

## **Impact of Social Media Data Analytics on Customer Equity Drivers and Purchase Intention: Understanding World's Most Valuable Brand - Amazon**

Agarwal Bhawna<sup>1</sup> , Gulla Anju<sup>2</sup> and Singh, Sumer<sup>3</sup>

### **Abstract**

Social Media is getting incredibly popular amongst brands and consumers both. This study aims to identify the constructs of perceived Social Media Marketing (SMM) activities of an e-commerce brand, Amazon and to evaluate the influence of those activities on customer equity drivers; value equity, relationship equity and brand equity and purchase intention using a PLS-SEM approach. The five constructs of perceived SMM activities are Interactivity, Informativeness, Personalization, Trendiness and Word of Mouth. The effects of SMM activities on value equity, relationship equity and brand equity were significantly positive. Out of the three customer equity drivers, only brand equity had a significant impact on the purchase intention, whereas value equity and relationship equity had no significant influence on purchase intention. The findings of this study will help the e-commerce brands to forecast the future purchasing behavior of their customers as well as manage their SMM activities.

**Keywords :** Social Media Marketing, Customer Equity Drivers, Brand Equity, Value Equity, Relationship Equity, Purchase Intention.

### **Introduction**

E-commerce marketing is the process of making sales by creating awareness and consciousness about an online store's product offerings. E-commerce marketers have been leveraging digital content through social media platforms, to draw in visitors and promote purchases on-line. Consumers worldwide have spent nearly \$3.46 trillion online in 2019 which is more from \$2.93 trillion spent in 2018. Global e-commerce sales have hit \$21.00 trillion in 2019 (Young, 2019).

---

<sup>1</sup>Dr. Bhawna Agarwal, Professor, Amity College of Commerce and Finance, Amity University, Uttar Pradesh, Noida, India. Email: bagarwal@amity.edu

<sup>2</sup>Dr. Anju Gulla, Associate Professor, G D Goenka University, Gurugram, Haryana, India (Correspondence Author) Email: [anjgulla@gmail.com](mailto:anjgulla@gmail.com)

<sup>3</sup>Dr. Sumer Singh, Vice-Chancellor, Jagan Nath University, NCR, India. Email: sumersingh549@gmail.com

The Indian e-commerce market is expected to grow to US \$200 billion by 2026, which is triggered mainly by increasing internet and smart phone penetration in India. This digital transformation in India is expected to increase India's user base from 636.73 million, 2019 to 829 million by 2021 (ibef.org). By 2021, global e-commerce is expected to reach \$5 trillion, though growth rates will fall below the 20% threshold beginning in 2020. This is since consumer

spending has been slowing down over the past two years which reflects a growing economic uncertainty across many countries worldwide (Lipsman, 2019).

There are top e-commerce companies around the world having a strong brand name and brand image. As per emarketer, as the consumer spending is projected to slow down in between the economic uncertainties. The statistics given above hide the pressure e-commerce companies are facing since the consumer demand is growing day by day. There is a fierce competition in this industry now and this all had made it difficult for e-commerce companies to survive alone on a brand name (Rajeck, 2018). Therefore, an e-commerce brand cannot depend only on its brand name, or a logo, but needs to focus on brand legacy, quality, esthetic value, and trustworthy customer relationships in order to succeed than their competitors.

Social media marketing has been used as a tool for branding by most of the e-commerce websites. It helps the brands to engage with the audience, create a sense of community which is quite a powerful branding exercise. It enhances and grows the customer relationships. Social media platforms like Facebook, Twitter, Instagram and Pinterest have been influencing the online purchasing habits of customers. There are many applications within social media which allows users to connect and communicate with e-commerce brands. It helps in exchanging opinions and enhances the purchasing experience. All thanks to Web 2.0 functionalities like Wiki, User Generated Content, Online Social Networks etc which help brand to create a social environment and thereby benefit from easier interconnectivity. Social media has become an integral part of the our daily lives. Using social media, everyone can create and share content among friends or globally to strangers, meaning it is now one of the greatest tools for spreading information around the world. Popular social media networking sites like Facebook, Instagram, Twitter, LinkedIn, and other content communities are already being used by most of the e-commerce companies in order to provide a platform for people where they can create and share content. In this way, brands and customers come together and co-create new products, services and values. Social Media marketing which is a two way communication platform, thereby, helps the brands to elevate brand value by creating a platform where ideas and information are exchanged between the users online. This helps the brands to gain exposure and strengthen relationships with their customers.

With nearly all e-commerce brands using social media marketing as a tool to be in touch with the users, it becomes relevant to analyze the effects of social media on the users and how it influences them.

### **Literature Review**

Social media has taken a place for itself in all aspects of our lives. Customers are very much engaged with the major social media platforms such as Facebook, Snapchat, Instagram, YouTube, and Twitter (Alalwan, Rana, Dwivedi, & Algharabat, 2017; Kapoor et al., 2017; Kim and Kim, 2018; Shareef, Mukerji, Dwivedi, Rana, & Islam, 2017). Today they take a lot of different forms like weblogs, social blogs, microblogging, wikis, podcasts, pictures, video, rating and social bookmarking. According to Robinson (2007) social media is all about using tools for

communication that have Web 2.0 attributes which makes it participatory, collaborative, helps knowledge sharing and user-empowering tools available on the Web. It helps companies to have better communication platform which is beyond the traditional methods (Jackson, 2011; Akhtar, 2011). Social media is an environment where people with common interests come together for sharing their thoughts and learn from each other (Weber, 2007: 4). The use of social media communication platforms which is used via internet and mobile based technologies in marketing is critical in two aspects. The first is that the consumers can share the brands with other consumers (Sigala and Dimosthenis, 2009; Chen et al., 2011). Second is that social media is utilized by most of the businesses as a platform to carry out the marketing actions directly. Therefore, social media is already moving forward, has pushed the boundaries of time and space in terms of businesses with potential consumers and helps in advocating the feeling of closeness (Mersey et al., 2010). A slightly different view has been proposed by (Hanna, Rohm and Crittenden, 2011), found social media platforms such as Facebook, Twitter, Digg, YouTube, and numerous others are revolutionizing the state of marketing and advertising. Due to the global growth of these platforms, social media marketing is now viewed as a mandatory element in a firms marketing strategy. However, at the same time they emphasize to consider traditional media along with social media to work towards a common objective; whether it maybe to launch or promote a new product or service. (Einwiller and Steilen, 2015) analyzed how large companies handle complaints on their Facebook and Twitter pages. They found that the companies are not fully embracing the opportunities of social media to demonstrate their willingness to interact with and assist their stakeholders. It can impact the loyalty of the consumers towards them.

As per a research published using an Infographic, it was found that at least half of the Twitter and Facebook users are comfortable to talk about, recommend or purchase a company's products after they start getting engaged with the company on social media (Jackson,2011). Businesses understanding this have started promoting all types of products and services, provide online support, create online communities, and appoint brand enthusiasts through a variety of the social media platforms. Firms use all types of social networking sites, content communities, virtual worlds, blogs, microblogging sites, online gaming sites, social bookmarking, news sites, forums and more to reach out to their prospects (Zarella, 2010; Kaplan and Haenlein, 2009; Weinberg, 2009). Social media platforms has changed the way how people, organizations, and even governments can interact and exchange views and information about products, and services (Hawkins and Vel, 2013; Rathore, Ilavarasan, & Dwivedi, 2016; Usher et al., 2014; Zeng and Gerritsen, 2014; Zhu and Chen, 2015). Since people like to share information about brands on their social media, it becomes a cost effective way for brands to increase brand awareness, boost brand recognition and recall, and increase brand loyalty (Gunelius, 2011). Thus, it can be said that social media helps organisations to increase brand loyalty through networking, conversation, and community building (McKee, 2010). Thereupon, all organizations worldwide have started thinking about how they can use these platforms in attracting customers and build a profitable marketing long lasting relationship with those customers (Alalwan, Rana, Algharabat, & Tarhini, 2016; Braojos-Gomez, Benitez-Amado, & Llorens-Montes, 2015; Kamboj, Sarmah, Gupta, & Dwivedi, 2018; Oh, Bellur, & Sundar, 2015).

### **SMM of E-commerce brands**

With the advent of web and online technologies in our everyday lives it has significantly increased the convenience of shopping online for everyone. E-commerce websites such as Amazon.com, Flipkart.com, Ebay.com, and Etsy.com are increasingly carving how people shop online, assist them in their buyer journey from pre purchase product evaluations till purchase and post purchase by sharing their experiences online (Wilcox, 2019). According to recent research, about eight in ten Americans regularly shop for products/services online (Anderson and Smith, 2016).

Technology is increasingly changing the ways of shopping. The purchase experience for the consumer today is being changed with new advances in smart and connected devices (Kim et al., 2015; Martins et al., 2018). This trend has left many impacts on traditional businesses. It has led many leading players like JC Penney, Sears, Macy's, Lululemon, Urban Outfitters, American Eagle, Ralph Lauren, Le Château, and many more to close their physical stores (Kowsmann, 2017; Thompson, 2017). A study done by Smith (2016), more than 70 percent of Internet users are active social media users, and on an average have 5.54 social media accounts. People engage in social media for many reasons – for entertainment, connection points, or mindless searching activities. Social media has been witnessing a steady growth which is due to its ease of connecting as well as it gives an option to choose whom we are wanting to connect with or share (Kumar and Sundaram, 2012). To date, with almost 100% dispersion of mobile phones worldwide (ICT, 2014), social media are even more accessed and used at all times and places.

The number of Internet buyers is increasing every year, so we can say that e-commerce industry is booming. Most of the major retailers now have an online store and new online only retailers are launching every day. Although it is great for consumers since they will have more and more options to make a purchase. At the same time for e-commerce store owners, it means that online retail is becoming an increasingly competitive industry, which is why using social media for e-commerce is so valuable.

