

**INTERACTIVE EFFECTS OF ONLINE  
CONSUMER REVIEWS AND READERS'  
PROPENSITY TO TRUST ON BRAND IMAGE,  
ADVOCACY AND PURCHASE INTENTIONS:  
MEDIATING ROLE OF PERCEIVED RISK**



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In the name of Allah, the most merciful and beneficent

## **DEDICATION**

I dedicate this thesis to my parents for their unconditional love and sacrifices and vision to see their kids successful, to my supporting wife who always stood by me in every tough time, to my kids for bearing my absence from their lives in their blossoming childhood. To all those whose support has enabled me to complete this research study successfully.

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## APPRECIATION AND GRATITUDE

All praise be to Allah, the Creator of this universe. I bow my head to Almighty Allah for the uncountable blessings and mercy upon me. I have been blessed to have received the best of everything in life for which I cannot thank Allah Almighty enough. I pray that my efforts may be accepted by Him and May I be guided to use my knowledge for the good of humanity and Ummah.

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(Acceptance by the Viva Voce Committee)

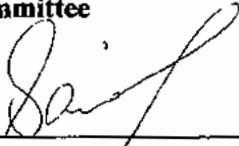
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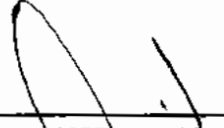
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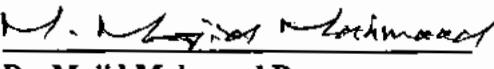
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## FORWARDING SHEET

The thesis titled "Interactive Effects of Online Consumer Reviews and Readers' Propensity to Trust on Brand Image, Advocacy and Purchase Intentions" submitted by Aqeel Shahzad (23-FMS/PHDMGT/S10) in partial fulfillment of Doctor of Philosophy degree in Management Sciences with specialization in Marketing, has been completed under our guidance and supervision. After receiving two reports from foreign evaluators, required changes have been incorporated. The changes advised by the external and the internal examiners have also been incorporated. We are satisfied with the quality of student's research work and allow him to submit this thesis for further process as per IUI rules & regulations.

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## LIST OF ABBREVIATIONS

|       |                                 |
|-------|---------------------------------|
| AD    | Advocacy                        |
| ANOVA | Analysis of Variance            |
| B2C   | Business to Customer            |
| B     | Beta Value                      |
| BI    | Brand Image                     |
| COD   | Cash on Delivery                |
| C2C   | Customer to Customer            |
| Df    | Degree of Freedom               |
| DV    | Dependent Variable              |
| eWOM  | electronic Word of Mouth        |
| HCI   | Human Computer Interaction      |
| IBFT  | Inter Bank Funds Transfer       |
| IoT   | Internet of Things              |
| IV    | Independent Variable            |
| LLCI  | Lower Level Confidence Interval |
| M     | Mean                            |
| Max   | Maximum                         |
| Min   | Minimum                         |
| NEG   | Negative                        |
| OCRs  | Online Consumer Reviews         |
| PI    | Purchase Intention              |
| POS   | Positive                        |
| PR    | Perceived Risk                  |
| Pt    | Propensity to Trust             |
| SD    | Standard Deviation              |
| SE    | Standard Error                  |
| UGC   | User Generated Content          |
| ULCI  | Upper Level Confidence Interval |
| WOM   | Word of Mouth                   |

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## **ABSTRACT**

Like other fields of life, the advent of internet has also heavily impacted the consumer behavior. Apart from engaging in online purchases, consumer also rely heavily on online sources for getting information about product and services to ease their decision making and purchase process (Zhang, Wu & Mattila, 2016). Being a new field of study, the recently emerged phenomenon of online reviews has been considered to significantly impact consumer behavior and thus needs further investigation. The present study explores role of positive and negative online reviews in consumer behavior. This study used an experimental design to investigate the impact of independent variables (negative and positive OCRs) on dependent variables (brand image, purchase intention and advocacy). The main effect of OCRs on brand image, purchase intentions and advocacy was tested. Similarly, moderating role of propensity to trust in the relationship between positive and negative OCRs and perceived risk was tested. Moreover, mediating role of perceived risk in the relationship between OCRs and outcomes was tested. 239 business students from 3 universities participated in the study. The results show that both positive and negative reviews have an impact on perceived risk and outcomes such that the positive reviews reduced uncertainty by minimizing risk and resulted in higher brand image, purchase intentions and advocacy. The negative reviews increased uncertainty by enhancing perceived risk and resulted in lower brand image, purchase intentions and advocacy. The results also suggest that consumers are more conscious about the durable products while evaluating the online reviews as compared to the commodity goods. Reviews written by expert reviewers had a stronger impact on consumer choices as compared to the reviews written by novice reviewers. Negative reviews had stronger impact on perceived risk as compared to

positive reviews. Consumers propensity to trust moderated the impact of positive and negative reviews and perceived risk resulting in increase in perceived risk in case of negative reviews and decrease in perceived risk in case of positive reviews. The results of the present study also suggest that perceived risk mediates the relationship between online reviews and outcomes. The theoretical and practical contribution of the study are discussed at the end and future research directions are proposed.

**Keywords:** Online consumer reviews, buying decision, propensity to trust, perceived risk, brand image, advocacy, purchase intentions, uncertainty reduction.

## **CHAPTER 1**

### **INTRODUCTION**

## **CHAPTER OVERVIEW**

This chapter opens up the discussion on the topic, introduces to the concepts used in the study and defines the relationship between the study variables. The need for conducting such study has been discussed followed by research questions and research objectives. The initial part of the chapter 1 describes the literature in light of which the present study has been planned. The online marketplace dynamics and future requirements have been discussed which identify the role of marketing researchers and practitioners. The changing online landscape, online purchasing, mode of payments and security issues are a major concern for the businesses. This chapter describes in details all aspects in light of the current literature and the reliable sources from internet.

# INTRODUCTION

## 1.1 Background

The consumer decision making model proposed by Engel, Blackwell, and Kollat (1968) suggests that buying decision making has remained the most important element of the purchase process. Engel, Blackwell, and Kollat (1968) divided the process of purchase decision-making into five stages that include need identification, search of pertinent information (Zhang, Wu & Mattila, 2016), evaluating the alternatives, decision to purchase and post purchase evaluation (Perreau, 2013). The customers are influenced by various factors during this purchase decision-making process (Cantalops & Salvi, 2014) that include the personal factors (Pappas, 2016; Sweeney, Soutar, & Mazzarol, 2014), cultural factors (Chung & Darke, 2006), social factors (Cheung & Thadani, 2012) and psychological factors (Hassanein & Head, 2007; McCarthy, Stock, & Verma, 2010; Pookulangara & Koesler, 2011). At the second stage of the purchase process, the customers make use of the available sources while searching the relevant information about products and services, to make a wise buying decision (Marchand, Hennig-Thurau, & Wiertz, 2016). Some information is already present in consumers' memory because of past purchase experience or by watching advertisements about the products or services. To aid the information available in the memory, some additional information is acquired through the outside sources including friends, family members and/or other customers (Perreau, 2013). This information from the surroundings is called Word of Mouth and has been considered as one of the most effective marketing tools by the researchers and practitioners. As search for information has expanded globally with the advent of internet, customers seek information online from the users

across the globe (Hennig-Thurau, & Wiertz, 2016). The information received via such virtual platforms in the form of online consumer reviews (OCRs) is considered to have significant impact on the purchase decision (Liu & Park, 2015; Yoon & Uysal, 2005). In online reviews, the consumers voluntarily express their views in the light of usage experiences. Such opinions are expressed on the social media, company websites, independent third-party websites and websites specified for the customer reviews (Luo & Zhong, 2015). Such information provided by the existing users of the products is considered more authentic (Decker & Trusov 2010; Godes & Silva, 2012; Wu, Matilla, Wang & Hanks, 2016). Therefore, an increasingly large number of internet users perceive OCRs as a major source of information that aids in the purchase decisions (Floyd, Alhoqail, Cho, & Freling, 2014; Riegner, 2007).

The consumers experience high level of uncertainty before making a purchase decision, particularly during the first interaction with the vendor for purchase of a product or service. Risk is also high when they do not possess sufficient information about the seller or when the product is newer in the market (Berger & Calabrese, 1975; Bughin, Doogan, & Vetvik, 2010; Hogg, 2000 & 2007; Sweeney, 2002). The consumers are concerned if the product or service would meet their expectations (Hu, Liu & Zhang, 2008; Weathers, Sharma, & Wood, 2007). The uncertainty reduction theory coined by Berger and Calabrese (1975) explains that “when interacting, people need information about the other party, in order to reduce their uncertainty”. Lack of enough information about strangers may jeopardize a transaction and result in perceptions of negative possible consequences (Ulleberg & Rundmo, 2003). The uncertainty may arise when a buyer is unable to assess others’ behavior during an interaction and the potential impact of such unpredictable behavior on the buyer’s well-being (Berger & Calabrese, 1975). The uncertainty reduction theory by Berger and Calabrese (1975) explains that feeling

of uncertainty is normal during the preliminary dealings with strangers. In the present study, the uncertainty reduction theory has been used as the overarching conceptual framework to examine the effect of OCRs combined with propensity to trust on the consumer behavior. A recent meta-analysis by Maity, Dass, and Malhotra (2014) explain that uncertainty gives rise to the perception of risk and prompts the customers to gather more information and knowledge about the sellers (Laroche, McDougall, Bergeron, & Yang, 2004; Moorthy, Ratchford, & Talukdar, 1997; Urbany, Dickson, & Wilkie, 1989). Information available in the form of OCRs reduces risk perceptions and results in high level of purchase intention and intention to recommend to others (Urbany, 1986; Xiang, Schwartz, & Uysal, 2017).

Consumer choices have been affected by the rapid changes in market conditions and increasing competition (Flatters & Willmott, 2009; Marchand, Hennig-Thurau, & Wiertz, 2016). Earlier, the WOM communication used to be among friends and family contacts through personal encounters (Kozinets, 2016; De-Maeyer, 2012). An unhappy or dissatisfied customer could only share his unpleasant usage experience with a few people around him. But now a dissatisfied customer can influence thousands of potential customers through internet using social media networks such as Twitter, Facebook, LinkedIn, Pinterest and so on (Banerjee, Bhattacharyya, & Bose, 2017; O'Connor, 2008). These changes in the online marketplace are increasingly causing uncertainty for the manufacturers, service providers and marketing practitioners (Engel, Blackwell, & Miniard, 1986; Schneider, 1987). The customers tend to acquire dependable information about the sellers. At the same time, the marketers try to find who all are involved in buying decision so that marketers can devise strategies for each of them (Kotler, Ayal, & Subach, 1994; Wu, Mattila, Wang, & Hanks, 2016). Hence, a positive feedback or statement about the product from fellow customers can increase

customer confidence resulting in high level of trustworthiness about the company (Wang, Zhang, & Hann, 2015). Specifically, due to the lack of a first-hand experience, the informal certification by a third-party helps customers reduce their perceived risk. Varying customer traits (Erdem, Mayhew, & Sun, 2001; Klapper, Ebling & Temme, 2005) cause variance in product and service evaluations which impacts the decision process (Wu et al., 2016). Therefore, in a recent meta-analysis Neumann and Bockenholt (2014) call for further research employing various individual characteristics of the customers.

## **1.2 Overview of the Study**

The advent of internet has significantly enhanced the accessibility to and use of information online (Dellarocas, 2003; Jarvenpaa, Tractinsky, & Saarinen, 1999; Hennig-Thurau, Walsh, & Walsh, 2003; Marchand, Hennig-Thurau, & Wiertz, 2016; Park & Lee, 2009; Schindler & Bickart, 2005; Sen & Lerman, 2007; Sher & Lee, 2009; Zhang, Wu & Mattila, 2016). The users can now share their product related experiences online, whereas the potential buyers can acquire abundance of information is available to the potential buyers to enhance their confidence (Black & Kelley, 2009; Lu, Ba, Huang, & Feng, 2013; Litvin, Goldsmith, & Pan, 2008; Gupta & Harris, 2010; Hennig-Thurau, Gwinner, Walsh, & Gremler, 2004, Lee & Chang, 2011; Litvin, Goldsmith, & Pan, 2008, Lu et al., 2013; Ward & Ostrom, 2002). The customers have been found to rely significantly on OCRs to know about stock markets (Guernsey, 2000), find about hit movies (Dellarocas & Narayan, 2007; Duan, Gu, & Whinston, 2008; Liu, 2006), decide about purchase of books (Chevalier & Mayzlin, 2006; Pookulangara & Koesler, 2011) or to know about the best hotel for travel and stay (Sparks & Browning, 2011).



The customers generally perceive some level of risk when confronting the strangers on internet (Gefen, 2000; Hoffman, Novak, & Peralta, 1999; Reichheld & Scheffer, 2000). To reduce uncertainty and to mitigate this risk, the customers depend on the signals coming from online forums and OCRs. Considering the importance of the buying decision-making process, it has gained attention of the academicians, researchers and practitioners (Chen & Xie, 2005; Chevalier & Mayzlin, 2006; Godes & Mayzlin, 2004; Luo & Zhong, 2015; Mayzlin, 2006; Smith, Menom, & Sivakumar, 2005; Sen & Lerman, 2007; Xie & Zhang, 2014).

