated to be part of a brand if it offers me discounts, coupons etc.	2.059	4	.515	.633	.642	.061	2.532	.189
	I feel brands offer allot of benefits online	.809	4	.202	.334	.854	.033	1.335	.117
	I intend to stay on as a customer if a brand responses to my requests	2.135	4	.534	1.069	.385	.099	4.275	.305
	As a customer I am rarely passive	3.958	4	.990	.859	.497	.081	3.435	.248
	I find brand platforms to be informative	4.338	4	1.085	2.646	.048	.213	10.585	.684
Itrustbrandswhohaveonlinedisc ussionforums	I feel motivated to be part of a brand if it offers me discounts, coupons etc.	1.366	4	.341	.420	.793	.041	1.680	.137
	I feel brands offer allot of benefits online	1.518	4	.380	.626	.647	.060	2.504	.187
	I intend to stay on as a customer if a brand responses to my requests	3.687	4	.922	1.846	.140	.159	7.383	.509
	As a customer I am rarely passive	1.674	4	.419	.363	.833	.036	1.453	.124
	I find brand platforms to be informative	2.541	4	.635	1.550	.207	.137	6.199	.434
Brandsactiveonsocialplatformsa ndcommunitiesappealstronglyto mysen	I feel motivated to be part of a brand if it offers me discounts, coupons etc.	.893	4	.223	.274	.893	.027	1.098	.104
	I feel brands offer allot of benefits online	7.689	4	1.922	3.171	.024	.245	12.682	.772
	I intend to stay on as a customer if a brand responses to my requests	.904	4	.226	.452	.770	.044	1.810	.145
	As a customer I am rarely passive	2.104	4	.526	.456	.767	.045	1.826	.146
	I find brand platforms to be informative	2.430	4	.608	1.482	.226	.132	5.930	.416
Brandsoftenstronglyengagesme emotionally	I feel motivated to be part of a brand if it offers me discounts, coupons etc.	1.012	4	.253	.311	.869	.031	1.244	.112
	I feel brands offer allot of benefits online	.949	4	.237	.391	.814	.039	1.566	.130
	I intend to stay on as a customer if a brand responses to my requests	2.189	4	.547	1.096	.372	.101	4.384	.312
	As a customer I am rarely passive	1.099	4	.275	.238	.915	.024	.954	.096
	I find brand platforms to be informative	1.699	4	.425	1.036	.401	.096	4.145	.296
Brandssocialmediaplatformsma keastrongimpressiononme	I feel motivated to be part of a brand if it offers me discounts, coupons etc.	1.418	4	.354	.436	.782	.043	1.744	.141
	I feel brands offer allot of benefits online	2.807	4	.702	1.157	.344	.106	4.629	.329
	I intend to stay on as a customer if a brand responses to my requests	3.364	4	.841	1.684	.173	.147	6.737	.469
	As a customer I am rarely passive	4.243	4	1.061	.921	.462	.086	3.682	.265
	I find brand platforms to be informative	4.281	4	1.070	2.611	.050	.211	10.444	.678

I engage in a lot of thinking as a customer of the brand	I feel motivated to be part of a brand if it offers me discounts, coupons etc.	1.237	4	.309	.380	.821	.038	1.521	.128
	I feel brands offer a lot of benefits online	2.582	4	.645	1.065	.387	.098	4.259	.303
	I intend to stay on as a customer if a brand responds to my requests	1.367	4	.342	.684	.607	.066	2.737	.202
	As a customer I am rarely passive	4.014	4	1.003	.871	.490	.082	3.483	.251
	I find brand platforms to be informative	7.827	4	1.957	4.774	.003	.329	19.096	.928
Error	I feel motivated to be part of a brand if it offers me discounts, coupons etc.	31.716	39	.813					
	I feel brands offer a lot of benefits online	23.646	39	.606					
	I intend to stay on as a customer if a brand responds to my requests	19.476	39	.499					
	As a customer I am rarely passive	44.942	39	1.152					
	I find brand platforms to be informative	15.985	39	.410					
Total	I feel motivated to be part of a brand if it offers me discounts, coupons etc.	1744.000	124						
	I feel brands offer a lot of benefits online	1745.000	124						
	I intend to stay on as a customer if a brand responds to my requests	1892.000	124						
	As a customer I am rarely passive	1268.000	124						
	I find brand platforms to be informative	1550.000	124						
Corrected Total	I feel motivated to be part of a brand if it offers me discounts, coupons etc.	125.419	123						
	I feel brands offer a lot of benefits online	133.637	123						
	I intend to stay on as a customer if a brand responds to my requests	125.677	123						
	As a customer I am rarely passive	163.968	123						
	I find brand platforms to be informative	113.839	123						
a. R Squared = .747 (Adjusted R Squared = .202)									
b. R Squared = .823 (Adjusted R Squared = .442)									
c. R Squared = .845 (Adjusted R Squared = .511)									
d. R Squared = .726 (Adjusted R Squared = .136)									
e. R Squared = .860 (Adjusted R Squared = .557)									
f. Computed using alpha = .05									

## Appendix II

### DATA COLLECTION:

Impact of co-creation on brand equity has been theoretically discussed over years in various research papers, but a quantitative research that justifies the phenomenon is not found in justifiable numbers. Thus, the research aims at quantitatively justifying the impact of co-creation on brand equity. To do this a one to one survey has been carried out.