### **Customer Equity**

Customer equity is defined as the total of the discounted lifetime values summed over all of the firm's current and potential customers (Rust 2004). From the past forty years marketing has become more customer focused (Vavra 1997). Marketing has decreased its prominence on short-term performances and has increased its focus on long-term customer relationships (Håkansson 1982; Storbacka 1994). In recent years, customer lifetime value (CLV) and its implications has been a primary metric for understanding customers and their increasing attentiveness towards your brand (Mulhern 1999). Consequently, customers and customer equity have become more central to many firms than brands and brand equity. There is a shift from product-based strategy to customer-based strategy (Gale 1994; Kordupleski, Rust, and Zahorik 1993). (Bell et al., 2002) reviews the evolution from brand-centered marketing to customer-centered marketing. They described the evolution of the customer equity management philosophy in their research article. As per the research article there are seven challenges that will have to be met to get positive results. They have created a customer-asset model which can help a firm to recognize a customer equity management program, which can help firms to have a tremendous competitive advantage.

Therefore, we can safely say that an organizations strategic opportunities are very much viewed in terms of organizations opportunity to enhance the drivers of its customer equity.

The equity theory focuses very much on the customer delight and customer life time value. Adams introduced equity theory (1963) which has mostly been focused on satisfaction (Oliver & Swan, 1989), delight (Barnes, Beauchamp, & Webster, 2010), and service recovery (Maxham, 2001). The literature has established three key constructs of customer equity which are value equity (VE), brand equity (BE), and relationship equity (RE) (Leone et al., 2006; Rust, Danaher, & Varki, 2000, Severt & Palakurthi, 2008). Researchers have been still actively determining the factors of importance within these key constructs (Hogan, Lemon, & Rust, 2002). They are called drivers of customer equity as they exert a considerable influence on customer experience which can effect customer attitudes and behaviours (Cheng et al., 2019). Value equity describes how customers assess the utility of products or services by using objective measures. Customers are interested in the comparison between what they have paid in lieu of what they are given by company (Vogel et al., 2008, p. 99). Brand equity refers to the assessment done by customers towards a brand which is intangible and above the perceived value (Rust et al., 2000, p. 55). Lastly, relationship equity contentedly relates the propensity of customers to stay in a relationship with the brand, which is above objective and subjective assessments of the brand (Rust, Lemon, & Narayandas, 2005, p. 25). Many researchers claim that these drivers cooperate to produce customer equity, but they can act independently as well. The relationship between value equity, relationship equity, brand equity and customer equity can differ by industry (Liu, Ge, Lin, Kuo, & Tsui, 2014). Value equity has a dominant role for customer equity in convention industry (Severt & Palakurthi, 2008) while brand equity has a paramount effect in chain restaurants (Hyun, 2009a). Relationship equity is a climactic source of customer equity in the theme park industry (Hyun, 2009b), whereas brand and relationship equity are an indispensable value to develop loyalty in casino industry (Wong, 2013).

### **Purchase Intention**

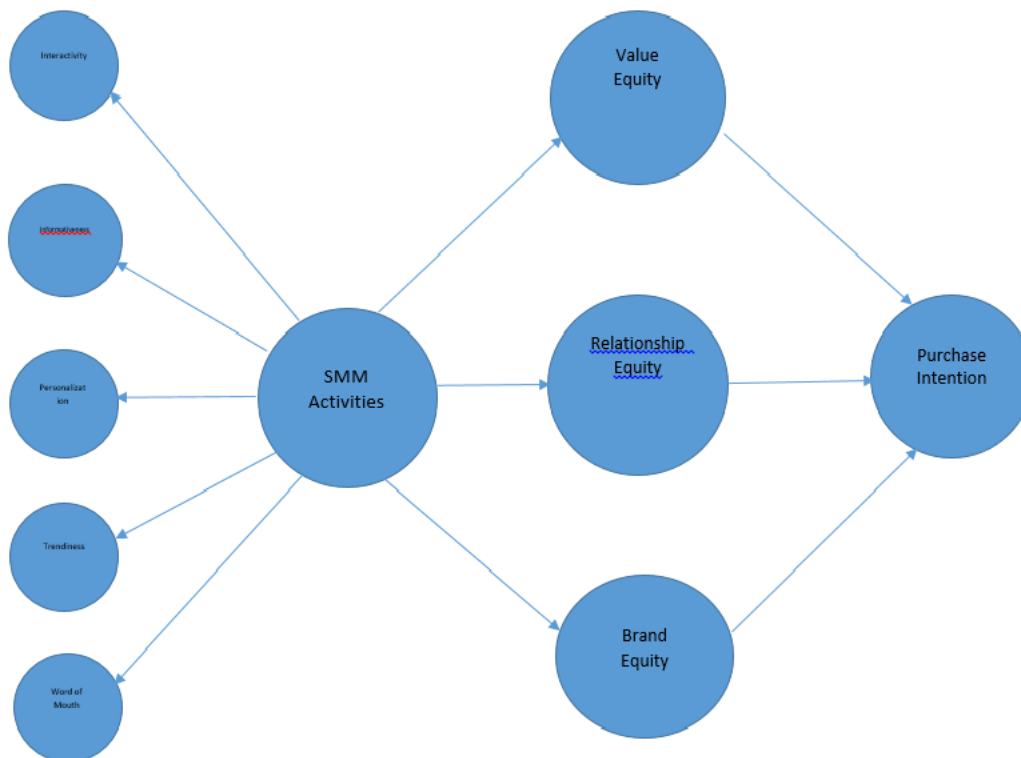
Purchase intention is defined as an individual's cognizant plan which helps them to make an endeavour to purchase a brand (Spears and Singh, 2004, p. 56). Purchase intention greatly relates to attitude and preference toward a brand or a product (Kim, Kim & Johnson, 2010; Kim & Ko, 2010b; Kim & Lee, 2009; Lloyd & Luk, 2010). Purchase intention describes the attitude towards a brand while customer equity describes the behaviour towards a brand which accounts for the actual purchasing record. At the same time brand attitude is only a arbitrary assessment of a brand, purchase intention is a personal disposition relating to a brand with a purpose of carrying out a buying behaviour (Bagozzi et al., 1979; Ostrom, 1969; Eagly and Chaiken, 1993). Purchase intention is a very crucial variable that measures probable action that consumer choose to be done (Fang and Lee 2015). Understanding consumers purchase intention can envision the customer's retention of a particular brand (Kudeshia et. al. 2017).

Based on the literature review done, this study is executed further by conceiving a research model (Figure 1) based on which the following research objectives were set:

1. To study and investigate the constructs of SMM activities of an e-commerce brand.
2. To gauge the effect of those activities on creating customer equity drivers.

3. To Identify the customer equity driver that most impacts purchase intention for an e-commerce brand.

The aim of this research is to propose a strategy to intensify further a brand performance by defining specific factors relating to customer equity and purchase intention. The findings from this research will empower the brands further to forecast customer purchasing behaviour and then manage their customer equity as well.



**Figure 1: Proposed Research Model.**

### Hypothesis development

Since the arrival of social media, there are literally hundreds of social media channels where consumers engage with brands. Andreas et. al. (2010) point out many business have unified social media into their marketing plans; so that it helps them to reach out to their customers better in a timely manner, at a relatively lower cost and higher level of competence than using traditional marketing tools. Social media being used as a platform by brands for engagement activity and to build relationships, it is indisputable that even online brands social media activity is expected to initiate positive influence on the drivers of customer equity. Based on a review of the relevant literature, hence, the following hypotheses are proposed:

H1: Social Media Activities have positive effect on Brand Equity

H2: Social Media Activities have positive effect on Relationship Equity  
 H3: Social Media Activities have positive effect on Value Equity

Authors Name and Year	Sample	Variables	Result and Implications
Wu and Li (2011)	775 Taiwan	<b>Independent Variables:</b> CRM <b>Dependent Variables:</b> Relationship Quality	CRM has a positive influence on Relationship Quality, study showed that when customers show higher awareness on the CRM actions of the hotel, the recognized Relationship Quality will be better
Wu and Li (2011)	775 Taiwan	<b>Independent Variables:</b> Relationship Quality <b>Dependent Variables:</b> CLV dimensions - usage quantity, loyalty , word of mouth and Purchase Intention	Relationship Quality has a positive influence on CLV. The better the Relationship Quality, the higher the four dimensions of CLV
Kim and Ko, (2012)	400 Korean Respondents	<b>Independent Variables:</b> Perceived Social Media activities i.e; entertainment, interaction, trendiness, customization, and word of mouth.  <b>Dependent Variables:</b> Value Equity, relationship Equity, Brand Equity, Customer Equity, Purchase Intention	The effects of five constructs of Social Media Marketing on value equity, relationship equity, and brand equity are significantly positive.  As for purchase intention, , while relationship equity had no significant influence. All these enable luxury brands to forecast the future purchasing behavior of their customers

			more accurately and provide a guide to managing their assets and marketing activities as well.
Kim and Ko, (2012)	400 Korean Respondents	<p><b>Independent Variables:</b> Value Equity, relationship Equity, Brand Equity, Customer Equity, Purchase Intention</p> <p><b>Dependent Variables:</b> Purchase Intention, Customer Equity</p>	The Customer equity drivers did not show any positive effect on Customer equity in case of luxury fashion brands. The findings of this study indicate a great difficulty in measuring customers future behaviour. Value equity and Brand equity had a positive influence on Purchase Intention.
Kim et. al (2012)	114, Seoul	<p><b>Independent Variables:</b> Materialism, Experiential Needs, Fashion Involvement</p> <p><b>Dependent Variables:</b> Attitude toward luxury brands.</p>	experiential need and fashion involvement are important antecedents of attitude toward luxury brands.
Kim et. al (2012)	114, Seoul	<p><b>Independent Variables:</b> Attitude toward luxury brands</p> <p><b>Dependent Variables:</b> Value Equity, Relationship Equity, Brand Equity</p>	Attitude toward luxury brands positively influences luxury brand equity and value equity but no significant relationship between attitude toward luxury brand and relationship equity was found.
Kim et. al (2012)	114, Seoul	<p><b>Independent Variables:</b> Attitude toward luxury brand</p> <p><b>Dependent Variables:</b></p>	Attitude toward luxury brand has no significant relationship with customer lifetime value.