The OCRs assert their influence on customers as they also provide information and opinions about the quality perceptions of the existing users of the products (Bickart & Schindler, 2001; Chen & Xie, 2005; Hu, Pavlou, & Zhang, 2017; Park, Lee, & Han, 2006; Xiang, Schwartz & Uysal, 2017). The information coming from others in the form of their experiences and views is called word of mouth (Harrison-Walker, 2001; Liu et al., 2015). However, in past two decades, internet has changed the word of mouth to many other forms like forums, blogs, polls, rankings and online reviews (Hennig-Thurau, Walsh, & Walsh, 2003). So, the word of mouth became electronic word of mouth (eWOM). Most of the researchers termed it e-Word of Mouth (Gruen, Osmonbekov, & Czaplewski, 2006; Hennig-Thurau et al., 2004; Jalilvand, Esfahani, & Samiei, 2011; Litvin, Goldsmith & Pan, 2008; Park & Lee, 2009; Weinberg & Davis, 2005), few called it virtual Word of Mouth (Gruen, Osmonbekov, & Czaplewski, 2006; Park & Lee, 2009; Ridings, Gefen & Arinze, 2002; Schindler & Bickart, 2005; Smith, Menon, & Sivakumar, 2005). Some researchers even used the word 'Word of Mouse' (Sun, Youn, Wu, & Kuntaparaporn, 2006; Xia & Bechwati, 2008). In this digital era, eWOM or the OCRs, being a detailed expression of the consumers' views, are

considered more trustworthy and unbiased source of information (Banerjee, Bhattacharyya, & Bose, 2017).

WOM was into the following seven types by Schindler and Bickart (2005): 1) *Posted reviews*. show user reviews and opinions shared by the sellers themselves, customers and experts on their websites, third-party websites as independent sources and blogs. 2) *Mailbags*. show consumer response and general public's views posted on the seller's websites in the shape of customer testimonials. 3) *Discussion forums*. show discussions among group members where discussions are generated and moderated about specific topics. 4) *E-mail lists*. show email blasts to the broad list of potential customers carrying user reviews related to the specific products and services. 5) *Personal email*. show correspondence between one person and the others. 6) *Chat rooms*. show real time and live conversation online among company representatives, individual users, experts or group of people on the topics of common concern. 7) *Instant messaging*. show instant and personalized messages across or among the participants of a forum.

Online consumer reviews (OCRs) carry significance because they provide feedback, recommendations and opinions of the users of the products (Channel Advisor, 2011; Marketer, 2013). The OCRs are user generated opinions posted on internet, based on their experience with products and services that they consumed (Banerjee, Bhattacharyya, & Bose, 2017; Cheong & Morrison, 2008; Ma, Zhang, Yan, & Kim, 2013). OCRs are generated by many sources; Firstly, OCRs are originated by the customers themselves (Black & Kelley, 2009; Gupta & Harris, 2010; Hennig-Thurau et al., 2004; Litvin, Goldsmith, & Pan, 2008; Lu et al., 2013; Ma et. al, 2013). Secondly, the manufacturers and sellers also offer testimonials of their loyal and satisfied consumers. Thirdly, there are freelance and independent experts, websites and forums that provide the expert opinions / reviews, for example [google.com](http://google.com), [amazon.com](http://amazon.com),

[facebook.com](https://www.facebook.com), [yelp.com](https://www.yelp.com), [traveladviser.com](https://www.traveladviser.com), [propakistani.pk](https://www.propakistani.pk) and so on. (Hennig-Thurau, Walsh, & Walsh, 2003). These review websites facilitate an instantaneous transmission of information to a considerably greater audience and this can be useful for multiple readers (Chen, Shang, Kao, 2009). OCRs outline the customer expectations, influence attitudes and preferences and impact buying decisions as well as post purchase evaluation (Litvin, Goldsmith & Pan, 2008; Luo & Zhong, 2015).

Risk perceptions influence decision makers' behavior, for example, leading decision makers to deny uncertainty or to exhibit unwarranted confidence in their judgements (Roll, 1986). The customer's individual evaluation of the probability of an unpleasant outcome may determine the total amount of risk in any buying decision (Dowling & Staelin, 1994; Grewal, Gotlieb, & Marmorstein, 1994). This results in a favorable or unfavorable decision. Cox (1967), Cox and Rich (1964), Bauer (1967) were few of the pioneering marketing scholars who started investigating the issues of perceived risks in consumer decision making. They explained defined perceived risk as the amount and nature of uncertainty a consumer perceives while contemplating a buying decision (Cox and Rich, 1964). Considering their importance as source of information for consumers, very few studies in context of OCRs have been conducted to explore the mechanism through which OCRs and perceived risk impact the purchase decision. Recent researchers (Maity, Dass & Malhotra, 2014) regarding importance of information search to reduce risk and (Ziegele & Weber, 2015) to investigate quality and type of review and the source as well as their interaction with the readers' personal factors, this research will explore the impact of OCRs on perceived risk and the outcomes such as brand image, purchase intention (Bag, Tiwari & Chan, 2019; Luca, 2016).

Recent research has found that brand equity moderates the relationship between OCRs and sales of Blue-ray and DVD (Ho-Dac, Carson & Moore, 2013). They argue that the impact of OCRs for weak brands was stronger as compared to the established brands. There are three main types of products and services that have been studied by researchers in recent past; search, experience and credence products. The credence attributes of the products and services (such as doctors, auto mechanics) are the most difficult ones for the consumers to evaluate. The credibility of OCRs about such services can be quite ambiguous. Several platforms like Angie's List, [www.rateMDs.com](http://www.rateMDs.com), [www.Yelp.com](http://www.Yelp.com) etc. are available that provide reviews about the credence services, however, the focus of past research has mainly remained on the reviews about search and experience goods (Huang, Burtch, Hong, & Polman, 2016; Lee, Park, & Han, 2008; Mudambi & Schuff, 2010). Word of mouth has been found to have an impact on the purchase behavior of the travelers because of the experiential aspect of tourism. Similarly, the word of mouth influences choice in the hospitality sector (Litvin, Goldsmith, & Pan, 2008; Luo & Zhong, 2015; Park & Nicolau, 2015). Another research finds that the negative word of mouth decreases the purchase likelihood whereas positive word of mouth has the opposite effect (Sparks, So, & Bradley, 2016). Therefore, this research will focus on the impact of positive and negative OCRs on perceived risk and outcomes such as brand image, purchase intention and recommendation to others. The study would also explore the impact of personal characteristics such as propensity to trust as proposed by the recent meta analytic studies (Floyd et. al., 2014; Neumann & Bockenholt, 2014; You, Vadakkepatt, & Joshi, 2015).

## 1.3 Justification of the Study (Gap Analysis)

### 1.3.1 Theoretical Gap

Floyd et al. (2014) in their meta-analysis conclude that so far, the research in this domain has been conducted using different methods such as text mining, experimentation, econometric analyses of the data from companies' sales records and simulations (Salehan & Kim, 2016). They further hope and recommend that the researchers would continue to use the experimental techniques for such investigation. Their also encourage researchers through the results of their meta-analysis to explore the effects of OCRs in various industries and settings, using diverse samples and product categories (Floyd et al., 2014). Therefore, the current study employs the experimental method to draw inferences proposed in the study hypotheses.

Past studies have mainly ignored the influence of appearance of varying forms of reviews on the consumer attitudes, wants and purchase intentions (Marchand, Hennig-Thurau, & Wiertz, 2016). Furthermore, researchers are still exploring through which mechanisms these product reviews assert their influential power (Wu et al., 2016; Ziegele & Weber, 2015). A recent call for research (Floyd et. al, 2014) recommends examining the influence of customer reviews for goods that differ in respect of *credence* (Bloom & Pailin, 1995; Nelson, 1980; Wilde, 1980) and *performance* (Schiffman & Kanuk, 2007). Another meta-analysis conducted by Ziegele and Weber, (2015) recommended use of experimental research due to its ability to exhibit stronger effect size in contrast with the non-experimental studies. Likewise, there is a dearth of research exploring the impact of OCRs on brand image. Lovett, Peres and Shachar (2013) explored the relationship between word of mouth and brand to analyze which brand attributes excite the word-of-mouth (online/offline). Another recent research by

Gao, Greenwood, Agarwal, and Jeffrey (2015) calls for the future to explore the underlying mechanisms that explore the impact of OCRs related to credence goods and their overall usefulness for the general population. Consumers interact with brands and the fellow users to acquire information about products they are interested to buy. The information they receive from fellow customers helps them reduce their uncertainty and take calculated risk (Chappuis, Gaffey, & Parvizi, 2011; Kozinets, 2016; Qualman, 2013).

Majority of the studies have largely focused upon the online shopping (Creamer, 2007), credibility or expertise of the website or the reviewer (Banerjee, Bhattacharyya, & Bose, 2017; Dellarocas, 2003; Wilson & Sherrell, 1993; Zhang, Zhang, & Yang, 2016), reviewers' characteristics (De-Maeyer, 2012). There is an increasing focus of the contemporary research to explore other factors related to the online reviewers, the websites and the visitors reading those reviews (Banerjee, Bhattacharyya, & Bose, 2017; Lueg, Ponder, Beatty, & Capella, 2006; Muratore, 2008; Okazaki, Li, Hirose, 2009). Many factors related to the personal factors of the potential customers are skill unknown. Hence, factors such as the personality traits of the potential customers which may affect how they interpret and use OCRs need to be explored (Hsu, Chang & Chen, 2012; Kim, Ferrin, & Rao, 2008; Lee, Papathanassis, & Knolle, 2011; Lee & Ma, 2012; Lee, Park & Han, 2008; Zhu & Zhang, 2010). Past studies (such as Zhu & Zhang, 2010) have explored the role of personal factors but only by investigating that if customers' internet experience has any moderating role in the evaluation of online reviews (Kostyra, Reiner, Natter, & Klapper, 2015). Kim, Ferrin, and Rao (2008) recommended to study relationships among perceived risk and purchase intentions; and their antecedents to clearly understand this concept. An important personality trait to consider in the process of purchase decision making is the customers' propensity to

trust on others (Bolton, Katok, & Ockenfels, 2004; Dellarocas, 2003; Lee & Turban, 2001; Mayer, Davis & Schoorman, 1995; Van-Dyne, Vandewalle, Kostova, Latham, & Cummings, 2000; Weinberg & Davis, 2005). Trust propensity is a personality trait or personal disposition that manifests peoples' general inclination to trust other people (Limerick & Cunnington, 1993; McKnight & Chervany, 2001, 2002; Ridings, Gefen, & Arinze, 2002; Smith, Organ, & Near, 1983). McKnight, Cummings, and Chervany (1998) argued that people with high propensity to trust believe that even when others may not be trustworthy, cooperation and trust can still be the best option. Chang and Fang (2013) suggested to test the role of propensity to trust as a moderator in the relationship between OCRs and outcomes.

A current research by Hertzfeld (2015) found that hotels that remain vigilant about the customer to customer communications on social media, respond and act proactively, increase their bed occupancy at a double rate as compared to those that do not leverage social media. Collie (2014) argued that almost 65% of the luxury travelers searched for their travel choices online whereas as many as 69% of them made their travel decisions based on the reviews posted by past customers. Some researchers cautioned brand managers about social media interactions (Fournier & Avery, 2011). Research has found that developing brand and brand communities through social media was more complex than merely inspiring more connections (Kozinets, 2016; Luca, 2016). The findings of a recent study by GE reveal that the customers' response to the content shared on social media was much more positive as compared to the paid content or company generated communication. Neff (2012) found that the viewers were 83% more likely to have positive response towards a video on GE when it was shared through social media as compared to when it was shared through paid means.

Ba and Pavlou (2002) were few of the pioneers to work in the field of information systems. They were followed by Dellarocas (2003) and many other researchers who have started to explore the impact of OCRs on competition in the market (Kwark, Chen, & Raghunathan, 2014), review helpfulness (Chua & Banerjee, 2016; Mudambi & Schuff, 2010; Singh et al., 2017) and sales increase (Li & Hitt, 2007). Previous studies have so far explored the topics including usefulness of reviews (Koufaris & Hampton-Sosa, 2004; Kwon, Lee & Shin, 2014), perceived trustworthiness (Gefen & Straub, 2004; Gefen, 2000; Jarvenpaa, Tractinsky, & Saarinen, 1999; Koufaris & Hampton-Sosa, 2004; Ling, Chai, & Piew, 2010; Mayer et. al. 1995; McKnight, Choudhury, & Kacmar, 2002; Verhagen, Meents, & Tan, 2006), level of expertise (Banerjee, Bhattacharyya, & Bose, 2017; Duan, Gu, & Whinston, 2008); Zhang, Zhang & Yang, 2016), benefits and cost (Lee & Ma, 2012) and purchase intention (Black & Kelley, 2009; Crilley, Hills, & Cairncross, 2010; Dickinger, 2011; Kim, Ferrin, & Rao, 2008; Lee & Chang, 2011; Litvin, Goldsmith, & Pan, 2008; Qu & Lee, 2011; Sparks & Browning, 2011; Vermeulen et. al, 2009; Xie, Miao, Kuo, & Lee, 2011; Xiang & Gretzel, 2010; Yacouel & Fleischer, 2012; Zimmer, Arsal, AlMarzouq, & Grover, 2010).

A major focus on research in the field of information sciences has emphasized on the technology acceptance and human computer interaction (Jalilvand, Esfahani, & Samiei, 2011). Research exploring the influence of positive and negative customer reviews on attitude toward product, brand, and purchase intentions is still in the early stages and many underlying mechanisms are still being explored (Grewal & Stephen, 2019; Sen & Lerman, 2007; Sparks, So, & Bradley, 2016; Ziegele & Weber, 2015). Further, it is still being explored as through which mechanisms these online reviews assert their persuasive effect (Wu et al., 2016; Ziegele & Weber, 2014). The aim of this study is to



fill this gap by exploring the effect of positive and negative OCRs on the various outcomes such as brand image, purchase intentions and recommendation (Bag et al. 2019).