Expected Responses: 120-150

Completed Responses: 130

DATA COLLECTION: Questionnaire

DATA COLLECTION: Questionnaire

Impact of Digital Co-Creation on Brand Equity with special reference to IT Industry

Questionnaire

Name: \_\_\_\_\_

Gender: ☐ Female ☐ Male

Age: \_\_\_\_\_

**What is the highest degree or level of school you have completed? If currently enrolled, mark the previous grade or highest degree received.**

- |   |  |
|---|--|
| <input type="radio"/> 9th, 10th or 11th grade   | <input type="radio"/> Bachelor's degree (for example: BA, AB, BS)                |
| <input type="radio"/> 12th grade, no diploma  | <input type="radio"/> Master's degree (for example: MA, MS, MEng, MEd, MSW, MBA) |
| <input type="radio"/> High school graduate - high school diploma or the equivalent (for example: GED) | <input type="radio"/> Professional degree (for example: MD, DDS, DVM, LLB, JD)   |
| <input type="radio"/> Some college credit, but less than 1 year                                       | <input type="radio"/> Doctorate degree (for example: PhD, EdD)                   |
| <input type="radio"/> 1 or more years of college, no degree   |  |

**Are you currently...?**

- |  |                                      |
|--|--------------------------------------|
| <input type="radio"/> Employed for wages                             | <input type="radio"/> A homemaker    |
| <input type="radio"/> Self-employed                                  | <input type="radio"/> A student      |
| <input type="radio"/> Out of work and looking for work               | <input type="radio"/> Retired        |
| <input type="radio"/> Out of work but not currently looking for work | <input type="radio"/> Unable to work |

**What different kinds of electronic devices do you use?**

A. PC/Laptop B. Smartphone C. Mobile phone D. Tablet

**What device do you use for Internet access?**

A Smartphone B Tablet PC C Netbook D PC/Laptop

**How much time per week do you spend on surfing the Internet?**

- |  |  |
|--|--|
| <input type="radio"/> 0- 7 hours per week  | <input type="radio"/> 7- 14 hours per week |
| <input type="radio"/> 14-21 hours per week | <input type="radio"/> 21-28 hours per week |
| <input type="radio"/> 28-35 hours per week | <input type="radio"/> more than 35 hours   |

**What do you use the Internet for?**

- |   |  |
|---|--|
| a. to keep in touch with friends and be entertained | e. to send e-mails I to look for other helplines |
| b. to read local, national and international news   | f. to pursue school activities                   |
| c. to download music, films, games                  | g. to navigate E to play online games            |
| d. to look for technical support                    | h. to buy things                                 |
|   | i. to read entertainment news or gossip          |
|   | j. to do other things                            |

	Strongly disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Strongly agree
I often express my personal needs on network platforms	1	2	3	4	5
I often give feedback for the brand to improve	1	2	3	4	5
I participate in conversations on various platforms	1	2	3	4	5
I often find solutions with the brand	1	2	3	4	5

I am actively involved when a brand develops solutions for me	1	2	3	4	5
Brands encourages customers to create solutions	1	2	3	4	5
I feel like I am a part of a community	1	2	3	4	5
I feel as I am part of a brand family	1	2	3	4	5
I feel motivated to be part of a brand if it offers me discounts, coupons etc.	1	2	3	4	5
I feel brands offer allot of benefits online	1	2	3	4	5
I find brand platforms to be informative	1	2	3	4	5
I follow brands on social media platforms	1	2	3	4	5
I find it engaging, to have an conversation with a brand	1	2	3	4	5
Social media platforms is the best way to connect to brands	1	2	3	4	5
As a customer I am rarely passive	1	2	3	4	5
Brands social media platforms make a strong impression on me	1	2	3	4	5
Being involved in various brand activities on brand network platforms gives me an interesting sensory experience	1	2	3	4	5
Brands active on social platforms and communities appeal strongly to my senses.	1	2	3	4	5
Brand communities induces my feelings	1	2	3	4	5
Brands often strongly engages me emotionally	1	2	3	4	5
Brands that ask for my opinions often stimulates my thinking	1	2	3	4	5
Overall I'm satisfied	1	2	3	4	5
Being a customer has been a good choice for me	1	2	3	4	5
I engage in a lot of thinking as a customer of the brand	1	2	3	4	5
Brand has lived up to my expectations	1	2	3	4	5
I am part of online communities of brand like apple, Nike etc.	1	2	3	4	5
I follow brand, I use on social media	1	2	3	4	5
Brand network platforms provide with new information	1	2	3	4	5
Brand network platforms also equip me with some benefits like coupons etc.	1	2	3	4	5

Brand network platforms keep me updated	1	2	3	4	5
I respond to requests by brands on digital platforms	1	2	3	4	5
I find the brand to be good if it responses back to me	1	2	3	4	5
I trust brands who have online discussion forums	1	2	3	4	5
I strongly associate with a brand that asks for my opinions	1	2	3	4	5
I share information about brand's that talk to me on my social pages	1	2	3	4	5
I intend to stay loyal to the brand that actively on digital platforms	1	2	3	4	5
I intend to recommend the brand that has online communities and forums to other people	1	2	3	4	5
I intend to stay on as a customer if a brand responses to my requests	1	2	3	4	5

IJSER