		Customer lifetime value, customer equity drivers	
Kim et. al (2012)	114, Seoul	<b>Independent Variables:</b> Value Equity, Relationship Equity, Brand Equity <b>Dependent Variables:</b> Customer lifetime value.	Drivers of customer equity have significant relationships with customer lifetime value
Abzari, Ghassemi and Vosta (2014)	210 Iran	<b>Independent Variables:</b> Traditional Media, Social Media <b>Dependent Variables:</b> Brand Attitude	Results indicated that traditional as well as social media have significant impact on brand attitude. However, the effect of traditional advertising was less than social media
Abzari, Ghassemi and Vosta (2014)	210 Iran	<b>Independent Variables:</b> Brand Attitude <b>Dependent Variables:</b> Purchase Intention	brand attitude has a significant impact on purchase intention.
Mohammadpour et.al (2014)	169 Tehran	<b>Independent Variables:</b> Social Media Marketing <b>Dependent Variables:</b> Relational Capital, Value Capital, Brand Capital	path analysis showed that social media marketing had positive and significant impact on value capital, relational capital and brand capital.
Mohammadpour et.al (2014)	169 Tehran	<b>Independent Variables:</b> Relational Capital <b>Dependent Variables:</b> Intention to e-shopping, value capital, brand capital	Relational capital by value and brand capital had indirect, positive and significant impact on e-shopping of customers.
Mohammadpour et.al (2014)	169 Tehran	<b>Independent Variables:</b>	Social media marketing had

		Value Capital, Brand Capital <b>Dependent Variables:</b> intention to e-shopping	indirectly positive and significant impact on e-shopping of customers via value capital, relational capital and brand capital. Results of the present study supported mediating role value capital, relational capital and brand capital variables in relationship between social media and e-shopping of customers.
Yuan, Kim and Kim (2016)	350 Hong Kong and Macau, China	<b>Independent Variables:</b> Motivation to use social network services (SNS), source credibility. <b>Dependent Variable:</b> parasocial relationships	motivation to use social network services (SNS) and celebrity source credibility positively impact parasocial relationships;
Yuan, Kim and Kim (2016)	350 Hong Kong and Macau, China	<b>Independent Variables:</b> parasocial relationships <b>Dependent Variable:</b> Attitude, Customer Equity Drivers	parasocial relationships positively affect attitudes toward using SNS and customer equity drivers
Yuan, Kim and Kim (2016)	350 Hong Kong and Macau, China	<b>Independent Variables:</b> Attitude <b>Dependent Variables:</b> Customer Equity Drivers	Attitude toward using SNS showed positive effects on customer equity drivers
Yuan, Kim and Kim (2016)	350 Hong Kong and Macau, China	<b>Independent Variables:</b> Customer Equity Drivers <b>Dependent Variables:</b>	customer equity drivers positively affect customer lifetime value.

		Customer Lifetime Value	
Yadav and Rahman (2017)	55 India	<b>Independent Variables:</b> Social Media Marketing Activities <b>Dependent Variables:</b> Purchase Intention, Brand Equity	It was revealed that perceived Social Media Marketing Activities positively influenced purchase intention and brand equity; which endorses the nomological validity of the developed scale.
Seo and Park (2018)	302 South Korea	<b>Independent Variables:</b> Social Media Marketing Activities <b>Dependent Variables:</b> Brand Awareness, Brand Image	The results showed that trendiness was the most important SMM activity component, and airline SMM activities had significant effects on brand awareness and brand image.
Seo and Park (2018)	302 South Korea	<b>Independent Variables:</b> Brand Awareness <b>Dependent Variables:</b> e-WOM, Commitment	The results demonstrated that brand awareness significantly affected commitment
Seo and Park (2018)	302 South Korea	<b>Independent Variables:</b> Brand Image <b>Dependent Variables:</b> e-WOM, Commitment	Brand image significantly affected online word-of-mouth and commitment
Lee and Park (2019)	564 South Korean Respondents	<b>Independent Variables:</b> Sensory experience, Affective experience, Cognitive experience, Social experience, Behavioural experience <b>Dependent</b>	Results showed that Affective Experience had a significant impact on customer delight. The Cognitive experience had a positive influence on the customer equity. Sensory experience

Impact of Social Media Data Analytics on Customer Equity Drivers and Purchase Intention: Understanding World's Most Valuable Brand - Amazon

		<b>Variables:</b> Customer Delight, Customer Equity	and Behavioural experience has a positive impact on Delight and Equity.
Lee and Park (2019)	564 South Korean Respondents	<b>Independent Variables:</b> Customer Delight, Customer Equity <b>Dependent Variables:</b> Loyalty	Customer Equity has a positive impact on Loyalty and it partly mediates the relationship between delight and loyalty.
Cheng et. al (2019)	365 Taiwan	<b>Independent Variables:</b> Information Search, Social Interactivity <b>Dependent Variables:</b> Relationship Equity	The results show that information search and social interactivity are the antecedents of customer brand engagement
Cheng et. al (2019)	365 Taiwan	<b>Independent Variables:</b> Relationship Equity <b>Dependent Variables:</b> Brand Resonance	This study successfully links relationship equity to brand resonance
Clure and Seock (2020)	159 US college students	<b>Independent Variables:</b> Involvement on Brand's Social Media <b>Dependent Variables:</b> Attitude towards Brand's Social Media, Future Purchase Intention	involvement with that brand on social media is a significant factor in forming and facilitating attitude towards the brand's social media pages, which eventually leads to future purchase intention.
Clure and Seock (2020)	159 US	<b>Independent Variables:</b> Attitude towards Brand's Social Media <b>Dependent Variables:</b> Future Purchase Intention	It was found that brand's social media content did significantly influence consumers' involvement with the brand's social media pages and thereby

			influencing Future Purchase Intention.
Clure and Seock (2020)	159 US	<b>Independent Variables:</b> Brand Familiarity <b>Dependent Variables:</b> Involvement on Brand's Social Media	This study revealed that familiarity with a brand had less impact than information quality on being involved with the brand's social media pages.

Source: Author's compilation using previous literature

Purchase intention is an attitudinal variable and customer equity is a behavioral variable. Since attitude has been considered as an antecedent to behaviour in the decision making process, so the drivers of customer equity are likely to have an influence on purchase intention. Brand equity invokes subjective assessments like brand recall, brand awareness, and how much emotional attachment a customer has towards a brand and consequently may aim one to have some interest and/or possibly buy the brand. . The growing interest in brands creates the need for brand equity measurement and management models that help companies manage and fortify brands continuously (Mun, 2002). Value equity can be defined as an objective evaluation of the utility of a brand, which focuses on convenience, price, and convenience (Zeithaml, 1988). If customers perceive that the brand and its products are of some value to them, they might buying the product. Lastly, relationship equity focuses on brand loyalty and thus if a customer shows loyalty to a specific brand they may have a greater purchase intention. It is the tendency of the customer to stick with the brand above and beyond objective and subjective assessment (Rust et al., 2005)". Overall, it can be proposed that there is a positive correlation between brand equity, value equity, relationship equity and purchase intention). Rust et. al. (2004) conducted CE studies on some selected industries like (airlines, electronics stores, facial tissues, grocery, and rental cars) that represented a broad set of consumer goods and services with each yielding different drivers. The drivers may change from one industry to another (Blattberg & Deighton, 1996; Rust et al., 2000a,b), so the drivers should be established on an industry-by-industry basis. In this study, we also want to identify the driver that most impacts purchase intention for an e-commerce brand, Amazon. Thus, the following hypotheses are posited:

- H4: Value Equity relates positively to Purchase Intention
- H5: Brand Equity relates positively to Purchase Intention
- H6: Relationship Equity relates positively to Purchase Intention

## Methodology

### Preliminary Test

A preliminary test was done to select a sample e-commerce brand. Twenty graduate students who were pursuing MBA from a known university in India were asked to list three e-commerce

brands that came to their mind when thinking of online shopping. Amazon was mentioned most often in this test. Amazon has been ranked as most valuable and influential brand for 2020. According to an article published by (Guttman, 2020) in *statistica.com*, Amazon has been ranked as the most valuable brand in the world with an estimated brand value of about 221 billion U.S. dollars, soaring over Google and Apple's brand valuations. Amazon is ranked as number one brand of 2020, which is based on following the International Organization for Standardization's ISO 10668 standard which maps out the appropriate process of valuing brands by adhering to some key requirements like it has successfully connected the values and positive brand associations from one business – ease of use, speed, reliability – to other areas. Since our target audience also had a high awareness about this e-commerce giant and Amazon shows a high presence on social media, therefore, Amazon was chosen to represent an e-commerce brand for this study.

## Measures

The questionnaire for this study was divided into two parts. The first part collected the information regarding gender, age, education, time the respondents spent online, purchase frequency from Amazon and monetary value of purchases made online. Purchase frequency is the number of times an average customer buys a good or service from a single seller in a given period. Since a customer who makes purchases often is more likely to continue to come back than a customer who rarely makes purchases, this will depict the growth and profitability of an organization. Monetary Value refers to the amount of money a customer has spent within that same time frame. A customer who makes larger purchases is more likely to return than a customer who spends less. The objective of asking these questions was to predict the customer behavior towards purchasing from e-commerce brands and understanding their receptivity towards Amazon. The second part of the questionnaire focused on proposed research model prepared from the previous literature.