Risk is one of the critical factors in purchase behavior (Kumar & Grisaffe, 2004; Pires, Stanton, & Eckford, 2004). Risk is associated with the uncertainty in outcome (Gefen, 2002). According to Dholakia (2001), some degree of risk perceived by customers is always involved in the buying decisions, and this is more prevalent where the situations with uncertain outcomes (Pappas, 2016). Whenever consumers delay, change or cancel a purchase, this is mainly due to the higher risk involved in the purchase decision (Grewal & Stephen, 2019; Hong, Chen, & Hitt, 2013). The importance of risk and its potential to influence decisions, particularly in the e-service context has drawn attention of the researchers. Therefore, it requires further exploration with reference to different underlying mechanisms (Mou & Cohen, 2013; Wu et al., 2016). Although some studies have explored the role of perceived risk in the context of OCRs (Cui, Lui, & Guo, 2012; Gefen, Karahanna, & Straub, 2003; Kim, Ferrin, & Rao, 2008; Mou & Cohen, 2013; Pavlou, 2002; Pavlou, 2003; Zhu & Zhang, 2010), this study would be based on the unique concept of uncertainty reduction theory (Berger & Calabrese, 1975) and would try to explore the mechanisms through which positive and negative OCRs affect the decision making process.

### **1.3.2 Contextual Gap**

Today's consumers have several advantages due to the advent of internet. The foremost is the easy and swift availability of information. The information in the form of OCRs remains available for the longer period of time. There is no peer pressure or courtesy involved in case of OCRs and the words can be said (written) without any social bias (Mauri & Minazzi, 2013; Zhang, Wu, & Mattila, 2016). Through internet, the information can be disseminated via multiple channels including forums, blogs, microblogs, virtual communities and relevant websites dedicated to provision of comparative information about the products or companies (Mauri & Minazzi, 2013; Marchand, Hennig-Thurau, & Wiertz, 2016; Sparks & Browning, 2011). Recently, the use of digital platforms, particularly the social media has grown at a fast pace. It can be observed that the use of traditional WOM is only restricted to a small number of people, that too, known personally to teach other. Such networks are quite confined and narrower. However, the electronic WOM has a broad and unlimited reach to the people in whole world using internet. The new form of website technology like Web 2.0 and Web 3.0 have further eased the mutual exchange of information about companies and their products and services. These online platforms or channels (email notifications, opinions, online reviews and / or the recommendations) have opened new doors of opportunities as well as challenges both for the companies and their consumers (Cantalops & Salvi, 2014; Zhang, Wu & Mattila, 2016).

More than half of world population (over 3.9 billion people) are online. Half of the global internet users (50%) belong to Asia. Asia has experienced a growth of 49% from 2000 to 2017 (ICT, 2017). 66% of the world population (4.9 billion) are active mobile users. 34% of the world population (2.78 billion) is active social out of whom 2.54

billion use social media on mobile. The internet usage in the world is growing with a pace of 10% annually (2016-2017), whereas use of social media is growing with a rate of 21% annually (2016-2017). Moreover, use of social media over the mobile phone is growing with the rate of 30% annually (2016-2017). Mobile cellular phones have around 100% penetration worldwide (ICT, 2017), therefore, social media sites are frequently visited regardless of time and place. Over 22% of the world population (1.6 billion) purchase products online making it an industry worth over USD 2 trillion. The marketing professionals are improvising their strategies to reach and engage their customers. Their focus has shifted from finding new customers to engaging with the current customers to drive engagement (Prentice et al, 2019). There has also been an increase in the digital ad spend over last few years.

| <b>Region</b> | <b>Total Population</b> | <b>Internet Users</b> | <b>Penetration</b> |
|---------------|-------------------------|-----------------------|--------------------|
| Asia          | 4.15 billion            | 1.9 billion           | 46%                |
| Americas      | 1.06 billion            | 718 million           | 71%                |
| Europe        | 839 million             | 637 million           | 76%                |
| Africa        | 1.23 billion            | 362 million           | 29%                |
| Middle East   | 246 million             | 147 million           | 60%                |

Source: [www.internetworldstats.com](http://www.internetworldstats.com) (2018)

#### **1.4 Research Problem**

Extensive review of the literature about the present topic provides sufficient ground to say that the research in this domain is at the preliminary stage. A very limited research on relationships between variables influencing consumer behavior in online context has been conducted so far. Moreover, many new areas related to finding the answers to the questions like how and why the OCRs impact the buying process are yet to be explored. The mechanism through which positive or negative OCRs assert their impact on the purchase intention is unknown. Particularly exploring the mediating role of perceived risk in the process could be very interesting. Furthermore, the moderating role of the customers' propensity to trust has not been studied in the past literature. There is a call for further exploration of the relationship between positive and negative OCRs and the behavioral outcomes (Grewal & Stephen, 2019; Sparks, So, & Bradley, 2016).

Thus, this study is an attempt to explore the impact of OCRs on brand image, advocacy and purchase intentions. The mediating role of perceived risk in the relationship between OCRs and outcomes such as brand image, advocacy and purchase intentions has also been examined. Further, this study also investigates the enhancing or buffering role of readers' propensity to trust propensity in the association among OCRs and outcomes. The present study also attempts to find support for the idea that due to the moderating effect of trust propensity along with positive OCRs, customers will perceive lower level of risk resulting in high level of advocacy and higher purchase intention. Similarly, for negative OCRs, the customers will perceive higher level of risk resulting in low levels of advocacy and lowers.

A research in Pakistan by Kundi and Shah (2009) suggests that the banking sector is continuing to progress and as compared to the investment and development banks, the

commercial banks are highly engaged in e-business. Moreover, their results show that Pakistan has good opportunities for e-commerce and the business environment is becoming more promising for investors in e-commerce to prosper. The research by practitioners and academicians calls for more investigation in this field. Hence, the present study will try to fill this gap in the body of literature by particularly from a non-western setting in a developing country like Pakistan. Furthermore, understanding and analyzing this research stream in the Pakistani context would possibly allow to understand the current practices in the field (Grewal & Stephen, 2019). The findings also provide insights to the business owners, marketing practitioners and companies to understand their consumers and serve them with quality goods and services to get positive reviews and to attract new customers (Hu, Pavlou, & Zhang, 2017; Salehan & Kim, 2016).

The internet of things (IoT) has enabled all the recognizable things to wirelessly communicate with each other (McGinty & Smyth, 2006). The emerging concept of web personalization offers several applications to IoT, like personalizing things that you want to control and communicate to as per your interest and need. IoT guides customers to the things of interest and helps customers select the shop within a proximity without having to find the shop and enables the things gain the knowledge from customers' behavior (Malik & Fyfe, 2012).

#### **1.4.1 Problem definition in Pakistani context**

Most of the research in the field of OCRs has been conducted in the developing countries, therefore, little amount of empirical evidence is available from this part of the world (Thamizhvanan & Xavier, 2012). Though some researchers have worked on the emergence of online banking (Sultan et al., 2002), technology acceptance (Chandio, 2008), opportunities and challenges for IT and e-commerce in Pakistan (Kundi & Shah, 2009). A very few academic researchers in Pakistan have carried out the research on OCRs (Kundi & Shah, 2009; Sulaiman, Mohezar & Rasheed, 2007; Sultan et al., 2002). This very important area of marketing and management research could not gain attention of scholars and researchers so far. In a study to test the trust model in e-commerce in Pakistan, Sulaiman, Mohezar, and Rasheed (2007) revealed that such individuals mainly have a low propensity to trust towards online shopping landscape and online sellers. Yasin et al., (2011) found that customers are now participating in various ways due to the interactivity possible by the modern e-commerce enabled web pages. This has resulted in to a shift in marketing approaches by the practitioners from traditional mass marketing to one-to-one marketing, from standardized production to customization and from customer as a target to customer as a partner (Reza-Kiani, 1998).

An interesting part of the present study is to explore the buffering role of propensity to trust propensity in strengthening or weakening the association of positive or negative OCRs with purchase intention, brand image and advocacy. The aim of this research is to methodologically explore how and why OCRs affect the customers purchase intentions, their impression about a brand and their advocacy behavior. Due to the

growing significance and potential power of the OCRs, there is a need to carry out research in this domain particularly in the developing countries like Pakistan.

More than two billion people on the globe are using social networking sites and apps such as Twitter, Facebook, Instagram, LinkedIn, Twitter, Snapchat and YouTube etc. ([www.socialbakers.com](http://www.socialbakers.com)). As of July 2018, there are over 151 million cell phone subscribers in Pakistan (Pakistan Telecommunication Authority, PTA) out of whom 59 million have access to the 3G or 4G technology ([www.pta.gov.pk](http://www.pta.gov.pk)).

The number of internet users in Pakistan has grown substantially in past few years. There are over 44 million internet users in Pakistan making it a penetration rate of 22% ([www.internetworldstats.com](http://www.internetworldstats.com)). This, however, is expected to rise up-to 28% of the total population (56 million users) by 2019. Pakistan e-commerce market comprises of over 2000 retailers. Currently the size of Pakistani e-commerce market is between \$70 to \$80 million which is likely to rise to \$1 billion in 2020 ([www.pta.gov.pk](http://www.pta.gov.pk)). Shoppers are increasingly buying products and services online. They also consult internet sources for product search, expert advice, weather forecast and to gain knowledge from fellow customers. As the larger population gets access to the internet, there is a continuous transformation in digital landscape. The companies operating in automobiles, cash and carry, online buying and even clothing and apparel industry are introducing their mobile apps to provide convenience to the customers. This will not only transform shopping trends in Pakistan but also make process of online buying more convenient ([www.pta.gov.pk](http://www.pta.gov.pk)).

There are over 140 million mobile phone subscribers in Pakistan which makes it the penetration rate of 73 per cent. The availability of low cost smartphones enabled with 3G, 4G and LTE technology have made access to internet very easy. This surge has multiple effects on the lives of people including increased socializing as well as

increased online business transactions. Apart from the world's leading mobile phone manufacturers such as Apple, Samsung, Huawei, Nokia, HTC and Sony, there are several Chinese or local brands that have introduced very cost effective internet-enabled smartphones ([www.whatmobile.com](http://www.whatmobile.com)). Such devices have provided an equal opportunity to the lower middle and lower income class to use the internet on their mobile phones with the same convenience (Yasin et al., 2011). The increasing use of internet and availability of low cost mobile phones, both are the factors promoting online businesses which will further enhance the online business trends in Pakistan.

#### **1.4.1.1 Online modes of payment**

The online retailing industry is booming in Pakistan. However, due to the trust factors and less established online payment mechanisms, over 90% of the online transactions are relying on Cash-on-Delivery (COD) payment methods ([www.pta.gov.pk](http://www.pta.gov.pk)). There are several online payment options offered by some leading banks and telecom operators as part of their branchless banking initiative, such as UBL Omni, Jazz Cash, Telenor's EasyPaisa etc. Majority of the banks have started offering Inter Bank Fund Transfer (IBFT) facility (Aslam, Ham & Arif, 2017; Chaudhry, Parveiz & Javed, 2016; Kazi & Mannan, 2016). The banks are also offering internet banking and mobile banking applications (Afshan, Sharif, Waseem & Frooghi, 2018). Such innovative services have given rise to the online purchases with a secure and easy money transfer facility (Akhlaq & Ahmed, 2015; Kazmi & Hashim, 2015; Raza, Jawaid, & Hassan, 2015; Sulaiman, Mohezar, & Rasheed, 2007).



#### **1.4.1.2 Logistics and delivery infrastructure**

There are several courier companies operating in the country that provide services with COD option across 150 cities nationwide. As much as 35% of the total 70,000 COD parcels were reported to be delivered in cities other than Karachi, Lahore and Islamabad which is a sign of acceptance of online purchasing via COD in the vast segments of the population. This has motivated some leading grocery outlets to offer home delivery services without incurring the cost of warehouses and storage. This initiative will allow them to save cost of having a large number of employees and pass on the benefit to the end user. The need is to expand the reach and offer delivery, warranty and easy payment facility to the shoppers in small to medium towns. These trends provide ample growth opportunities for emerging online business, as well as potential exploration and growth avenues for courier services by association. Recently the success of few startup companies like Careem (leading ride-hailing application), Daraz.pk (leading online shopping store), Zameen.com (leading property website), PakWheels.com (leading automobiles website) and many more are the examples of acceptance and popularity of e-commerce in Pakistan (Luca, 2016).

#### **1.4.1.3 Growing trust and reliance on e-commerce**

The future of ecommerce trends lay in the ability of online business to gain their foothold and establish trust in online shopping and e-commerce initiatives. There is a long way to go. With just 3 per cent of the Pakistani population indulging in online shopping, several initiatives are starting with online businesses in Pakistan to reach out to their potential market, build up their credibility, and garner consumer trust. This is especially true for risk-averse shoppers. Internationally, other than ecommerce giants

like Amazon and eBay, platforms like Uber with net worth of \$50 billion in just over a half decade of its launch and Airbnb with over 2 million listings are few examples (Luca, 2016). It has also launched a mobile phone app to provide widespread access and opportunities to existing and budding entrepreneurs. Approximately 17.3 per cent of ecommerce activities take place via smartphones. Such marketing initiatives are generally successful in reaching out to first time consumers and generating overall awareness, acceptance, trust and credibility (Banerjee, Bhattacharyya, & Bose, 2017).

#### **1.4.1.4 Pakistan's new e-commerce horizons**

Many visionary local players such as Shophive, Homeshopping, ROZEE, Just4girls.pk, and Pakwheels, as well as giant foreign investors such as Rocket Internet with their diverse online initiatives such as Jovago, Tripda, and Foodpanda, are all swooping in to establish their market share in the emerging e-commerce industry of Pakistan, within their respective domains (Ali et al., 2017). Various other local and home operated business have also flourished through Facebook pages as a result of rapid penetration of the internet and smartphones, COD and IBFT services and the overall growing trends of online shopping. All these businesses have emerged in spite of all the barriers such as misconception and mistrust of e-commerce in Pakistan, security concerns regarding online transactions, low access to technology, low literacy rates, and limited infrastructure and logistical support. All in all, this goes to show that the market and timing is ripe for e-commerce in Pakistan – irrespective of a few hiccups – and the industry is all geared up to create massive waves in the country, with colossal scope for innovation and improvement as well as exponential long-term growth.