Marketing Communications uses Social Media activities to engage with the customers as a means of reaching out to them. Since Amazon is very active on different social media platforms like Facebook and Twitter, and is used by the company as a means to promote itself, so Amazon's perceived SMM activities on these sites was employed in the measurements. We measured perceived SMM activities on a five-point Likert type scale (1 = strongly disagree; 5 = strongly agree), adapted from an existing SMM activities scale created by Yadav and Rahman (2017). We measured SMM activities on the basis of 15 items for (Interactivity, Informativeness, Word-of-Mouth (WOM), Personalization, and Trendiness, with three items in each dimension. Value Equity was measured on the basis of the user responses to 8 items on a five point likert scale configured from Rust et al. (2000), and Wiedmann et al. (2009). Constructs of value equity measures included price, product quality, service quality and, convenience.

As per a research done by (Bowden, 2009; France et al., 2016; Vogel et al., 2008), the highest purpose of Customer based Brand Equity is to develop close relations with customers and drive them to be loyal. Therefore, the constructs of relationship equity measures Cognition, Emotion and Behaviour towards the brand. Seven items to measure relationship equity were developed

from (Cheng et.al.). Linking relationship equity to brand resonance in a social networking brand community Measures of brand equity included brand awareness, perceived value, brand personality, brand association, and perceived uniqueness aspects. Ten items to measure brand equity were developed from Aaker (1991) and Yun (2006). Measures of purchase intention were adapted from the instrument used in Park et al. (2007). All these measurement items were measure on a five-point Likert type scale (1 = strongly disagree; 5 = strongly agree).

A questionnaire was designed according to the hypotheses stated above. The participants in this study were experienced users of social media. All of the above measurement statements were measured using five-point Likert-type Scales (1=Strongly disagree, 5=Strongly agree). A pretest was done with 10 participants who had experience of using social media and then some alterations were done in some areas of the questionnaire so that it could be easily understood by the participants. A pilot test was done at a university in Noida in New Delhi, India in which 48 sample responses were collected. Google forms was used as a tool for preparing an online questionnaire and the link was dispersed to collect the required data from a convenience sample of customers who have already used few social media platforms (Dwivedi and Irani, 2009). Since this study focuses on an e-commerce brand's SMM, respondents were restricted to consumers who had made any purchases online within the past 1 year and are familiar with Amazons social media sites. Data was collected from online survey questionnaires from May 10 to 25, 2020. From among the 450 survey questionnaires distributed, 430 were finally analyzed after excluding incomplete responses as shown in the Analytical findings below.

### Findings

Using the frequency analysis, the respondents' profile has been tabulated in the Table 1:

**Table 1: Demographic profile analysis (respondents= 430)**

Measure	Item	Frequency	Percentage (%)
<b>Gender</b>	Female	255	59.3
	Male	175	40.7
<b>Age</b>	21-30	254	59.1
	31-40	66	15.3
	41-50	39	9.1
	Less than 20	64	14.9
	More than 50	7	1.6
<b>Education</b>	Secondary school	32	7.4
	Graduate	208	48.4
	Masters and Doctoral studies	190	44.2
<b>How often do you browse the Internet during the day</b>	1-2 hours	65	15.1
	2-3 hours	75	17.4
	3-4 hours	85	19.8
	Less than 1 hour	21	4.9
	More than 4 hours	184	42.8

<b>When you buy online how much on an average do you spend</b>	between Rs 3000 and 5000	54	12.6
	between Rs 1000 and 3000	252	58.6
	less than Rs 1000	87	20.2
	Rs 5000 or more	37	8.6
<b>On average how often do you purchase from Amazon</b>	3–4 times per year	205	47.7
	once a month	140	32.6
	once a week or more	28	6.5
	once every two weeks	57	13.3

**Source: Author's Calculation using SPSS 21.0**

Demographically, the results showed that most of the respondents were female (59.3%), majority of the respondents were within the age group of 21–30 years, however respondents above 50 years of age were just 1.6%, With respect to education, most of the respondents were graduates (48.4%) followed by Post Graduates and Doctorate level of education (44.2%). Based on the age group of majority of respondents, it was seen that most of them spent up to even more than 4 hours browsing internet. Majority of the respondents purchase 3-4 times in a year from Amazon and most of the respondents (58.6%) spent on an average Rs. 1000-3000 per purchase. Since the study deals with an e-commerce portal purchase being initiated via Social Media Marketing efforts, that's why it can be said that approximately 60% of the sample were the real shoppers on Amazon portal encompasses a certain amount of monetary commitment.

To test the hypothesis, SPSS 17.0 and PLS-SEM package programs were used. The descriptive analysis was conducted using SPSS. Cronbach alpha was measured as suggested by Nunnally and Bernstein (1994) and the results had a Cronbach's alpha value over 0.7, which proved the internal consistency of each variable. Structural Equation Modeling techniques, such as the covariance based SEM (CBSEM) and the Partial Least Squares based SEM (PLS) have gained a lot of popularity in empirical research from the last few years (Ringle et al., 2015). PLS-SEM is used to estimate path relationships on the basis of available data with an objective of minimizing the error terms of endogenous variable. It is not bound by the normal data distribution assumption (Chin and Newsted, 1999; Haenlein and Kaplan, 2004). In addition, it is more suitable to evaluate estimated parameters in more complicated multivariate relationships between exogenous and endogenous variables (Ringle et al., 2014). The Smart PLS (version 3.2.4; Ringle, Wende, & Becker, 2015) software was used to run the analysis by applying the technique of bootstrapping in order to evaluate the factor loadings' significance, and path coefficients. Moreover, a two-step approach for analysis as proposed by Anderson & Gerbing (1988) was adopted in this study. First, the evaluation of the measurement model was done by performing the reliability and validity analyses on each of the model's measures and then the structural model was analysed by estimating the paths between the model's constructs determining the significance of path relationships and the Goodness of Fit of the model. Normality of data with sample size 430 and number of variables 42 has been checked online through



<https://webpower.psychstat.org/models/kurtosis> to get Mardia’s multivariate skewness and kurtosis values which are shown as below in Table 2.

**Table 2:**

Mardia’s Multivariate	b	Cut-Off	Z	p-value	Decision
Skewness	<b>433.4011</b>	-1 to +1	<b>30988.17872</b>	0	Data is non-normal
Kurtosis	<b>2414.9976</b>	-20 to +20	<b>96.58594</b>	0	

Source: Author’s calculation using <https://webpower.psychstat.org/models/kurtosis>

**Constructs Reflexive/Formative Check**

In order to decide whether a construct should be formatively or reflectively measured, a confirmatory tetrad analysis (CTA-PLS) was used (Gudergan et al., 2008). For that, Confirmatory Tetrad Analysis (CTA) has been run as depicted in Table 3. CTA can be done with the constructs which has 4 or more indicators. In this study, Value Equity, Relationship Equity and Brand Equity have more than four indicators. Therefore, CTA can be run on these constructs with subsamples 5000, parallel processing with two tailed test at 10% level of significance where  $H_0 : \tau = 0$  V/s  $H_1: \tau \neq 0$ .

**Table 3:**

Construct	Rule	CI Low adj.	CI Up adj.	Decision on Measurement Model
Value Equity	More than one values is	-	+	Since 0 lies in the range of – and +, model is Reflexive
Relationship equity	More than one values is	-	+	Since 0 lies in the range– and +, model is Reflexive
Brand Equity	More than one values is	-	+	Since 0 lies in the range – and +, model is Reflexive

**Low Order Constructs Validity and Reliability Check**

Impact of Social Media Data Analytics on Customer Equity Drivers and Purchase Intention: Understanding World's Most Valuable Brand - Amazon

<b>Construct</b>	<b>Indicator</b>	<b>Construct Loadings</b>	<b>Cronbach's Alpha</b>	<b>rho_A</b>	<b>Composite Reliability</b>	<b>Average Variance Extracted (AVE)</b>
<b>Informativeness</b>	Amazon's social media offers accurate information on products	0.771	0.846	0.848	0.847	0.648
	Amazon's social media offers useful information	0.831				
	The information provided by Amazon's social media is comprehensive	0.813				
<b>Interactivity</b>	Amazon's social media allows me to share and update their existing content	0.699	0.785	0.789	0.785	0.55
	Amazon interacts regularly with its followers and fans	0.721				
	Amazon's activity on social media serves to create and nurture an interactive community of customers	0.8				
<b>Personalization</b>	Amazon's social media makes purchase recommendations as per my requirements	0.713	0.79	0.79	0.789	0.556
	I feel my needs are met by using Amazon's social media	0.76				
	Amazon's social media facilitates personalized information search	0.762				
<b>Trendiness</b>	Contents visible on Amazon's social media is the latest trend	0.803	0.86	0.861	0.861	0.673
	Using Amazon's social media is really trendy	0.832				
	Anything trendy is available on Amazon's social media	0.826				

<b>Word Mouth</b>	I would recommend my friends to visit Amazon's social media	0.843	0.844	0.852	0.847	0.65
	I would encourage my friends and acquaintances to use Amazon's social media	0.845				
	I would like to share my purchase experiences with friends and acquaintances on Amazon's social media	0.724				
<b>Value Equity</b>	Amazon's online shopping saves money in comparison to traditional shopping	0.739	0.83	0.853	0.838	0.403
	Amazon's online shopping significantly reduces expenses per transaction in comparison to traditional shopping	0.692				
	The product ordered online on Amazon is of the same quality as the product purchased in a store	0.72				
	Amazon's E-shopping provides same purchasing conditions as traditional shopping	0.615				
	Amazon's online shopping saves my time	0.709				
	Amazon's online shopping offers me the possibility of shopping 24/7	0.56				
	The option free shipping in Amazon's online shopping increases my purchases	0.606				
	After the online shopping on Amazon, I am concerned whether the ordered product will	0.34				