## **1.5 Significance of the Study**

### **1.5.1 Theoretical significance**

The research in this area started in last two decades. There is much to explore by the new research as the digital landscape and continuously changing. Considering this paradigm shift in marketing techniques and practices, a huge responsibility lies on the shoulders of marketing researchers and scholars to provide the industry with the insights based on scientific and scholarly research. This research attempts to explore the new areas not explored in the academic research. Hence, the findings of this research study will be of a great significance to the future scholars and researchers. The findings will add in to body of literature by identifying and exploring the relationship between study variables in a unique way. There are fewer studies available on the topic from this part of the world. Therefore, this will be a unique contribution of this study to provide academic findings based on the theoretical basis of uncertainty avoidance theory and other study variables. The findings of this study would also add in to literature of consumer behavior, consumer psychology and word of mouth marketing on the basis of the findings from a unique set of respondents. The results of the study will help researchers and marketing professionals understand the significance of online reviews in the process of consumer decision making. The study also highlights one of the important personality traits such as propensity to trust, which may have important consideration in the online word of mouth context. By investigating the moderating or buffering effect of propensity to trust the study findings would indicate if the relationship is between OCRs and risk is strengthened or weakened and whether it has an influence on overall customer buying decision (Bolton, Katok, & Ockenfels, 2004). The study involves OCRs by the experts and novice reviewers which will highlight the

significance of expertise level of the reviewers. Further, the findings will enlighten the future researchers and scholars with the differential impact of positive and negative online reviews in varying contexts and for products of different nature. Finally, the result of the study would enhance the scope and application of the online consumer reviews for a broader use in future by the researchers and practitioners alike.

Access to an unlimited amount of information has been made possible with the availability of internet at offices, home and even mobile phones while you are moving. The websites and mobile applications are increasingly encouraging the visitors and users to subscribe to their mailing lists so that the relevant information can be sent to your mailbox instantly (Marchand, Hennig-Thurau, & Wiertz, 2016). The underlying mechanisms through which the positive and negative OCRs impact the consumer attitudes and behaviors (Neumann & Bockenholt, 2014). One of the possible underlying factors could be the perceived risk which is being considered as a mediating variable in this study to investigate the overall effect of OCRs on brand image, purchase intentions and advocacy. To the best of the knowledge of the researcher, these proposed relationships between OCR, propensity to trust, perceived risk, purchase intention has not been studied in the literature (Floyd et al., 2014; You, Vadakkepatt, & Joshi, 2015); Zhang, Wu, & Mattila, 2016) and this study would add to the body of knowledge in this

evolving area of research. Research has shown a positive relationship between the reviews helpfulness and sales (Malik & Hussain, 2017; Chen, Shang, & Kao, 2009;

### **1.5.2 Practical significance**

Many firms are making use of online consumer reviews by regularly posting their product information, by sponsoring promotional chats on on-line forums, such as USENET, and by proactively prompting their consumers to provide reviews of their products online (Mayzlin, 2006). These applications are integrated into stages of customer decision-making process (Li & Liu, 2011). Past research has found that a careful management of negative online comments or complaints enhances hotel performance (Kim, Vogt, & Knutson, 2015; Sparks, So, & Bradley, 2016). Social media offers potential for generating awareness and interest through viral or rapid spreading of product and service experiences and opinions (Banerjee, Bhattacharyya, & Bose, 2017; Berger & Milkman, 2012). As a result, companies are proactively engaging in new social media marketing strategies and tactics (Neff, 2014).

Internet and mobile applications have made it easier for the managers in tourism and hospitality industry to access the potential customers, acquire knowledge about their buying patterns and develop as well as maintain relationships with them (Hsu, 2012). The managers can also react to the customer complaints and get to know about flaws in their systems through customer feedback online which can help them minimize the chances of service failure and improve service recovery efforts (Escobar-Rodríguez & Carvajal-Trujillo, 2013; Sparks, So, & Bradley, 2016). At the same time, in most of the cases, the companies do not have control over what is being written online by the customers, whether in their favor or against them. This makes it more challenging for them to handle as any negative information might affect the views of their current or potential customers (Sparks & Browning, 2011; Zhang, Wu & Mattila, 2016).

The digital age has also enabled companies to have their website or a mobile application which enables customers to access information and communicate with the company regardless of the opening or closing hours. The companies are focusing on developing interactive websites to allow easy and user-friendliness of the websites, improve communication and brand positioning, share existing customers' testimonials and influence the buying decisions of the website visitors and potential customers (Aziz & Kamal, 2017; Díaz & Koutra, 2013). The users evaluate the navigability, ease of use and availability of information as important factors and result in positive attitude toward the website. In addition, the users also form a positive attitude towards a professionally designed and creative website and the quality of information available on the website (Hu, Pavlou, & Zhang, 2017; Ladhari, 2010). In a research to investigate persuasiveness of a website, Kim and Fesenmaier (2008) found that reciprocity, inspiration, usability, credibility and involvement were the major considerations by the customers.

Marketers have already realized the importance of digital media and are transforming their marketing strategies such as, moving away from the conventional marketing practices to the contemporary online marketing techniques. According to eMarketer, companies are now allocating as much as 40% of their marketing budget for the digital channels which is almost double of the amount allocated in 2013-14. A recent publication by American Marketing Association revealed that the overall marketing spend from all channels is decreasing and share towards digital advertising is increasing ([www.ama.org](http://www.ama.org)).

From the marketing professionals point of view, the study offers huge significance. First and foremost, by monitoring and analyzing the online reviews, marketing managers can obtain feedback from the customers at a very low cost (Wu et al., 2016). Such feedback can save marketing managers millions of dollars spent on marketing

research. The feedback available in the OCRs helps marketers articulate their messages addressing the customers' concerns, improve quality and alter product or service design or delivery where necessary (Hu, Pavlou, & Zhang, 2017; Sparks, So, & Bradley, 2016). The findings also suggest changes in the policy framework and firms' approach towards individual customers, markets and society at large (Wu et al., 2016). Based on the feedback and suggestions available in OCRs, companies can reach out to their customers to resolve their complaints and make them their loyal customers (Kozinets, 2016). Companies can also encourage their satisfied customers to share their views online in the form on positive reviews (Hu, Pavlou, & Zhang, 2017).

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## 1.6 Research Questions

The aim of current study is to find answers to the below questions and fill the gaps in the current literature in the field of WOM, online marketing, OCRs and their relationship with the outcome variables:

- 1 Do the positive and negative OCRs relate to the perceived risk?
- 2 Do positive and negative OCRs relate to the outcome variables (brand image, purchase intention and advocacy)?
- 3 Does perceived risk relate to the outcome variables (brand image, purchase intention and advocacy)?
- 4 Does the propensity to trust moderate the relationship between positive and negative OCRs and perceived risk?
- 5 Do positive and negative OCRs generated by the expert and novice sources have different impact on the perceived risk and outcome variables?
- 6 Does the perceived risk have a mediating role in the relationship between positive and negative OCRs and outcome variables (brand image, purchase intention and advocacy)?
- 7 Do negative OCRs have a stronger impact on perceived risk and outcomes (brand image, purchase intention and recommendation) than positive OCRs?



## 1.7 Objectives of the Study

The objectives of the study include investigation about the relationship between OCRs and outcome variables such as purchase intention, brand image and advocacy. As this is an experimental study, the focus is on the potential customers of both the commodity and durable goods. Online reviews play an important role in shaping consumer behavior regardless of the country and background. Therefore, this study is focused on Pakistani customers considering Pakistan to be in the line of countries leading in e-commerce in future. It is vital to carry out such studies as this will act as a guideline for the companies and marketing practitioners. It is anticipated that the results of present research will provide consumer insights and guidelines to the marketers with regards to the digital media in general and the impact of online reviews in specific.

Following are the objectives of this study:

- 1 To explore and understand the relationship between the positive and negative OCRs and perceived risk?
- 2 To explore and understand the relationship between positive and negative OCRs and the outcome variables (brand image, purchase intention and advocacy)?
- 3 To explore and understand the relationship between the perceived risk and outcome variables?
- 4 To explore and understand the moderating role of propensity to trust in the relationship between the positive and negative OCRs and perceived risk?

- 5 To explore and understand the difference between impact of OCRs generated by experts vs. OCRs generated by novice reviewers on perceived risk and outcome variables.
- 6 To explore and understand the mediating role of perceived risk in the relationship between positive and negative OCRs and the outcome variables (brand image, purchase intention and advocacy).
- 7 To explore and understand the difference between impact of positive OCRs and negative OCRs on perceived risk and the outcome variables (brand image, purchase intention and advocacy).

## **CHAPTER 2**

### **LITERATURE REVIEW**

## **CHAPTER OVERVIEW**

This chapter discusses literature review on the study variables. The chapter starts with a brief introduction to the phenomenon of Word of Mouth followed by the literature on electronic word of mouth. Several relationships that have been tested in past literature are discussed in this chapter. The next part of this chapter throws light on the propensity to trust literature which is the moderating variable in this study. The next part describes literature on perceived risk. The chapter discusses that assessing and mitigating risk is vital in any kind of purchase. It becomes more important to rule out any risk involved in the online purchases. The uncertainty reduction theory has been used as an overarching theory in this study. The chapter also includes brief literature on this theory. In the last part of the chapter the dependent variables are defined and discussed in detail followed by relationship between the study variable the chapter ends with listing down the study hypotheses.

## LITERATURE REVIEW

### 2.1 Word of Mouth Marketing

Word of Mouth (WOM) has been defined as an “informal, person-to-person communication between a perceived noncommercial communicator and a receiver regarding a brand, a product, an organization, or a service” (Harrison-Walker, 2001). Academicians have noticed that over past few decades, the communication between customers has emerged as a detrimental factor that affects the purchase decision (Chen & Xie 2005; Huang, 2018; Whyte, 1954). During the informal, inter personal communication, the friends usually share product related information and attributes (Arndt, 1967; Park & Lee, 2008; Tata et al, 2019). This exchange of information also develops the expectations of prospective customers (Anderson & Salisbury, 2003) and play a role in forming their attitudes toward products or services during the pre-purchase stage (Zeithaml & Bitner, 1996; Herr, Kardes, & Kim, 1991). This feedback also affects the post purchase evaluation as the buyers may relate their usage experience with that of their acquaintances which was shared in an informal conversation (Bone, 1995; Sundaram, Mitra, & Webster, 1998). Research carried in past emphasizes that the consumer or user generated information has a much stronger impact as compared to the information shared by the companies in the form of paid advertising or sales persons (Duverger, 2013; Katz & Lazarsfeld, 1955; Lu et al., 2013).

The past research in this domain has identified several areas of research to be explored. The first and the foremost is to explore what motivates a customer to generate the word of mouth regarding the services and products (s)he has used King et. al. 2014, Wu et. al. 2016). Majority of the researchers agreed on the conclusion that the positive or

negative word of mouth would come from the consumers who are very much satisfied or dissatisfied with the product or service (Anderson, 1998; Bowman & Narayandas, 2001; Dichter, 1966; Lim, Sia, Lee & Benbasat, 2006; Richins, 1983; Yale, 1987). Other aspects that might help reduce uncertainty, as identified by researchers are longevity of the relationship between the customers and the company (Dick & Basu, 1994; Maxham & Netemeyer, 2002), customers' loyalty with the company or the brand (Sher & Lee, 2009) and unique or exceptional products or services (Bone, 1992; Wangenheim & Bayon, 2004).

Moreover, the researchers have attempted to study the information seeking behavior of individuals. Particularly, when do customer need the opinion from other consumers instead of relying on the information provided by companies. The results of several studies reveal that people usually do so when they perceive a high level of risk involved in the purchase (Bansal & Voyer, 2000; Kiel & Layton, 1981), when they have less knowledge or information about the product or service (Furse, Punj, & Stewart, 1984) and when they are purchasing a high level of involvement product or service (Beatty & Smith, 1987, Tata et al, 2019). Researchers also attempted to find what makes one source of information appear to be more credible, authentic and reliable than the other. The findings reveal that the source expertise (Banerjee et. al. 2017, Bansal & Voyer, 2000; Gillyet al., 1998; Zhang et. al. 2016), nature and strength of association with reviewer of website, product or service (Brown & Reingen, 1987; Frenzen & Nakamoto, 1993), interests that are common between readers and the reviewers (Brown & Reingen, 1987) and similarity in the opinions of both readers and reviewers (Gilly et al., 1998) are some key factors that make the WOM from one source superior to the other sources of information in reducing uncertainty.

Past research shows that buying decision making is heavily affected by WOM (Bag et al, 2019; Richins & Root-Shaffer, 1988; Zhang, Wu & Mattila, 2016). The information present in the WOM helps reduce search cost, saves search time, decreases uncertainty and mitigates potential risk (Ward & Ostrom 2002). The customers consider WOM as much trustworthy, unbiased and dependable source of information (Huang, 2018; Join, Grant, & Listserv, 1988; Wilson & Sherrell, 1993). The word of mouth has also been found to decrease frustration, anger and anxiety (Burzynski & Bayer, 1977), lessen the cognitive dissonance associated with the doubts or unpleasant feelings at the post purchase stage after a major purchase decision (Engel, Blackwell, & Miniard, 1993, Prentice et al, 2019).

WOM has been found to be more trustworthy and reliable as compared to the communication made by advertisers and marketers (Bansal & Voyer, 2000; Carl, 2006). If the source of word of mouth is known, such as a friend or relative, the impact of WOM is even stronger. This impact has more significance when the product is considerably costly, product is new in the market or the customer is buying a product for the first time (Bughin, Doogan, & Vetvik, 2010). Moreover, if the volume of WOM information received by the customer is very high, such as, a large number of users are saying positive (or negative) things about a company, product or service, the potential customers are more likely to respond to such messages (Bansal & Voyer, 2000). Although marketers have started realizing the significance of word of mouth communications as these grow in number, size and depth across the social networks, understanding, measuring and managing the word of mouth remains a big challenge for them (Bughin, Doogan, & Vetvik, 2010; Huang, 2018).

## 2.2 Online Consumer Reviews (OCRs)

As discussed above, historically the traditional word of mouth was hard to manage due to its inconsistent nature and lack of traceability. However, with the advent of internet WOM has become more recordable, traceable and marketers can manage it systematically (Dellarocas, 2003). The WOM in the form of online reviews remains available on the websites in abundance which offers unmatched scalability and speed of transmission (Kawaf & Istanbuluoglu, 2019; Salehan & Kim, 2016). The readers can not only find the general information but can also apply different filters to find information relevant to them (Huang, 2018). Due to internet, this information is now universally available and accessible to anyone from any part of the globe without any geographical boundaries. Reviews can be seen with or without the reviewers being identified (Banerjee, Bhattacharyya, & Bose, 2017). The information about latest happenings in any part of the world is readily available to anyone across the globe (Gilly, et al., 1998; Singh et al., 2017). This has enabled the consumers to post reviews online to express and share post their usage related experiences (Wu et al., 2016). Past research explains that positive or negative WOM has an impact on the buying decision making process (Bansal & Voyer, 2000; Chen & Xie, 2005; Dellarocas, 2003; Zhang, Wu, & Mattila, 2016). However, the negative WOM has been found to have stronger impact than the positive WOM (Singh et al. 2017; Sparks, So & Bradley, 2016). Researchers found that negative reviews are perceived as more realistic, informative and helpful (Chen & Lurie, 2013; Chevalier & Mayzlin, 2006; Chua & Banerjee, 2016; Kusumasondjaja, Shanka, & Marchegiani, 2012; Mudambi & Schuff, 2010; Singh et al. 2017; Sparks, So, & Bradley, 2016).



Online consumer reviews (OCRs) are the electronic form of word of mouth communication (Park & Lee, 2009). Online consumer reviews are user generated information based on the opinions, experiences and evaluation by the users of products and services (Banerjee, Bhattacharyya, & Bose, 2017; Godes & Mayzlin, 2004; Park, Lee & Han, 2006; Salehan & Kim, 2016). Online consumer reviews are different from the traditional word of mouth in many ways. Traditional word of mouth communication takes place in private conversations or in dialogs among acquaintances. Thus, it is only limited to the people that are physically present when the communication takes place (Goldsmith & Horowitz, 2006). In electronic word of mouth, the exchange of information takes place in a synchronous manner in the form of online reviews (Hung & Li, 2009). A reader is not required to be physically present in case of online reviews (Goldsmith & Horowitz, 2006; Join, Grants, & Listserv, 1988; Karakaya, 2010; Katz & Lazarsfeld, 1955). Therefore, the online reviews can be posted, accessed and read by anyone at anytime from anywhere (Salehan & Kim, 2016; Huang, 2018). Another significant difference between traditional word of mouth and online reviews is that the traditional communication takes place at one point in time and perishes. Whereas, the information in the form of online reviews remains available for a long, rather in most cases, for indefinite period unless it is removed by those who posted it (Hennig-Thurau et al., 2004; Hung & Li, 2009; Lee, Park, & Han, 2008; Park & Lee, 2009; Park, Lee, & Han, 2006; Sen & Lerman, 2007). Furthermore, in contrast with the traditional word of mouth communications, the online reviews are quantifiable and show overall evaluation of products or services (Lee, Park, & Han, 2008; Park & Kim, 2008; Salehan & Kim, 2016). The detailed reviews show in depth evaluation and usage experiences. A huge quantum of information is present online in the form of reviews as compared to the information obtained from traditional word of mouth (Chatterjee, 2010; Kawaf &

Istanbulluoglu, 2019). These factors distinguish online reviews from the traditional word of mouth (Salehan & Kim, 2016).

Electronic word of mouth (eWOM) may be generated through discussion forums, review websites, opinion platforms or websites promoting customer-to-customer communications (Hennig-Thurau et al., 2004). eWOM is the result of behaviors that are potentially motivated due to multiple factors, such as, the social desirability, urge for social interactions or upholding social networks, emotional support, participation in online activities, identification, altruism, mutual help, feeling of solidarity and self-esteem etc. (Hennig-Thurau et al., 2004; Kozinets, 2016; Munar & Jacobsen, 2014; Salehan & Kim, 2016). Online reviews being a proxy of eWOM are different from star ratings and could be considered a reflection of an overall evaluation of service (Duverger, 2013; Wu et al., 2016). Research on tourism found that eWOM could have a stronger impact on choice of hotel as compared to the traditional word of mouth (Ogut & Tas, 2012; Wu et al., 2016). Another research found that the reviews generated online by the past users have a great impact on sales (Duverger, 2013; O'Connor, 2008; Prentice, 2019; Ye et al., 2011). The customers' feedback about the food quality in a restaurant, price, friendliness of staff, ambiance and overall service is positively related with the hotel's popularity in online forums (Huang, 2018; Wu et al., 2016; Zhang, Qiang, & Yijun, 2010).

Recent research shows that the customers trust the comments generated by their fellow customers more than those written by vendors of products and services and even by the experts (Banerjee, Bhattacharyya, & Bose, 2017; Dickinger, 2011; Racherla & Friske, 2012; Zhang et al., 2016). O'Connor (2008) discusses that travelers prefer suggestions and recommendations made by the peers who share common interests. Dickinger (2011) argues that the information shared by other customers is considered as highly

informative, but at the same time less accurate as customers may have little familiarity with the surroundings.

The electronic word of mouth has most significance for the service industry, particularly in hospitality and tourism industry mainly because information retrieval for the purchase decisions is easy for the customers (Liu & Park, 2015). A typical online review about a product or service involves a public display of emotion in which a user shares his opinion with the public and provides evaluation based on his experience (Yin, Bond, & Zhang, 2014). Customers are in search of such feedback from the past customers prior to making a purchase decision (Hong, Chen, & Hitt, 2013; Liu et al., 2015; Sun, 2012).

There is a large number of forums, blogs and websites that offer opportunity to general public (Chiu, Kafeza, & Hung, 2011; Chau & Xu, 2012; Marchand, Hennig-Thurau, & Wiertz, 2016). All the Internet platforms that provide users with the base for a horde of social interactions are referred to as “social media” (Kozinets, 2016). These social interactions provide opportunities for information exchange, collaborating for creating and sharing content related to diverse topics of common interest (Luca, 2016; Wu et al. 2016). Therefore, the increasing role of such platforms in everybody’s life cannot be neglected.

Electronic word of mouth is also different from the traditional WOM in its scope, due to the convenience it offers, sources as they are generally not known in person speed of interactions and volume of information available (Cantalops & Salvi, 2014; Duarte, Silva & Ferreira, 2018; Kozinets, 2016; Luo & Zhong, 2015). Unlike traditional word of mouth that is generated by the acquaintances (family, friends and colleagues), online reviews are generated by unfamiliar sources (Xie et al., 2011). On social media platforms like LinkedIn and Facebook however, the people we connect with are usually

known. This provides further strengths and credibility to the opinions and comments as compared to the content generated by unfamiliar sources. Facebook allows its subscribers to expand their social circles and users may increase the frequency and duration of interpersonal contact to an unlimited time and space (Kawaf & Istanbuluoglu, 2019; Luo & Zhong, 2015). A study by Luo and Zhong (2015) focuses on the impact of social interactions and interpersonal relationships on social networking sites on the eWOM. They found that the strength of ties between different members on social sites (strong social ties, mediocre ties or weak social ties) has an impact on effectiveness of the eWOM such that the eWOM may influence attitudes and the decision making of members with strong social ties (Luo & Zhong, 2015).

Information search has become much easier rather indispensable courtesy social networks due to their highly user-friendly nature. Social networks make it convenient for the consumers to post comments and have access to the others' opinions. The information search process during the customer decision making phase has become much influenced by such networks (Dickinger, 2011; Luo & Zhong, 2015; Mauri & Minazzi, 2013; Sparks, Perkins, & Buckley, 2013); Sparks & Browning, 2011; Zhang, Qiang, & Yijun, 2019). Social networks are playing a vital role in decision making process related to the hospitality and tourism industry (Kawaf & Istanbuluoglu, 2019; Escobar-Rodríguez & Carvajal-Trujillo, 2013; Filieri & McLeay, 2014; Inversini & Masiero, 2014; Luo & Zhong, 2015; Munar & Jacobsen, 2014). The customers can have effective and smooth interactions with other customers to get their feedback in the form of textual description such as opinions and comments, photo sharing or storytelling (Escobar-Rodríguez and Carvajal-Trujillo, 2013; Kozinets, 2016; Papathanassis & Knolle, 2011; Wilson, Murphy, & Cambra, 2012). These online platforms have become significantly popular among customers in the travel industry as well as other industries

(Kawaf & Istanbulluoglu, 2019). The information available on such platforms like Tripadvisor.com, Facebook and other tourism websites has major impact on the choices and preferences of other customers (Ghose et al. 2012; Luo & Zhong, 2015; Papathanassis & Knolle, 2011; Xiang & Gretzel, 2010; Ye et al., 2011). The peer generated comments are generally considered as more reliable, unbiased and impartial as compared to the information generated and controlled by the companies (Luca, 2016; Wilson, Murphy, & Cambra, 2012). Thus, this perceived independence of the message source makes such information shared on the social media (Litvin, Goldsmith & Pan, 2008).

A large number of users may benefit from the consumer reviews available online as there is no limit of access to anyone (Dellarocas, 2003; Lee & Bradlow, 2011; Lu et al. 2013). The bi-directionality of the online reviews differentiate them from the traditional mass communication which is generally one-sided communication. Therefore, it is pertinent to study and explore the antecedents and consequences of the online reviews (Dellarocas, 2003; Goes, Greenwood, Agarwal, & Jeffrey, 2014). Many studies have found the increasing role of online reviews in consumer decision making before any purchase (Tata et al, 2019; Zhang, Wu & Mattila, 2016). However, the content of the reviews holds vital importance. Lee, Kim, and Peng (2013) argued that the reviews containing more informational content may be more useful for one type of products or services and less useful for another. User ratings towards positive or negative side may give an overview of users' general evaluation of the products or services but they may still be considered as the "other side of the argument" (Cao, Duan, & Gan, 2011). In the detailed reviews however, the users express their personal experiences thus the reviews give a deeper insight in to the products or services (Dellarocas, 2003). Interestingly, some researchers found that the context while writing a review is also

important as sometimes he may feel obligation to “conform” to the group norms and write similar reviews as those already written by the other customers (Lee et al., 2014; Muchnik, Aral, & Taylor, 2013; Salehan & Kim, 2016; Wang, Zhang, & Hann, 2015). Goes et al. (2014) found that consumers who write highly objective reviews gain popularity among the reviewers’ community. The expression of emotion by a customer can have an impact on the perceived helpfulness (Chua & Banerjee, 2016; Salehan & Kim, 2016; Singh et al., 2017; Yin, Bond, & Zhang, 2014) and can even impact the consumer conversion (Ludwig, Ruyter, Friedman, Bruggen, Wetzels, & Pfann, 2013). Yin, Bond, and, Zhang (2014) argue that some negative emotions (such as anxiety) may be perceived as more useful as compared to other emotions (such as anger). Ahmad and Laroche (2015) studied relationship between the perceived helpfulness of reviews and various expressed emotions (such as happiness, hope, disgust and anxiety). They found differential impact of each emotion on the review helpfulness (Chua & Banerjee, 2016; Salehan & Kim, 2016; Singh et al. 2017). Furthermore, as both anger and anxiety are negative emotions, anxiety has more influential power than anger (Wu et al., 2016; Yin, Bond, & Zhang, 2014).

In the past, reviews were comments written by critics or reporters and presented in newspapers or magazines. The emergence of Web 2.0 and Web 3.0 has made it convenient for everyone to say a word about things they may be interested in. As the Internet is an important part of our daily life, people generally preferred to share their opinions online with others (Kaplan & Haenlein, 2010). Majority of such expressions are in the form of online reviews about products or services we have experienced. Thus, online reviews have huge penetration in the lives of every customer not only to deciding but also to gain more knowledge about different products (Burgess et al. 2011; Hu, Liu, & Zhang, 2008; Zhang, Wu & Mattila, 2016). Besides the emotion and sentiment in the

review, text readability is important to readers (Bag et al. 2019). Numerous studies in the field of information systems have explored the role of text in the online reviews and found that textual content is more influential than the numerical ratings (Chevalier & Mayzlin, 2006; Pavlou & Dimoka, 2006). Some recent studies exploring the effects of textual features have also found impact of readability and spelling mistakes on the perceived helpfulness of the reviews (Ghose & Ipeirotis, 2011, Goes et al., 2014). Few studies have investigated the impact of other features, such as the objectivity versus subjectivity of the reviews (Ghose & Ipeirotis, 2011) and semantic differential style (Cao, Duan, & Gan, 2011) and of the reviews.

Online reviews are a form of user generated content (UGC), provide important information to the future customers that allows easy access to interested customers (Cheong & Morrison, 2008; Chua & Banerjee, 2016; Wu et al., 2016). Different types of user generated content are found online, such as virtual communities, blogs, social networks, wikis, and media sharing sites such as Vimeo and YouTube (Marchand, Hennig-Thurau, & Wiertz, 2016; Sparks, Perkins, & Buckley, 2013; Xiang & Gretzel, 2010). The content generated by users mainly depicts their impressions based on relevant experiences (Wu et al., 2016; Zhang, Qiang, & Yijun, 2010). The user generated content could easily be accessed and is considered as an informal endorsement as compared to what companies say about their products (Cheong & Morrison, 2008; Dellarocas, 2003; Papathanassis & Knolle, 2011). Online reviews can be found everywhere, particularly on the eCommerce websites like eBay, Amazon.com as well as on the travel websites such as TripAdvisor, Expedia, Booking.com, Hotels.com, Yelp.com and many more. These online platforms facilitate the customers to share information through detailed reviews and also provide overall user rating on a 1-star (worst) to 5-star (best) rating system (Banerjee, Bhattacharyya, & Bose, 2017).