Impact of Social Media Data Analytics on Customer Equity Drivers and Purchase Intention: Understanding World's Most Valuable Brand - Amazon

	be delivered					
<b>Relationship Equity</b>	Using Amazon gets me to think about it	0.623	0.904	0.913	0.904	0.579
	I think about Amazon a lot when I'm using it	0.624				
	Using Amazon stimulates my interest to learn more about Amazon	0.714				
	I feel very positive when I use Amazon	0.822				
	Using Amazon makes me happy	0.888				
	I feel proud when I use Amazon	0.817				
	I spend a lot of time using Amazon, compared to other category brands	0.791				
<b>Brand Equity</b>	I recognize the logo of Amazon	0.56	0.924	0.929	0.925	0.582
	When I think of Online Shopping, Amazon is the brand that comes to my mind	0.719				
	Amazon offers very good-quality products	0.788				
	Products of Amazon are reliable	0.791				
	Amazon is a very sincere brand	0.784				
	Amazon has a good Image in my mind	0.813				
	I consider myself a fan of Amazon	0.802				
	If someone offers me a competitive brand, I still buy from Amazon	0.756				
	I consider myself a consumer loyal to Amazon	0.815				
<b>Purchase Intention</b>	I would buy my products from Amazon	0.823	0.844	0.844	0.843	0.642

	rather than any other online shopping portal available					
	I am willing to recommend others to buy from Amazon	0.793				
	I intend to purchase from Amazon in the future as well	0.788				
<b>Cut-off</b>		>0.5 (Steenkamp and Geyskens, 2006; Hair et al., 2006)	0.7 or above (Nunnally, 1978)	> 0.7 (Dijkstra-Henseler coefficient)	> 0.7 (Hair, Hult, Ringle, and Sarstedt, 2014)	> 0.5 (Hair et al., 2006)
<b>Finding</b>		All satisfied except one marked in red	All satisfied	All satisfied	All satisfied	All satisfied except one marked in red

**Authors’ Calculation using SmartPLS 3, Confirmatory Tetrad Analysis.**

Therefore, all scales were measured reflectively. The conceptual model was tested through two stages: measurement model and structural model (Anderson and Gerbing, 1988). In the measurement model, reflective constructs are assessed on the basis of reliability and validity (Chin and Newsted, 1999; Hulland, 1999). The reliability was assessed on the basis of three key criteria’s like: factor loadings, composite reliability and internal consistency reliability. The results showed satisfactory factor loadings on all reflective items on their corresponding latent constructs (with the minimum of 0.56-0.888) except for one factor loading of 0.34 which was not satisfactory. The results also showed high reliability (0.785-0.925) and high internal consistency reliability (0.785-0.924) in all latent constructs (see Table 4).

**Report Measurement Model: Convergent Validity and Discriminant Validity of Low Order Constructs (Table 4):**

Discriminant validity was assessed further using three criteria including cross-loadings, Fornier-Lacker criterion, and HTMT as suggested by Hair et al. (2017). In assessing the cross-loadings, the outer loading of an item should be greater on its respective latent variable than its cross-loadings on other latent variables. Table 5 reveals that since outer loading of each construct should be higher than all its cross loadings with other constructs (which is almost satisfied).

**Cross Loadings of Low Order Constructs (Table 5)**

Impact of Social Media Data Analytics on Customer Equity Drivers and Purchase Intention: Understanding World's Most Valuable Brand - Amazon

Construct/ Indicators	Interactivity	Informa- tiveness	Person- aliza- tion	Trendi- ness	Word of Mout- h	Value Equit- y	Relatio- nship Equity	Bran- d Equit- y	Purcha- se Intenti- on
BE1	0.331	0.405	0.437	0.391	0.37	0.559	0.371	<b>0.56</b>	0.531
BE2	0.406	0.459	0.497	0.506	0.499	0.614	0.58	<b>0.719</b>	0.695
BE3	0.503	0.573	0.563	0.535	0.584	0.705	0.644	<b>0.788</b>	0.727
BE4	0.472	0.601	0.581	0.539	0.578	0.699	0.626	<b>0.791</b>	0.724
BE5	0.424	0.563	0.565	0.549	0.584	0.68	0.592	<b>0.784</b>	0.723
BE6	0.397	0.559	0.546	0.526	0.576	0.684	0.641	<b>0.813</b>	0.78
BE7	0.448	0.524	0.584	0.544	0.595	0.643	0.769	<b>0.802</b>	0.754
BE8	0.417	0.469	0.525	0.463	0.577	0.54	0.698	<b>0.756</b>	0.719
BE9	0.436	0.472	0.568	0.484	0.645	0.611	0.696	<b>0.815</b>	0.774
Inf1	0.605	<b>0.763</b>	0.69	0.621	0.586	0.565	0.479	0.507	0.465
Inf2	0.616	<b>0.834</b>	0.745	0.665	0.679	0.609	0.531	0.555	0.53
Inf3	0.652	<b>0.818</b>	0.76	0.63	0.625	0.575	0.517	0.571	0.535
Int1	<b>0.649</b>	0.507	0.594	0.462	0.499	0.359	0.395	0.352	0.371
Int2	<b>0.733</b>	0.562	0.581	0.494	0.49	0.425	0.416	0.411	0.437
Int3	<b>0.837</b>	0.65	0.668	0.572	0.533	0.463	0.487	0.477	0.396
PI1	0.431	0.492	0.533	0.498	0.588	0.564	0.692	0.773	<b>0.823</b>
PI2	0.478	0.515	0.583	0.493	0.591	0.623	0.614	0.746	<b>0.793</b>
PI3	0.384	0.518	0.58	0.51	0.595	0.685	0.567	0.741	<b>0.788</b>
Per1	0.606	0.675	<b>0.664</b>	0.585	0.593	0.507	0.449	0.468	0.458
Per2	0.569	0.697	<b>0.782</b>	0.649	0.739	0.567	0.558	0.551	0.583
Per3	0.677	0.667	<b>0.784</b>	0.688	0.651	0.589	0.525	0.566	0.531
RE1	0.418	0.422	0.489	0.505	0.529	0.445	<b>0.623</b>	0.474	0.431
RE2	0.387	0.422	0.499	0.449	0.512	0.446	<b>0.624</b>	0.497	0.453
RE3	0.468	0.469	0.529	0.498	0.585	0.517	<b>0.714</b>	0.576	0.523
RE4	0.458	0.517	0.568	0.529	0.607	0.643	<b>0.822</b>	0.713	0.67
RE5	0.458	0.534	0.571	0.587	0.687	0.711	<b>0.888</b>	0.719	0.712
RE6	0.481	0.519	0.528	0.52	0.629	0.595	<b>0.817</b>	0.706	0.647
RE7	0.445	0.473	0.481	0.499	0.577	0.528	<b>0.791</b>	0.663	0.658
Tre1	0.576	0.629	0.705	<b>0.797</b>	0.691	0.586	0.514	0.518	0.519
Tre2	0.561	0.688	0.697	<b>0.857</b>	0.759	0.561	0.592	0.586	0.517
Tre3	0.557	0.634	0.718	<b>0.805</b>	0.761	0.559	0.551	0.525	0.502
VE1	0.426	0.523	0.556	0.492	0.52	<b>0.739</b>	0.484	0.578	0.591
VE2	0.435	0.5	0.544	0.463	0.505	<b>0.692</b>	0.482	0.547	0.537
VE3	0.327	0.509	0.5	0.482	0.523	<b>0.72</b>	0.523	0.634	0.577
VE4	0.342	0.46	0.438	0.423	0.492	<b>0.615</b>	0.518	0.49	0.462

VE5	0.332	0.529	0.509	0.504	0.529	<b>0.709</b>	0.484	0.574	0.542
VE6	0.358	0.456	0.463	0.414	0.379	<b>0.56</b>	0.354	0.498	0.415
VE7	0.333	0.377	0.422	0.383	0.436	<b>0.606</b>	0.507	0.572	0.512
VE8	0.32	0.265	0.307	0.343	0.307	<b>0.34</b>	0.43	0.283	0.205
WoM1	0.585	0.646	0.758	0.768	<b>0.854</b>	0.615	0.671	0.633	0.628
WoM2	0.558	0.684	0.757	0.763	<b>0.85</b>	0.632	0.651	0.631	0.645
WoM3	0.502	0.562	0.629	0.636	<b>0.708</b>	0.529	0.556	0.508	0.502

The second criteria of Discriminant validity was not confirmed since the AVE’s was not greater than the squared correlation coefficients, which is the problem of multicollinearity (see Table 6). Therefore, we had to go for higher order Reflective Model. The higher order model will be reflective model because it reflects all the constructs in low order.

**Discriminant Validity Analysis of Low Order Constructs – Fornell Lacker Criteria (Table 6)**

	<b>Interac tivity</b>	<b>Informati veness</b>	<b>Personali zation</b>	<b>Trend iness</b>	<b>Word of Mout h</b>	<b>Val ue Equ ity</b>	<b>Relatio nship Equity</b>	<b>Bra nd Equ ity</b>	<b>Purc hase Inten tion</b>
<b>Interactiv ity</b>	<b>0.743</b>								
<b>Informati veness</b>	0.775	<b>0.805</b>							
<b>Personali zation</b>	0.826	0.909	<b>0.746</b>						
<b>Trendine ss</b>	0.688	0.793	0.861	<b>0.82</b>					
<b>Word of Mouth</b>	0.681	0.783	0.889	0.898	<b>0.807</b>				
<b>Value Equity</b>	0.562	0.724	0.745	0.692	0.736	<b>0.63 4</b>			
<b>Relations hip Equity</b>	0.584	0.633	0.687	0.674	0.778	0.73 9	<b>0.76</b>		
<b>Brand Equity</b>	0.56	0.676	0.711	0.663	0.735	0.83 6	0.827	<b>0.76 3</b>	
<b>Purchase Intention</b>	0.538	0.634	0.705	0.624	0.737	0.77 8	0.78	0.94 1	<b>0.801</b>
<b>Rule</b>	<b>Square root of AVE of each indicator mentioned in diagonal cells should be more than the correlation with the other indicators mentioned in off diagonal cells (Fornell&amp;Larcker,1981)</b>								
<b>Finding</b>	<b>Discriminant Validity is not satisfied.</b>								

In order to establish the discriminant validity Henseler et al. (2015) have recommended heterotrait-monotrait ratio (HTMT) which works on assessment of correlations. This shows the true correlation between two latent variables. A threshold value of 0.90 has been suggested for HTMT (Henseler et al., 2015) and if it is above 0.90 it shows a lack of discriminant validity. In the Table 7 below, the discriminant validity is violated between Informativeness and Personalization (0.912) and also between Trendiness and Word of Mouth. Since HTMT criterion has not been fulfilled for our PLS model, therefore, Higher Order Constructs are to be formed.