The online platforms offer exceptional tools for travelers to record and relive their travel experiences through expression of their satisfaction level (Filieri & McLeay, 2014; Ghose, Ipeiritis, & Li, 2012; Ip, Lee, & Law, 2010; Xiang, Schwartz & Uysal, 2017). These review sites regarding travel allow travelers to share opinions, and recommendations regarding certain hotels, travel destinations and other services for tourists (O'Connor, 2008; Liu & Park, 2015; Ye et al. 2011). Due to the growing popularity, accessibility and convenience offered by these online platforms, the online reviews now have more importance and a noticeable impact in the customers' buying decisions process (Filieri & McLeay, 2014; Mauri & Minazzi, 2013; Sparks & Browning, 2011; Xie et al. 2011; Ye, Law, Gu & Chen, 2011; Zhang, Qiang, & Yijun, 2010). However, many review platforms still provide the accumulative and aggregate of all the reviews by averaging the overall review comments ignoring the differences of each reviewer's personality and individual differences (Dai, Jin, Lee, & Luca, 2012). Lee and Cranage (2014) another research on restaurant customers found that the customers developed an unfavorable attitude towards restaurants based on the negative reviews, particularly when the aggregate reviews are against the restaurant.

The review websites also allow anonymity to the reviewers while posting comments on the review websites because the customers may become cautious of their words and avoid voicing sharp critics due to the identification process. Due to the anonymity the customers may express their factual opinions without feeling any social pressure (Banerjee, Bhattacharyya, & Bose, 2017). Due to this anonymity however, the retailers may enhance their online reputation by using untruthful postings online.

Recent research has found that highly helpful and readable online reviews offer both pros and cons about the products, whereas the unhelpful reviews are overly biased, emotional and may also lack sufficient information required by customers (Burch,



Ghose & Wattal, 2013; Chua & Banerjee, 2016; Connors, Mudambi, & Schuff, 2011; Singh et al. 2017; Wu, Heijden, & Korfiatis, 2011). Another research claims that the readability of a review has significantly higher impact than its length (Korfiatis, García-Bariocanal & Sanchez-Alonso, 2012). Ghose, Ipeirotis, and Li (2012) proposed a new ranking system for hotel search engines by mining consumer reviews and by considering the readability of the review as one major factor in their system (Salehan & Kim, 2016). Hu, Pavlou, and Zhang (2017) found that consumer reviews on Amazon tend to display an uneven bimodal (J-shaped) distribution, with more positive than negative reviews. They claim that hence the J-shape suggests that people are more likely to write reviews after extreme experiences. Park, Xiang, Josiam, and Kim (2013) observed that readers consider those reviews more credible that carry self-disclosed personal profile information about the reviewers. Effect of review content and reviewer characteristics have been found to have an impact on the overall review value (Banerjee, Bhattacharyya & Bose, 2017; Ghose & Ipeirotis, 2011).

With the changing digital landscape, studies in past have explored the characteristics of online customer reviews related to areas like framing the recommendation (Chevalier & Mayzlin, 2006; Hennig-Thurau, Walsh & Walsh, 2003; Xue & Zhou, 2010), argument quality (Bhattacharjee & Sanford, 2006; Cheung et al. 2008; Lee, Park, & Han, 2011), recommendation sidedness (Crowley & Hoyer 1994; Eisend, 2006; Lee, Kim, Peng, 2013), prior beliefs about reviews (Cheung, Luo, Sia, & Chen 2009), credibility of the recommendation source (Brown et al. 2007; Cheung et al. 2008), review ratings (Chevalier & Mayzlin, 2006; Khare et al. 2011; Mudambi & Schuff, 2010) and consistency of reviews (Benedicktus, Brady, Darke, & Voorhees, 2010; West & Broniarczyk, 1998).

### **2.3 OCRs and Perceived Risk**

Knight (1921) introduced the term "risk" in the domain of economics particularly relating it to the decision-making process. Risks are individual's approximation of uncertainty related to information search about product or service (Bettman, 1979). Risk has been an important element in the theories in the fields of economics, decision sciences and finance. The concept of "perceived risk" was first introduced in the marketing literature by Bauer (1960) followed by the work of Kogan and Wallach (1964) on risk taking in the field of psychology. Earlier work in the field of marketing includes a book by Cox (1967) on information handling and risk taking in consumer behavior. This was followed by numerous theoretical models of consumer risk perceptions (Markin, 1974; Stern, Lamb, & MacLachlan, 1977; Taylor, 1974). Perceived risk is the ambiguity related to the buying decision, the estimated likelihood of an undesirable outcome (Deutsch, 1958) and dissonance as a result of making an undesired action related to purchase (Arndt, 1968; Cunningham, 1967; Gronhaug, 1975; Ulleberg & Rundmo, 2003). The risk perception has remained a valuable schema for elucidation of customer's choice of a certain product or service. Online consumer reviews are a vital source of acquiring information related to the product or service under consideration (Bounie, Bourreau, Gensollen, & Waelbroeck, 2005; Campbell & Goodstein, 2001; Kim, Ferrin & Rao, 2008; Schmidt & Spreng, 1996).

Consumers, while pursuing several benefits confront some level of risk in every buying decision (Kim, Ferrin, & Rao, 2008; Taylor, 1974). Therefore, perception of risk and perceived benefits have been an important framework for understanding the consumer's preference about a product or service. Perceived risk is the accumulated effects of probabilities and uncertainty linked with a purchase; and the anticipated undesirable

consequences of making a purchase decision (Arndt, 1968a, 1968b; Cunningham, 1967; Gronhaug, 1975; Ulleberg & Rundmo, 2003). This two-dimensional phenomenon was further expanded by Jacoby and Kaplan (1972) by introducing it as a substantiated and largely used multidimensional concept which assesses psychological, physical, financial, social and performance risk. Social risk is defined in terms of a potential loss of respect and / or esteem (Murray & Schlacter, 1990). Social risk involves a potential loss of status in one's social group which is particularly associated with the purchase and usage of a product or service, for example, looking untrendy or appearing foolish within a social group (Park & Lee, 2009). It has been argued by researchers that high social risk is perceived in case of products that are consumed publicly, such as dress, mobile phones, cars etc. (Bearden & Etzel, 1982; Snoj, Korda, & Mumel, 2004). Likewise, psychological risk is associated with potential loss of self-concept and / or self-image (Murray & Schlacter, 1990). Consumer's ego might negatively be affected after buying a wrong product (Halstead, 2002; Snoj, Korda, & Mumel, 2004). Financial risk is involved in almost every transaction or purchase which (Roehl & Fesenmaier, 1992; Snoj et al. 2004). Financial risk involves a likelihood of not getting value for the money paid for purchasing a product. The risk perceptions in adopting, purchasing and using a product have been a focus of research in many studies (Bauer, 1967; Dowling & Staelin, 1994; Marchand, Hennig-Thurau, & Wiertz, 2016); however, the impact of several factors on these risk perceptions still need to be studied with regards to the online reviews context.

Potential effect of risk is determined by the level of significance of the situation Koller (1988). Role of risk could be involved while adopting e-services by banks and other service providers could be an important decision for customers, offering long term implications (Marchand et al. 2016). Even if e-services are an application of e-

commerce for which there exist some adoption models (Pavlou, 2001), it entails a discrete conceptualization. Jacoby and Kaplan (1972) deduced a measure of perceived risk from inspiring work of Bauer (1967). It was theorized as comprising of numerous independent variations of risk after a “tradeoff” of risk behavior happened. For example, an automobile company may decrease physical risk related to passengers’ safety risk but raise the financial risk for consumers. Privacy risk can be involved in situations like e-commerce environment, specifically while making the e-payments. Studies have highlighted customers’ fear of the information theft, or its misuse by the sellers. This privacy concern related to personal and financial information poses a potential “identity-theft” and gives rise to customers’ fear of information sharing. Privacy risk has remained a major concern that inhibited adoption of e-commerce in past, items to measure this variable were developed, grouped and modeled perceived risk as a deterrent to perceived usefulness and adoption of e-services (Marchand, et al. 2016).

Contrarily, perceived benefits are the beliefs of customers’ beliefs about the degree to which they will be better off after buying and using the product or service (Kim, Ferrin, & Rao, 2008). Both tangible and intangible attributes, functional and non-functional attributes, extrinsic and intrinsic attributes, direct and indirect attributes shape the customers’ perceived benefits (Forsythe et al. 2006; Snoj, Korda, & Mumel, 2004; Lee, 2009). The consumption situation such as context plays an important role in shaping perceived benefits. As perceived risk and perceived benefits are two sides of the same coin, the present study will take in to consideration perceived risk only.

Research on consumer behavior has extensively used perceived risk as an illustrative variable (Rao & Farley, 1987; Srinivasan & Ratchford, 1991). Studies on perceived risk demonstrate a range of conceptualizations of the construct of perceived risk (Dowling

et al. 1994; Gemunden, 1985; Ingene et al., 1985; Ross, 1975). Perceived risk can also be defined as the combination of seriousness of outcome and uncertainty (Bauer, 1967) and anticipation of losses associated with the purchase (Peter & Ryan, 1976). The decision about adoption of information systems is also associated with perceived risk particularly when the conditions create 1) uncertainty (Engel, Kollat, & Roger, 1986), 2) anxiety or distress (Dowling & Staelin, 1994), 3) concern, 4) conflict (Bettman, 1973), 5) psychological discomfort (Zaltman & Wallendorf, 1983), 6) anxiety associated pain (Taylor, 1974), and 7) cognitive dissonance (Festinger, 1957; Germunden, 1985). The cognitive dissonance is aroused from the post purchase evaluation of the product as having favorable or unfavorable outcomes compared to the cost incurred, risk borne and benefits associated with the product or service (Engel et al.1986).

Consumer researchers explain perceived risk with regards to the customer's apprehension of uncertainty as well as adverse consequences associated with purchase of a product (Hogg et al. 2007). Thus, perceived risk can be explained as the perceived uncertainty related to any possible negative consequences. Consumer researchers obliquely assume that uncertainty could be associated with the expected outcome of every purchase. Online reviews have a significant influence on the hospitality sector due to its experiential nature (Cantallops & Salvi, 2014). In case of tourism and hospitality sector, the online reviews are the important source of information about products and services with regards to the consumption experiences and subjective evaluation by other customers (Lee & Cranage, 2014; Litvin, Goldsmith, & Pan, 2008; Liu & Park, 2015; Papathanassis & Knolle, 2011; Xie & Zhang, 2014). Several studies have found that the positive and negative comments posted on the review websites affect travelers' attitude toward the hotel and help develop trust in the hotel (Liu &

Park, 2015; Mauri & Minazzi, 2013; O'Connor, 2008; Sparks & Browning, 2011; Ye et al., 2011). The importance and usefulness of the OCRs has resulted in their enhanced popularity among travelers and tourists because it reduces uncertainty (Liu & Park, 2015).

**Hypothesis 1:** Positive OCRs will be negatively related with perceived risk.

**Hypothesis 2:** Negative OCRs will be positively related with perceived risk.

## **2.4 Moderating Role of Propensity to Trust**

Propensity to trust is an important personality attribute that reflects on someone's tendency or willingness to trust or not to trust others. Propensity to trust has been defined as a "general willingness based on extended socialization to depend on others" (McKnight & Chervany, 2001/2002; Ridings, Gefen, & Arinze, 2002). This concept can be understood by assuming that individuals who trust others and treat them fairly, mainly in the uncertain situations, expect others to deal with them fairly in reciprocation (Smith, Organ, & Near, 1983). People with high propensity to trust are comparatively less skeptical, less apprehensive and little and concerned about the behavior of others (Van-Dyne et al. 2000). Researchers discussed that propensity to trust is associated with personality and cultural factors (Mcknight & Chervany 2001). It is obvious that anyone who has tendency to doubt others, will also face difficulty trusting people on internet as well as online sellers. Therefore, we can infer that in addition to the general attributes of an online sellers, the buying decision also rests on the propensity to trust of the customers (Marchand, Hennig-Thurau, & Wiertz, 2016; Sulaiman, Mohezar, & Rasheed, 2007).

Apart from the significance of trust in online scenario, it remained a topic of study in various fields since the 1950s (Corritore, Kracher, Wiedenbeck, 2001). Scholars in the

fields of sociology, philosophy, management, psychology, industrial psychology, marketing, electronic commerce, online banking and human-computer interaction (HCI) have included trust as a variable in their research. However, scholars in every discipline have defined trust from the perspective of their own fields, which often results in lack of agreement among researchers from different fields (Lewicki & Bunker, 1995). Jarvenpaa, Tractinsky, and Saarinen (1999) discussed that the consumers' perceived risk and attitude towards purchase from a website or an online store depends on the level of trust on the store. Trust in the online store is a consumer's willingness to depend on the seller and act in circumstances where such action makes the consumer vulnerable to the seller (Mayer, Davis, & Schoorman, 1995; McKnight, Cummings, & Chervany, 1998).

Individuals vary in their tendency to trust on other. Propensity to trust has been found to have a significant impact on trust in e-commerce websites with regards to information search, shopping online or sharing personal information (Cheung & Lee, 2001; Kawaf & Istanbuluoglu, 2019). Propensity to trust influences the cues from the surrounding environment as well as other sources and affects decision making. The high level of propensity to trust may result in reduced uncertainty and higher purchase intentions among individuals.

Researchers discuss that the signals provided by the cues are affected positively or negatively by the individuals' propensity to trust (Lee & Turban, 2001). OCRs in presence of high propensity to trust help reduce uncertainty and lower the perceived risk of any undesirable consequences (Park & Lee, 2008). Limerick and Cunnington (1993) argued that high propensity to trust is vital for a continuation of a relationship with others and it lessens the anxieties related to the unforeseen circumstances likely to arise in the future. Thus, a high propensity to trust reduces consumers' perceived risk

of purchasing a product they are not enough aware of (Schurr & Ozanne, 1985). In general, that consumers' propensity to trust plays a significant role in minimizing the perceived risk and uncertainty affecting the purchase intentions (Hu, Pavlou & Zhang, 2017). Several studies have focused on trust as an important variable in the online purchase and role of trust in the online reviews (Sultan et al., 2002). Surprisingly, individuals' propensity to trust as a personality trait has been largely ignored in the past research. Therefore, this study would explore the moderating role of individuals' propensity to trust as it might influence the impact of OCRs on brand image, purchase intentions and advocacy. Since offline and on-line situations have much in common, many offline-trust findings seem to be applicable to the online environment as well. One noticeable commonality is exchange of information. In both offline and online scenarios, fear, risk, costs and complexities limit exchanges between people. However, cooperation and coordination improve exchanges. Furthermore, the social norms of interaction between people seem to function in both the offline and online environment to reduce uncertainty (Kozinets, 2016).

**Hypothesis 3:** Propensity to trust will moderate the negative relationship between positive OCRs and perceived risk such that the relationship will be stronger when the propensity to trust will be high than low.

**Hypothesis 4:** Propensity to trust will moderate the positive relationship between negative OCRs and perceived risk such that the relationship will be stronger when the propensity to trust will be low than high.



## **2.5 OCRs from Expert and Novice Reviewers**

Past studies found that consumers usually experience some degree of risk while interacting with the strangers on the internet (Gefen, 2000; Hoffman, Novak, & Peralta, 1999; Reichheld & Scheffer, 2000). Consumers depend on the cues like online reviews, trustworthiness of the online sellers to reduce their uncertainty (Banerjee, Bhattacharyya, & Bose, 2017; Salehan & Kim, 2016). Usually individuals express their opinions voluntarily on the website. They share their usage experiences and judgements about products or services, which makes information provided by them to be authentic and of high value (Banerjee, Bhattacharyya, & Bose, 2017; Decker & Trusov, 2010; Wu et al., 2016). Past research claimed that travelers contemplate the online reviews posted by the past tourists while deciding on their trips (Gretzel & Yoo, 2008; Liu & Park, 2015; Vermeulen & Seegers, 2009; Ye et al., 2011). They discuss that characteristics of the review (such as length, readability & rating) and characteristics of reviewer (such as credibility, reputation & expertise) affect the perceived value of a review. Therefore, the perceptions and attitudes towards the content generated by the source heavily depends on the perceptions about the message source (Sparks, Perkins, & Buckley, 2013). Some other studies found while differentiating the source reputation (such as perceived level of trustworthiness) from the source expertise (Liu and Park, 2015; Zhang et al. 2016) found that the OCRs posted by the highly reputed source were more powerful as compared to the OCRs written by low reputation source (Banerjee, Bhattacharyya, & Bose, 2017). WOM in the shape of OCRs is known to be more powerful than advertising (Keller and Berry, 2003), information provided by companies (Alreck & Settle, 2002; Singh et al., 2017). Among all the factors affecting the confidence on the information provided, the credibility of the message source and

review quality are the most important ones (Banerjee, Bhattacharyya, & Bose, 2017; Racherla & Friske, 2012). A recent research claims that individuals would trust the opinions by experts more than others due to their knowledge and expertise (Zhang et al. 2016). Therefore, reviews by experts received better response than others (Hochmeister, Gretzel, & Werthner, 2013). The present study would considers OCRs from expert and novice customers and would try to investigate if they have any role in reducing customers' risk and uncertainty. Many customers are concerned about the credibility and expertise of the reviewer writing a review (Banerjee, Bhattacharyya, & Bose, 2017; Hochmeister, Gretzel, & Werthner, 2013). This is manifestation of their fear that the review sites do not have a strong filtering and reviewer identification mechanism. This results in lack of confidence in the information presented in the form of OCRs which increases potential uncertainty (Xiang & Gretzel, 2010). Therefore, it is ascertained that the OCRs written by the experts would reduce uncertainty and yield much higher response by the readers (Liu & Park, 2015; Zhang et al., 2016). Therefore, we can hypothesize that:

**Hypothesis 5:** In case of the expert reviewers, negative relationship between positive OCRs and perceived risk will be stronger when the propensity to trust will be high than low.

**Hypothesis 6:** In case of the expert reviewers, positive relationship between negative OCRs and perceived risk will be stronger when the propensity to trust will be high than low.

## **2.6 Relationship of OCRs and Behavioral Outcomes**

### **2.6.1 OCRs and Brand Image**

Many consumers gain access to information through online reviews available at the powerful new media to compare different products, services and brands (Hagel & Singer, 1999; Pitt, Berthon, Watson, & Zinkhan, 2002; Prahalad & Ramaswamy, 2004; Wu et al. 2016). Therefore, companies in a range of industries are responding to such trends by developing strategies and practices based on customer advocacy and testimonials (Achrol & Kotler, 1999; Baker, 2003; McKenna, 2002; Mitchell, 2001; Pitt et al. 2002; Sawhney & Kotler, 2001; Urban, 2004). The strategy behind customer advocacy is usually very modest (Urban, 2004). It becomes easier for a company to gain customers' trust and loyalty by facilitating consumers to find the best product according to their needs and choices. Online reviews are one of the major sources of information for the customers (Chua & Banerjee, 2016). Thus, we can say that the online reviews about a company, products or services would have an impact on how the customer evaluate a brand. For brands that are famous online, customers form online self-regulating brand communities which are functional without being managed by the companies themselves (Stokburger-Sauer, 2010). These are a successful model of customer advocacy and help in strengthening the brand's image (Urban, 2004). Researchers have recently explored review texts to identify the emotional and affective element in the reviews (Salehan & Kim, 2016; Yin, Bond and Zhang, 2014). The research found that the emotional content in reviews can significantly impact the perceived helpfulness of a review which can influence conversion of customers (Ludwig et al., 2013). Recent studies have reported evidence on the broad conformity of reviewers (Banerjee, Bhattacharyya, & Bose, 2017; Lee, Chang, Lin & Cheng, 2014; Muchnik, Aral, & Taylor, 2013; Wang, Zhang, & Hann, 2015). An experimental study revealed that the individuals having prior exposure to a

positive review rating have an amplified likelihood of submitting a positive review (Litvin, Goldsmith, & Pan, 2008; Singh et al., 2017). Similarly, Wang, Zhang, and Hann 2015) and Lee et al. (2014) have reported that the opinions of individuals are positively correlated with those of their friends in framing the image of the seller company.

Today, the informed, socially connected and engaged consumers are challenging the company-centric approach of brand management (Dupuy, 1999 (p105-127); Hagel & Singer, 1999; Moynagh & Worsley, 2002; Pitt et al. 2002; Sawhney & Kotler, 2001; Wind & Rangaswamy, 2001). Customers can acquire detailed information about products, services using new technologies such as smart phones, internet and email which can help them make smarter and more tailored choices. They can authenticate a company's marketing and can more easily reject claims or statements based on their own knowledge gained through such forums (Ind & Riondino, 2001). Hence, the image portrayed by companies is not taken as it is but the customers form image of a company or its brands based on the feedback and information received by other customers (Sparks, So, & Bradley, 2016).

Positive and negative reviews can affect a company's online reputation (Grewal et al. 2019). Therefore, marketing managers should carefully watch their digital presence and manage their online reputation by responding to customers' feedback and encouraging maximum positive reviews about their products (Luca, 2016). Companies can also create brand communities of loyal customers based on the emotional benefits associated with their products (Sparks, So, & Bradley, 2016). It would be difficult for the competitors of a brand to convince a loyal customer of a brand and a loyal customer is also likely to ignore unfavorable reviews about the brands of their choice (Salehan & Kim, 2016). OCRs characterize a supplementary source of information for the

prospective customers that can be utilized as a value parameter to reduce uncertainty in the decision-making process (Chua & Banerjee, 2016; Erdem & Swait, 1998; Grewal et al. 2019;).

**Hypothesis 7:** Positive OCRs will be positively related with brand image and negative OCRs will be negatively related with brand image.

### **2.6.2 OCRs and Purchase Intentions**

Consumers' readiness or willingness to purchase a product or services is generally known as the purchase intention (Freedman, 2008; Pavlou, 2003; Schlosser, 2011). Many recent studies found that OCRs significantly influence the purchase intentions of potential customers (Bag et al. 2019; Grewal & Stephen, 2019; Hu, Pavlou & Zhang, 2017; Zhang, Wu & Mattila, 2016). OCRs have become more important and popular among customers as they increasingly engage with the other customers to know about effectiveness of products and services they intend to buy (Goldsmith & Horowitz, 2006; Trusov, Bucklin, & Pauwels, 2009). Therefore, majority of online buyers depend largely on OCRs for buying decision (Park & Kim, 2008; Sen & Lerman, 2007). The positive OCRs increase purchase intention (Koh et al. 2017; Tata et al, 2019), negative OCRs reduce it (Bailey, 2004; Kim & Park, 2005; Sparks, So, & Bradley, 2016; Xia & Bechwati, 2008). For the sellers, the helpful OCRs have been found to have a positive impact on sales (Chen, Ching, Tsai, & Kuo, 2008; Chua & Banerjee, 2016; Ghose & Ipeiritis, 2011; Ghose, Ipeiritis, & Li; Singh et al., 2017). Hu et al. (2010) further argue that helpful OCRs do have an impact on sales, however, the less helpful OCRs do not affect the sales much. Research further says that the quantity (small or large number) of OCRs and the quality (readability, usefulness and helpfulness) of OCRs positively

influence the purchase intentions (Fiore, Jin, & Kim, 2005; Prentice, 2019; Tata et al, 2019).

Researchers have found that OCRs do not only have varied content such that some are general whereas some have more details, but OCRs also differ from their polarity or valence such as positive and negative OCRs (Liu, 2006; Sparks & Browning, 2011; Tata, Prashar & Gupta, 2019). Sparks and Browning (2011) further discuss that the positive feedback through OCRs includes vivid, romanticized or pleasant experiences, whereas negative feedback includes unpleasant experiences or complaints (Sparks, So, & Bradley, 2016). Park and Lee (2009) argue that negative OCRs have more effect on sales as compared to the positive OCRs. On the contrary, some researchers like Liu (2006) found no effect of OCRs valence on sales.

Findings from the past research in tourism show that user-generated content has a positive influence on selection of hotel reflecting a curvilinear relationship between traveler ratings and market share for hotels (Chua & Banerjee, 2016; Duverger, 2013; Grewal & Stephen, 2019). Vermeulen and Seegers (2009) discuss that awareness about a hotel is increased due to exposure to the OCRs that results in favorable consideration by the customers and maximizes the probability for room booking. Their findings were further endorsed by the later studies that found a positive effect of consumer evaluations on hotel booking, such that the favorable reviews lead to increase in the rooms booking (Duverger, 2013; Mauri & Minazzi, 2013; Vermeulen & Seegers, 2009; Ye et al., 2011). Customers have higher purchase intentions in the presence of positive OCRs and low purchase intentions in case of negative OCRs (Halstead, 2002; Mauri & Minazzi, 2013; Tata et al, 2019). A study by Ye et al. (2011) found that a 10% improvement in the consumer rating resulted in an increase of 4.4% in sales or room reservation. Positive OCRs motivated users to purchase the product or service, whereas negative

eWOM caused disagreement among users to adopt them (Dellarocas, Zhang, & Awad, 2007; Grewal & Stephen, 2019).

**Hypothesis 8:** Positive OCRs will be positively related with purchase intentions and negative OCRs will be negatively related with purchase intentions.

### 2.6.3 OCRs and Advocacy

One of the outcomes of positive or negative OCRs is advocacy. Advocacy refers to recommending the company or its products and services to fellow colleagues, friends or family members (Groth, Mertens, & Murphy, 2004). In the OCRs context, advocacy reflects fidelity to the firm to a level that customers start promoting the firm's interests beyond their individual interests (Bettencourt, 1997; Urban, 2004). The customer may or may not purchase a product but positive reviews about a product or service can prompt him to recommend the products to others (Bettencourt, 1997; Groth, Mertens, & Murphy, 2004). Satisfied customers feel themselves as part of the company and they promote company's products or services by recommending them to others. This phenomenon was termed as customer citizenship behavior by Groth (2005) which is adopted from the concept of OCB from management and organizational behavior science. Due to increasing use of social media such as blogs and twitter, the influence of customer feedback in textual form is likely to further rise (Hoffman & Novak, 2009; Marchand, Hennig-Thurau, & Wiertz, 2016; Sparks, So, & Bradley, 2016; Wu et al., 2016).