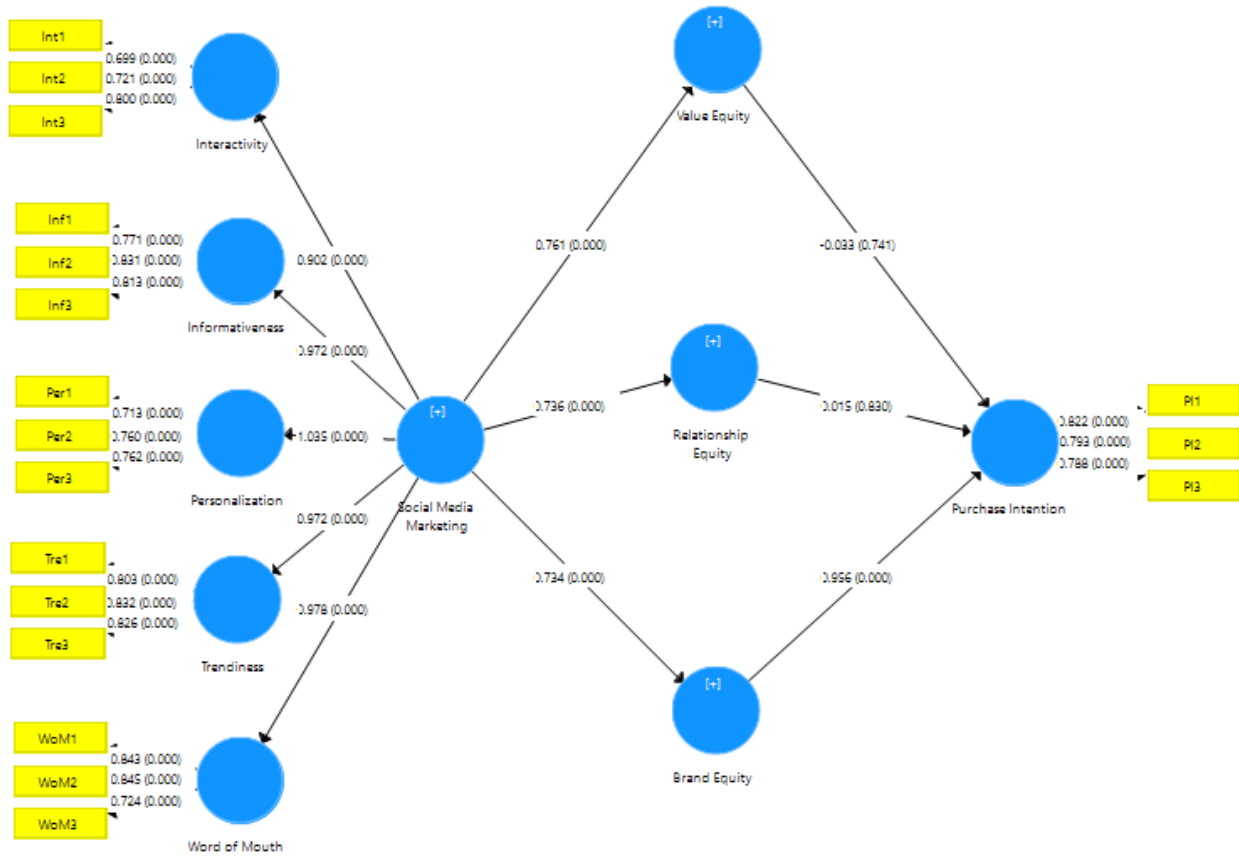
**Table 7**

<b>Heterotrait-Monotrait Ratio</b>								
	<b>Interactivity</b>	<b>Informativeness</b>	<b>Personalization</b>	<b>Trendiness</b>	<b>Word of Mouth</b>	<b>Value Equity</b>	<b>Relationship Equity</b>	<b>Brand Equity</b>
<b>Informativeness</b>	0.775							
<b>Personalization</b>	0.831	0.912						
<b>Trendiness</b>	0.689	0.794	0.86					
<b>Word of Mouth</b>	0.689	0.786	0.889	0.901				
<b>Value Equity</b>	0.583	0.735	0.758	0.712	0.753			
<b>Relationship Equity</b>	0.587	0.633	0.689	0.676	0.781	0.763		
<b>Brand Equity</b>	0.561	0.679	0.712	0.665	0.736	0.853	0.817	
<b>Purchase Intention</b>	0.542	0.634	0.703	0.625	0.738	0.781	0.77	0.942

Since the discriminant validity is not achieved in lower order constructs and the higher order construct is introduced. Higher-order constructs (also known as hierarchical component models in the context of PLS-SEM; Lohmöller, 1989) provide a framework for researchers to model a construct on a more abstract dimension (referred to as higher-order component) and its more concrete sub dimensions (referred to as lower-order components). Now, the model has been revised as shown below in Figure 2. Here the higher order construct is social media marketing which consists of all the indicators mentioned in lower order constructs; those are Interactivity, Informativeness, Personalization, Trendiness and Word of Mouth. All the lower order constructs are connected with the higher order construct and then on the basis of beta values between lower and higher order constructs, its reliability and validity has been checked as shown in Table 8 below.



**Figure 2: Model with Higher Order Construct**



**(Table 8)**

	<b>Beta</b>	<b>Beta<sup>2</sup></b>	<b>Error</b>	<b>Composite Reliability (CR)</b>	<b>Average Variance Extract (AVE)</b>	<b>Cronbach Alpha</b>	<b>Comment</b>
Beta1	0.972	0.945	0.055	<b>0.98873</b> (Cut Off is >0.7)	<b>0.946176</b> (Cut Off is >0.5)	<b>0.941</b> (Cut Off is >0.7)	<b>Convergent Validity and Reliability of Higher Order Construct satisfies</b>
Beta2	0.902	0.814	0.186				
Beta3	1.035	1.071	-0.071				
Beta4	0.972	0.945	0.055				
Beta5	0.978	0.956	0.044				
<b>Sum</b>	<b>4.859</b>	<b>4.730881</b>	<b>0.269119</b>				
<b>Sum<sup>2</sup></b>	<b>23.60988</b>						

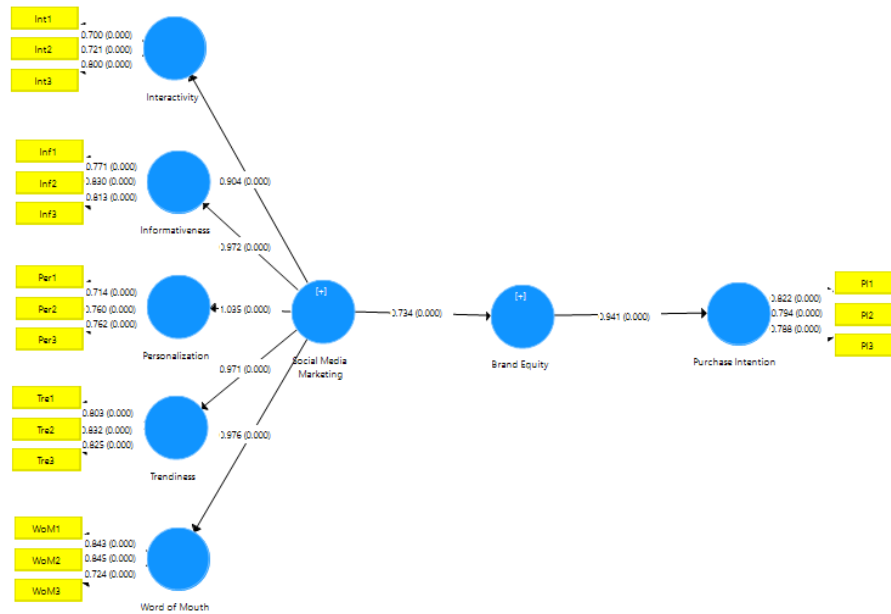
**Checking** (Standardized) Root Mean Square Residual value which is 0.073 and the cut-off is <0.10, which satisfies means, the model is fit for considering for hypothesis analysis.

After checking fitness, validity and reliability, Consistent PLS Bootstrapping was run to test the hypothesis and the decision taken on the hypothesis as mentioned in below table in Table 9.

**(Table 9)**

<b>Hypothesis</b>	<b>Causal Path</b>	<b>Standardized Estimate</b>	<b>T Statistics</b>	<b>P Values</b>	<b>Hypothesis Decision</b>
<b>H1</b>	<b>Social Media Marketing -&gt; Brand Equity</b>	0.734	18.298	0.000	Supported
<b>H2</b>	<b>Social Media Marketing -&gt; Relationship Equity</b>	0.736	24.412	0.000	Supported
<b>H3</b>	<b>Social Media Marketing -&gt; Value Equity</b>	0.761	19.964	0.000	Supported
<b>H4</b>	<b>Value Equity -&gt; Purchase Intention</b>	-0.033	0.331	0.741	Not Supported
<b>H5</b>	<b>Brand Equity -&gt; Purchase Intention</b>	0.956	8.082	0.000	Supported
<b>H6</b>	<b>Relationship Equity -&gt; Purchase Intention</b>	0.015	0.215	0.830	Not Supported

From The above table, it is found that there is no impact of value equity and relationship equity on purchase Intention. Therefore, the model has been modified as below:



## Findings and Conclusion

The purpose of this study is to examine the effects of social media marketing activities of e-commerce brands on customer equity drivers and purchase intention. The findings of this study support the following conclusion.

First SMM activities of an e-commerce brand comprises of five constructs: Interactivity, Informativeness, Personalization, Trendiness and Word of Mouth, which are quite distinctive in comparison to frumpish marketing activities. The SMM activities perceived by the customers show a predominant influence on all customer equity drivers. The results showed that SMM activities had a positive and significant effect on relationship equity. This result is in line with the study of Kim and Ko (2012). Since social media activities drives friendly relations between the company and its customers, the relational equity of a company gets increased. Indeed, via the interactions in social media among people, many values are exchanged among people and this leads to much information exchange among people, groups and companies. Thus, these relations create a trust and it is a valuable capital for organization. Amazon's social media marketing activities are trying to engage the customers in a friendly manner so the Amazons intended actions are positively affecting the relationship equity.

The SMM activities had a positive influence on value equity, and thereby this hypothesis is supported. This is in line with the study of Kim and Ko (2012). Value is the keystone of any good customer relationship. When a company provides good consistency between quality and price, it increases the value equity of the company, which can lead to better intention to shop with the company. Amazons SMM activities offers a ground for customers to get engaged in a friendly communication with it. Amazon has been able to generate good brand awareness and brand image, thus positively impacting the brand equity as well.

The main purpose of any marketing communication is to strengthen customer relationships and thereby create a better purchase intent. Although the SMM activities are contributing as effective marcom methods but not all of them are able to create a purchase intention as per our study. Unlike some prior studies on this topic, not all customer equity drivers show a positive influence on the purchase intention in our study. Some of the most possible reasons for such results are as follows. Amazon is a company which focuses on e-commerce, cloud computing, digital streaming and artificial intelligence. Its product line include several digital media apparel, baby products, consumer electronics, beauty products, gourmet foods, groceries and many more items. In our study the age group of the sample who majorly shop on Amazon is 21-30 years old and this the consumer segment who browse internet for at least four hours a day, but at the same time would not spend more than Rs. 3000-Rs. 4000 on an average when they buy from Amazon. These are majorly Generation Y or Millennial consumers. Generation Y likes to spend money on experiences rather than materialistic items. It is the least loyal and the least satisfied customer segment which is always looking for a unique experience and a change. Generation Y customers are not much interested in utilitarian benefits but look out more for the hedonic benefits, therefore the value equity doesn't show a positive influence on purchase intention. The hedonic features of an e-commerce website are not usually directly related to purchase decisions, although they can increase customer satisfaction (Cai and Xu, 2011). There is a big possibility due to this the Generation Y customers don't seek value based benefits, therefore even if the social media activities carried out by Amazon towards value equity are great, but this segment is rarely looking out for such benefits. There is also a lot of competition in e-commerce brands who want to reach out to this segment. India is bestowed with the largest population of millenials, which is over 440 million and comprises 34% of the total population. Due to the increased competition, it is difficult to maintain a customer loyalty towards a specific brand which impacts the purchase intention. While comparing the influence of all three customer equity drivers on purchase intention, this study concludes that only brand equity has a positive impact on purchase intention. The Indian millennial seems to be either brand sensitive with least loyalty towards a specific brand. Consequently, brand equity to an e-commerce brand is more influential than value equity or relationship equity.

### **Limitations and future research**

The empirical findings from this study are taken from Indian sample from the age group which is less than 20 years old to more than 50 years of age as well. This makes it a very wide sample segment for study which can impact the findings by creating more errors. A future research should be conducted taking each generation as an independent sample. This study focuses on Indian consumers only, there is scope of replicating the study with additional samples of global consumers of Amazon worldwide. Since Amazon sells a variety of product lines, a study needs to be done focusing on a specific product category for better results. A study may also be conducted to understand how brand loyalty of Generation Y to e-commerce brands can be increased. Although the results of the study show that SMM activities had a positive impact on value, relationship and brand equity but only brand equity influenced the purchased intention. Thus based on the importance of social media these days, it is proposed a study needs to be conducted on how social media marketing needs to be improvised further for developing the intention to purchase more.

## References

- Aaker, D., (1991). *Managing Brand Equity. The Free Press*, New York.
- Adams, J. S. (1963). “Towards an understanding of inequity”. *The Journal of Abnormal and Social Psychology*, 67(5), 422–436.
- Alalwan et. al., (2016). “A systematic review of extant literature in social media in the marketing perspective”. *Conference on e-Business, e-Services and e-Society* (pp. 79–89).
- Alalwan et. al., (2017). “Social media in marketing: A review and analysis of the existing literature”. *Telematics and Informatics*, 34(7), 1177–1190.
- Anderson et. al. (2016). “Online shopping and E-commerce. Pew Res. Center: Internet, Sci. Tech. (Blog). [http://www.pewinternet.org/2016/12/19/onlin\\_e-shopping-and-e-commerce/](http://www.pewinternet.org/2016/12/19/onlin_e-shopping-and-e-commerce/). (Accessed 25 June 2020).
- Bagozzi, Richard P., et al. (1979). “The Construct Validity of the Tripartite Classification of Attitudes.” *Journal of Marketing Research*, vol. 16, no. 1, Feb. 1979, pp. 88–95, 10.1177/002224377901600113.
- Bell, David, et al. (2002). “Seven Barriers to Customer Equity Management.” *Journal of Service Research*, vol. 5, no. 1, Aug. 2002, pp. 77–85, 10.1177/1094670502005001008.
- Blattberg RC, Deighton J. (1996), “Manage marketing by the customer equity test”. *Harvard Business Review*, 1996;74(4):136–44
- Blattberg, Robert C., and John Deighton. (1996). “Manage Marketing by the Customer Equity Test.” *Harvard Business Review*, 1 July 1996, [hbr.org/1996/07/manage-marketing-by-the-customer-equity-test](http://hbr.org/1996/07/manage-marketing-by-the-customer-equity-test). Accessed 10 June. 2020.
- Braojos et. al., (2015). “How do small firms learn to develop a social media competence?”. *International Journal of Information Management*, 35(4), 443–458.
- Cai, S., and Xu, Y. (2011). “Designing not just for pleasure: effects of website seathetics on consumer shopping value”. *International Journal of Electronic Commerce*, 15(4), 159-188.
- Chen et. al., (2011). “The Role of Marketing in Social Media: How Online Consumer Reviews Evolve”. *Journal of Interactive Marketing*, 25(2), 85-94.
- Chen, Mei-Fang, and Chia-Lin Lee. (2015). “The Impacts of Green Claims on Coffee Consumers’ Purchase Intention.” *British Food Journal*, vol. 117, no. 1, 5 Jan. 2015, pp. 195–209, 10.1108/bfj-07-2013-0196. Accessed 15 May 2020.
- Cheng, Ya-Yun, et al. (2019). “Linking Relationship Equity to Brand Resonance in a Social Networking Brand Community.” *Electronic Commerce Research and Applications*, vol. 35, 1 May 2019, p. 100849, 10.1016/j.elerap.2019.100849.
- *Communications of the ACM*, 52(1), 122–125.
- Dwivedi, Y., & Irani, Z. (2009). “Understanding the adopters and non-adopters of broadband”.

- Ecommerce Industry of India, (2020). “Industry Overview, Market Size & Growth| IBEF”. [online] Ibef.org. Available at: <<https://www.ibef.org/industry/ecommerce.aspx>> [Accessed 27 June 2020].
- Gale and Bradley (1994). “*Managing Customer Value*”. New York: The Free Press.
- Gunelius, S. (2011). “30 minute Social Media Marketing: Step by Step Techniques to Spread the Words about your Business”, McGraw-Hill: USA.
- Håkansson, H., ed. (1982). “*International Marketing and Purchasing of Industrial Goods: An Interaction Approach*”. Chichester, UK: John Wiley & Sons.
- Hawkins, K., & Vel, P. (2013). “Attitudinal loyalty, behavioural loyalty and social media: An introspection”. *The Marketing Review*, 13(2), 125–141.
- Hogan, John E., et al. (2002). “Customer Equity Management.” *Journal of Service Research*, vol. 5, no. 1, Aug. 2002, pp. 4–12, 10.1177/1094670502005001002.
- Hyo Jin Kim, and Hye-Joo Lee. (2013). “The Effect of the Well-Being Consumer Value Orientations, the Perceived Value and Brand Preference on Purchase Intention of the Environment-Friendly Cosmetic.” [www.semanticscholar.org/paper/The-Effect-of-the-Well-being-Consumer-Value-the-and-Kim-Lee/1b28446b31fc13d6b74646d5e7c1056abd6d239c](http://www.semanticscholar.org/paper/The-Effect-of-the-Well-being-Consumer-Value-the-and-Kim-Lee/1b28446b31fc13d6b74646d5e7c1056abd6d239c). Accessed 1 Aug. 2020.
- Hyun, Sunghyup Sean. (2009). “Creating a Model of Customer Equity for Chain Restaurant Brand Formation.” *International Journal of Hospitality Management*, vol. 28, no. 4, Dec. 2009, pp. 529–539, 10.1016/j.ijhm.2009.02.006.
- Kalpan, M.A., and M. Haenlein (2009). “Users of the world, unite! The challenges and opportunities of Social Media”, *Business Horizons (2010)* 53. 59-68.
- Kamboj et. al., (2018). “Examining branding co-creation in brand communities on social media: Applying the paradigm of Stimulus-organism response”. *International Journal of Information Management*, 39(April), 169–185.
- Kaplan, Andreas M., and Michael Haenlein. (2010). “Users of the World, Unite! The Challenges and Opportunities of Social Media.” *Business Horizons*, vol. 53, no. 1, Jan. 2010, pp. 59–68, 10.1016/j.bushor.2009.09.003.
- Kim et. al. (2015). “The effect of adopting and using a brand's mobile application on customer's subsequent purchase behaviour”. *J. Interact. Mark.* 23, 28–41.
- Kim, Angella Ji-Young, and Eun-Ju Ko. (2010). “The Impact of Design Characteristics on Brand Attitude and Purchase Intention - Focus on Luxury Fashion Brands -.” *Journal of the Korean Society of Clothing and Textiles*, vol. 34, no. 2, 28 Feb. 2010, pp. 252–265, 10.5850/jksct.2010.34.2.252. Accessed 6 June. 2020.
- Kim, Jieun, et al. (2012). “The Customer-Salesperson Relationship and Sales Effectiveness in Luxury Fashion Stores: The Role of Self Monitoring.” *Journal of Global Fashion Marketing*, vol. 1, no. 4, Nov. 2010, pp. 230–239, 10.1080/20932685.2010.10593074. Accessed 22 June. 2020.
- Kim, N., & Kim, W. (2018). “Do your social media lead you to make social deal purchases? Consumer-generated social referrals for sales via social commerce”. *International Journal of Information Management*, 39(April), 38–48.

- Kordupleski, Raymond, Roland T. Rust, and Anthony J. Zahorik (1993), “Why Improving Quality Doesn’t Improve Quality,” *California Management Review*, 35 (Spring), 82–95.
- Kudeshia, Chetna, and Amresh Kumar. (2017). “Social EWOM: Does It Affect the Brand Attitude and Purchase Intention of Brands?” *Management Research Review*, vol. 40, no. 3, 20 Mar. 2017, pp. 310–330, 10.1108/mrr-07-2015-0161.
- Kumar, V.V., and Sundaram, B. (2012). “An evolutionary road map to winning with social media marketing”. *Mark. Res.* 24 (2), 4-7
- Leone, Robert P., et al. (2006). “Linking Brand Equity to Customer Equity.” *Journal of Service Research*, vol. 9, no. 2, Nov. 2006, pp. 125–138, 10.1177/1094670506293563. Accessed 11 Dec. 2019.
- Lipsman, A., (2019). “Global Ecommerce 2019”. [online] eMarketer. Available at: <<https://www.emarketer.com/content/global-ecommerce-2019>> [Accessed 27 June 2020].
- Lloyd, Alison E., and Sherriff T.K. Luk. (2010). “The Devil Wears Prada or Zara: A Revelation into Customer Perceived Value of Luxury and Mass Fashion Brands\*.” *Journal of Global Fashion Marketing*, vol. 1, no. 3, Aug. 2010, pp. 129–141, 10.1080/20932685.2010.10593065.
- Martins et. al. (2018). “How smartphone advertising influences consumers' purchase intention”. *J. Bus. Res.* <https://doi.org/10.1016/j.jbusres.2017.12.047>.
- Maxham and James G. (2001). “Service Recovery’s Influence on Consumer Satisfaction, Positive Word-of-Mouth, and Purchase Intentions.” *Journal of Business Research*, vol. 54, no. 1, Oct. 2001, pp. 11–24, 10.1016/s0148-2963(00)00114-4.
- McKee, S. (2010). “Creative B2b Branding (No, Really): Building a Creative Brand in a Business World”, *Goodfellow Publishers Limited; USA*.
- Mersey et. al., (2010). “Engagement with Online Media”. *Journal of Media Business Studies*, 7(2), 39-56.
- Mulhern and Francis (1999). “Customer Profitability Analysis: Measurement, Concentration, and Research Directions”, *Journal of Interactive Marketing*, 13 (Winter), 25–40.
- Mun, D. J. (2002), “A study of brand equity and performance diagnosis model”. *Journal of Global Academy of Marketing Science*, 2002;8:77–99.
- Oliver, Richard L., and John E. Swan. (1989), “Equity and Disconfirmation Perceptions as Influences on Merchant and Product Satisfaction.” *Journal of Consumer Research*, vol. 16, no. 3, 1989, pp. 372–383, [www.jstor.org/stable/2489518?seq=1](http://www.jstor.org/stable/2489518?seq=1). Accessed 1 Aug. 2020.
- Ostrom, T. M. (1969). “The Relationship between the Affective, Behavioral, and Cognitive Components of Attitude.” *Journal of Experimental Social Psychology*, vol. 5, no. 1, Jan. 1969, pp. 12–30, [www.sciencedirect.com/science/article/pii/0022103169900031](http://www.sciencedirect.com/science/article/pii/0022103169900031), 10.1016/0022-1031(69)90003-1. Accessed 28 June 2020.
- Otto, Julie E, and J.R.Brent Ritchie. (1996). “The Service Experience in Tourism.” *Tourism Management*, vol. 17, no. 3, May 1996, pp. 165–174, 10.1016/0261-5177(96)00003-9.

- Rajeck, J., (2018). “How Ecommerce Sites Can Rise Above Price-Driven Competition – Econsultancy”. [online] Econsultancy. Available at: <<https://econsultancy.com/how-ecommerce-sites-can-rise-above-price-driven-competition/>> [Accessed 27 June 2020].
- Rathore et. al., (2016). “Social media content and product co-creation: An emerging paradigm”. *Journal of Enterprise Information Management*, 29(1), 7–18.
- Robinson, J.E. (2007). “A Study of Social Media Marketing in North Carolina Special Libraries”, Unpublished Master’s Thesis, *University of North Carolina at Chapel Hill. U.S.A.*
- Rust RT, Lemon KN, Zeithaml VA. (2004), "Return on marketing: using CE to focus marketing strategy". *Journal of Marketing*, 2004;68(1):109–27
- Rust RT, Zeithaml VA, Lemon KN. (2000), “Driving customer equity: how customer lifetime value is reshaping corporate strategy”. *New York, NY: The Free Press*; 2000b.
- Rust RT, Zeithaml VA, Lemon KN. (2000), “Driving customer equity”. *New York: The Free Press*; 2000a
- Rust, Roland T., et al. (2008). “Customer Equity Management.” [Www.Hbs.Edu](http://www.Hbs.Edu), 1 Dec. 2005, [www.hbs.edu/faculty/Pages/item.aspx?num=19337](http://www.hbs.edu/faculty/Pages/item.aspx?num=19337). Accessed 15 July. 2020.
- Rust, Roland T., Katherine N Lemon, and Das Narayandas. *Customer Equity Management*. Upper Saddle River, NJ: Pearson Prentice Hall, 2005.
- Severt, Kimberly S., and Radesh Palakurthi. (2008). “Applying Customer Equity to the Convention Industry.” *International Journal of Contemporary Hospitality Management*, vol. 20, no. 6, 22 Sept. 2008, pp. 631–646, 10.1108/09596110810892209.
- Sigala, M. and Dimosthenis, M. (2009). “Exploring the Transformation of Tourism Firms’ Operations and Business Models through the Use of Web Map Services”. *European and Mediterranean Conference on Information Systems* (s. 1-13). Izmir: EMCIS
- Storbacka and Kaj (1994). “*The Nature of Customer Relationship Profitability*”. *Helsinki: Swedish School of Economics and Business Administration*.
- Usher et. al., (2014). “Australian health professions student use of social media”. *Collegian*, 21(2), 95–101.
- Vavra, Terry G. (1997). “*Improving Your Measurement of Customer Satisfaction*”. *Milwaukee: ASQ Quality Press*.
- Vogel, Verena, et al. (2008). “Customer Equity Drivers and Future Sales.” *Journal of Marketing*, vol. 72, no. 6, Nov. 2008, pp. 98–108, 10.1509/jmkg.72.6.098.
- Weinberg, T (2009). “The New Community Rules: Marketing on the Social Web”, 1<sup>st</sup> Edition, *O’Reilly: California*.
- Wilcox, S., (2019). “How millennials are shaping the future of retail. Martech Advisor (Blog) 2019”. <https://www.martechadvisor.com/articles/ecommerce/how-millennials-are-shaping-the-future-of-retail>.
- Wong, IpKin Anthony. (2013). “Exploring Customer Equity and the Role of Service Experience in the Casino Service Encounter.” *International Journal of Hospitality Management*, vol. 32, Mar. 2013, pp. 91–101, 10.1016/j.ijhm.2012.04.007.
- Yadav, Mayank, and Zillur Rahman. “Measuring Consumer Perception of Social Media Marketing Activities in E-Commerce Industry: Scale Development & Validation.”



*Telematics and Informatics*, vol. 34, no. 7, Nov. 2017, pp. 1294–1307, 10.1016/j.tele.2017.06.001.

- Young, J. (2019). “Global Ecommerce Sales To Reach Nearly \$3.46 Trillion In 2019 | Digital Commerce 360”. [online] Available at: <https://www.digitalcommerce360.com/article/global-ecommerce-sales/> [Accessed 27 June 2020].
- Yuan et. al., (2016). “Parasocial relationship effects on customer equity in the social media context”. *Journal of Business Research*, 69(9), pp.3795-3803.
- Yun S.Y., (2006). “A study on measuring and defining customer equity of fashion brand”. Unpublished master's thesis, Yonsei University, 2006.
- Zarella, D. (2010). “The Social Media Marketing Book”, *O’ Reilly Media Inc.*, CA, U.S.A.
- Zeithaml, V. A. (1988). “Consumer perceptions of price, quality, and value: a means-end model and synthesis of evidence”. *Journal of Marketing*, 1988;52(3):2-22.
- Zeng, B., & Gerritsen, R. (2014). “What do we know about social media in tourism? A review”. *Tourism Management Perspectives*, 10, 27–36.
- Zhu, Y. Q., & Chen, H. G. (2015). “Social media and human need satisfaction: Implications for social media marketing”. *Business Horizons*, 58(3), 335–345.