Advocacy is completely a voluntary act and can be categorized as one of the customer citizenship behaviors (Groth, Mertens, & Murphy, 2004; Urban, 2004). Customer advocates are important assets for the company's growth and market intelligence as

they share their needs and provide feedback to the for future strategies or to tailor the products, services, pricing, distribution and marketing communications (Sparks, So, & Bradley, 2016; Xiang, Schwartz, & Uysal, 2017; Zablah, Bellenger, & Johnston, 2004). Such customers do not only maintain a business relationship with the company, but also increase their purchasing activities over time and accept new products by the company (Marchand, Hennig-Thurau, & Wiertz, 2016; Groenroos, 2004). The influence of advocacy in the form of online reviews on the marketing and sales techniques has been emphasized by a large number of marketing scholars (Burton & Soboleva 2011; Chevalier & Mayzlin 2006; Cui, Lui, & Guo, 2012; Karakaya & Barnes 2010; Park & Cho 2012). Online reviews and profit were found to have a positive relationship (Anderson & Magruder, 2012). Therefore, the companies having positive OCRs about companies benefit firms in different ways. Even if the readers of the reviews do not read reviews they can still become company's advocates and recommend others to purchase the products rated high by online reviewers (Banerjee, Bhattacharyya, & Bose, 2017; Dellarocas & Narayan, 2007). Urban (2005) emphasized to notice the shift of customer power and its effects on a new marketing paradigm, to identify the new strategic choices for companies and indicate some implications for scholarly research on the emerging customer advocacy era of marketing (Urban, 2004).

**Hypothesis 9:** Positive OCRs will be positively related with advocacy and negative OCRs will be negatively related with advocacy.



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MEDIATING ROLE OF PERCEIVED RISK**

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## 2.7 Perceived Risk and Behavioral Outcomes

Perceived risk has been found to affect the behavioral intentions thus resulting in a decision in favor of or against a purchase (Ajzen, 1985, 1988; Marchand, Hennig-Thurau, & Wiertz, 2016; Parsons, Siegel, & Cousins, 1997). Customers' attitude is affected by their risk perception toward an individual which affects their behavioral orientation (Jarvenpaa, Tractinsky, & Vitale, 2000). The high or low level of perceived risk toward product or service significantly affects the purchase intention (Huang, 1993). Low perceived risk will result in molding a positive attitude towards the seller and vice versa (Jarvenpaa, Tractinsky, & Vitale, 2000). On the other hand, high risk perception will give rise to fear of adverse consequences that will affect consumer behavior negatively (Dowling, 1986). Therefore, it is important to understand unpleasant and uncertain implications of risk perceptions. This will help predict how people behave in different circumstances. Perceived risk alters someone's viewpoint, and influences purchase intention positively or negatively (Halstead, 2002). It can be understood that buying decision can be affected when perceived risk is high (Kim, Ferrin, & Rao, 2008).

Researchers have suggested that behavioral intentions are the ultimate determinants of behavior, therefore many researchers have used intentions as a proxy for actual behaviors (Ajzen, 1985; Fishbein & Ajzen, 1975). Attitude is "a learned predisposition to respond in a consistently favorable or unfavorable manner with respect to a given object" (Fishbein & Ajzen, 1975, p. 6). Attitude is formed due to perceived benefits and risks as people engage in behavior that reflects behavioral intentions (Ajzen, 1985, 1988; Parsons, Siegel, & Cousins, 1997). Low perceived risk and/or high perceived benefit related to something instigate or mold the consumers' attitudinal orientation and

their behavior (Jarvenpaa, Tractinsky, & Vitale, 2000). The empirical evidence from past studies indicates that the connection between attitude and perceived risk/benefits exists (Xiang, Schwartz, & Uysal, 2017). A study by Huang (1993) found that low perceived risk in online purchase context results in favorable attitude of consumers towards the online sellers (Jarvenpaa, Tractinsky, & Vitale, 2000). Researchers proclaim that an individual's likelihood of belief on adverse outcomes will most probably affect the consumer behavior towards company (Dowling, 1986). Thus, apprehending the undesirable and uncertain consequences will help understand how people will react to certain situations. Risk perceptions alter a person's emotions, hence influencing overall behavior. While perceived risk manifests to be a potential obstacle to behavior (Kim, Ferrin, & Rao, 2008), perceived benefits lead to positive and/or rewarding outcomes (Grubbs & Carter, 2002).

The emotional risk is associated with the intangible and perishable products or services such as the quality of hotel service cannot be assessed before or without purchase or consumption. Therefore, consumers usually make their purchase decisions based on comments and reviews provided by the fellow customers who had experienced the services before (Luo & Zhong, 2015). Sparks and Browning (2011) demonstrate that potential consumers use online reviews to reduce the risk and uncertainty related to the purchase situation, and that those opinions and recommendations can help determine their trust level (Marchand, Hennig-Thurau, & Wiertz, 2016). Consumers' reliance on online reviews is increasing as the online reviews provide necessary information that helps customers reduce their uncertainty (Chua & Banerjee, 2016; Huang, 2018; Ye et al., 2011).

Traditional marketing practices seldom involve consumers in the product development, pricing, production, distribution and/or marketing of the products or services. The company is the main driver in the market for exchange of products and services between the consumers and the companies. whereas, customers are major stakeholders in this exchange process and their feedback is very vital. This resulted in introduction of the concept of co-creation by Prahalad and Ramaswamy (2004). According to them, an eloquent collaboration between companies and consumers is pivotal role in creating exceptional experiences as well as in developing new products and ultimately gaining competitive advantage in the market (Marchand, Hennig-Thurau, & Wiertz, 2016; Xiang, Schwartz, & Uysal, 2017; See & Ho, 2014). They called it a “win–win approach”, as it encourages dialogue, fosters interaction, provides customers the access to information, ensures transparency, and alleviate potential risk which is a barrier to developing trust in the buyer and seller relationship (Chua & Banerjee, 2016).

**Hypothesis 10:** Perceived risk will be negatively related with brand image.

**Hypothesis 11:** Perceived Risk will be negatively related with Purchase Intention.

**Hypothesis 12:** Perceived risk will be negatively related with Advocacy.

### **2.7.1 Mediating role of perceived risk between positive OCRs and outcomes**

Mostly there exist discrepancies between customers’ judgments of a product and its actual performance. This poses a potential risk because customers do not understand the consequence of such discrepancy. It is usually considered as a relative term; consumers risk perception is high when the value of acquiring a product is not more than the money spent on its purchase (Snoj, Korda, & Mumel, 2004). Internet users, while making an online purchase transaction with an unknown vendor perceive a

significant level of risk (Hoffman, Novak, & Peralta, 1999; Kawaf & Istanbuluoglu, 2019). This turns out to be a hindrance in developing a mutual relationship in the e-commerce context. The physical absence of seller or buyer, or both of them makes in both the parties more vulnerable to fraud or mistrust (Hoffman, Novak, & Peralta, 1999; Lowry, Vance, Moody, Beckman, & Read, 2008; McKnight & Chervany, 2001-2002; Stewart; 2003). In such uncertain situations, online forums with a vast amount of online reviews offer a substantial foundation for trust among the two parties (Chua & Banerjee, 2016; Dellarocas, 2003). To and Ho (2014) discuss that the OCRs reduce risk and uncertainty as they are based on the first-hand experience of the users of products and services.

Consumers mostly base their purchase decisions on the editorial recommendations, bloggers and peer suggestions available online (Chua & Banerjee, 2016; Huang, 2018; Luca, 2016). These online peer recommendations are considered as a priceless resource by customers (Smith, Menon & Sivakumar, 2005). Thus it can be inferred that these reviews build confidence in the consumers' mind and consequently facilitate them in the purchase decision process. Transparency and advocacy are deliberate proportions that are echoed in the form of advice, visual communication, information content, and ultimately trust. This concept was extended by Prahalad and Ramaswamy (2004) who demonstrated that the typical system of creating value by firms for the consumers is shifting from a product and firm-centric view to the very personalized consumer experience (Wu et al., 2016). This means the industry is experiencing a shift in power from the firm to consumer (Wu et al., 2016) now as consumers have become more informed and have found sophisticated and meaningful ways to diagnose information online and assess potential issues in the products being offered by companies.

Low or a high-risk perception involving an online purchase affects consumers' attitude toward the online vendor or store (Huang, 1993; Grewal et al., 2019; Jarvenpaa, Tractinsky, & Vitale, 2000). Bauer (1967) argues that once a risk has been perceived in a purchase situation, there seems to be some reasonable evidence that subsequent consumer behavior is shaped by this risk perception. Positive OCRs contain online buzz, also called as e-sentiment which reflects the underlying product's overall value perception and satisfaction (Bag et al. 2019; Salehan & Kim, 2016; Xiang, Schwartz, & Uysal, 2017). Thus, we can consider it as a valuable gauge of behavioral outcomes such as brand image, purchase intention and value of products (Hu, Pavlou, & Zhang, 2017). Yet, the role of risk in relation to the positive and negative OCRs has received little attention from empirical researchers. Favorable opinion about a product or service can enhance the probability that customer would buy the product and unfavorable opinion would leave a negative impact on the consumers discouraging them to purchase (Dellarocas, Zhang, & Awad, 2007; Marchand, Hennig-Thurau, & Wiertz, 2016). Past research shows that a customer's perceived likelihood of adverse consequences would impact consumer behavior (Dowling, 1986). The positive OCRs about a product or service would reduce the customer risk and build a strong image of the brand in the mind of the customer. Thus we can hypothesize that:

**Hypothesis 13:** Perceived Risk will mediate the relationship between positive OCRs and Brand Image.

**Hypothesis 14:** Perceived Risk will mediate the relationship between positive OCRs and Purchase Intention.

**Hypothesis 15:** Perceived Risk will mediate the relationship between positive OCRs and advocacy.

### **2.7.2 Mediating role of perceived risk between negative OCRs and outcomes**

Hoffman et. al. (1999) reported that are cautious while carrying out on-line transactions mainly due to concerns related to risk. Consequently, perceived risk is equally postulated as a significant hurdle to consumer acceptance of e-commerce (Jarvenpaa, Tractinsky, & Saarinen, 1999; Pavlou, 2001). The situations where probabilities of outcomes are unknown may be termed as the risky situations. With the presence of OCRs, the positive and negative aspects of a product or services are known to the consumers now. This swift and easy access to an unparalleled volume of user-generated information ultimately helps customers to select the suitable product as per their choices and preferences (Chua & Banerjee, 2016; Duan, Gu, & Whinston, 2008); Moe & Trusov, 2011). The opinions based on user experiences also highlight the aspects related to quality and durability of a product resulting in decrease in perceived risk (Chua & Banerjee, 2016; Cui, Lui, & Guo, 2012; Zhu & Zhang, 2010). Such information also aids other forms of company-to-customer communication in the shape of marketing promotions (Chevalier & Mayzlin, 2006).

Studies reveal that negative information about products usually has more influence due to its diagnostic nature than positive information (Arndt, 1968; Chua & Banerjee, 2016; Grewal et al. 2019; Herr, Fiske, 1980; Kardes, & Kim 1991). Thus, consumers pay more attention to the negative information and take it into consideration during their judgment and evaluation process. Since online reviews are the only source of information in the e-commerce environment, the negative information coming through OCRs is considered more informative (Lucking-Reiley, Bryan, Prasad, & Reeves, 2007) and more credible (Chevalier & Mayzlin, 2006) as compared to the positive

information. One of the major reasons for consumers to suspect the positive information is that it may be written by the sellers or service providers themselves (Banerjee, Bhattacharyya, & Bose, 2017; Dellarocas, 2003). Consumers do believe that firms might manipulate the online reviews in their favor to boost their sales (Dellarocas, 2006; Zhang et al., 2016). Consumers are also reported to have believed that companies may be moderating the customer reviews (Bhatnagar, 2006) and even feeding fake reviews (Iverac, 2009). Iverac (2009) found that one fourth (25 per cent) of online consumers are not likely to purchase a product with negative reviews.

Discrepancy among OCRs (such as higher fluctuation of star ratings) can have detrimental effects on nature of succeeding reviews as well as on product sales (Nagle & Riedl, 2014, Sun 2012). Past researches have also examined the impact of OCRs on travel behavior of tourists (Vermeulen & Seegers, 2009) as well as on product sales (Duverger, 2013; Racherla, Connolly & Christodoulidou, 2012; Sparks & Browning, 2011). Some researchers argue that just the presence of online reviews can also increase the sales of products, regardless of their positive or negative nature (Mitchell & Khazanchi, 2010). This proposition was also supported by later researchers commenting that OCRs generated by online users have a significant influence on sales (Chua & Banerjee, 2016; Duverger, 2013; O'Connor, 2008; Ye et al., 2011).

Consumers may have little confidence while making a purchase decision in the presence of higher uncertainty and risk perceptions. The customer may not purchase a product but positive reviews about a product or service can prompt him to recommend the products to others (Bettencourt, 1997; Groth, Mertens, & Murphy, 2004). In the hypothesized model, perceived risk is related to advocacy. Research shows that when customers feel a lower level of risk, they are more likely to display favorable behaviors



such as advocacy and purchase intentions. Thus we can conclude that the positive or negative OCRs will also affect the customer advocacy.

**Hypothesis 16:** Perceived Risk will mediate the relationship between negative OCRs and Brand Image.

**Hypothesis 17:** Perceived Risk will mediate the relationship between negative OCRs and Purchase Intention.

**Hypothesis 18:** Perceived Risk will mediate the relationship between negative OCRs and Advocacy.

## 2.8 Theoretical Framework

The present study employs the uncertainty reduction theory as the underpinning theoretical framework to investigate the impact of online consumer reviews on perceived risk, purchase intention, brand image and advocacy. The conceptual framework of this theory as proposed by Berger and Calabrese (1975) says the “when interacting, people need information about the other party in order to reduce their uncertainty.” This information about strangers allows us to anticipate any possible negative outcomes of interactions with others. According to the uncertainty reduction theory (Berger & Calabrese, 1975) experiencing uncertainty is natural phenomenon while interacting with strangers for the first time. Thus, in order to uphold or expand any relationship, uncertainty and ambiguities must be addressed. Uncertainty reduction theory (Berger & Calabrese, 1975) focuses on the interpersonal interactions and communication. It further says that people experience uncertainty at several occasions in our routine life (Hogg, 2007). Uncertainty is caused as individuals are unable to envisage others’ behavior, response or actions in the initial interactions (Berger & Calabrese, 1975).

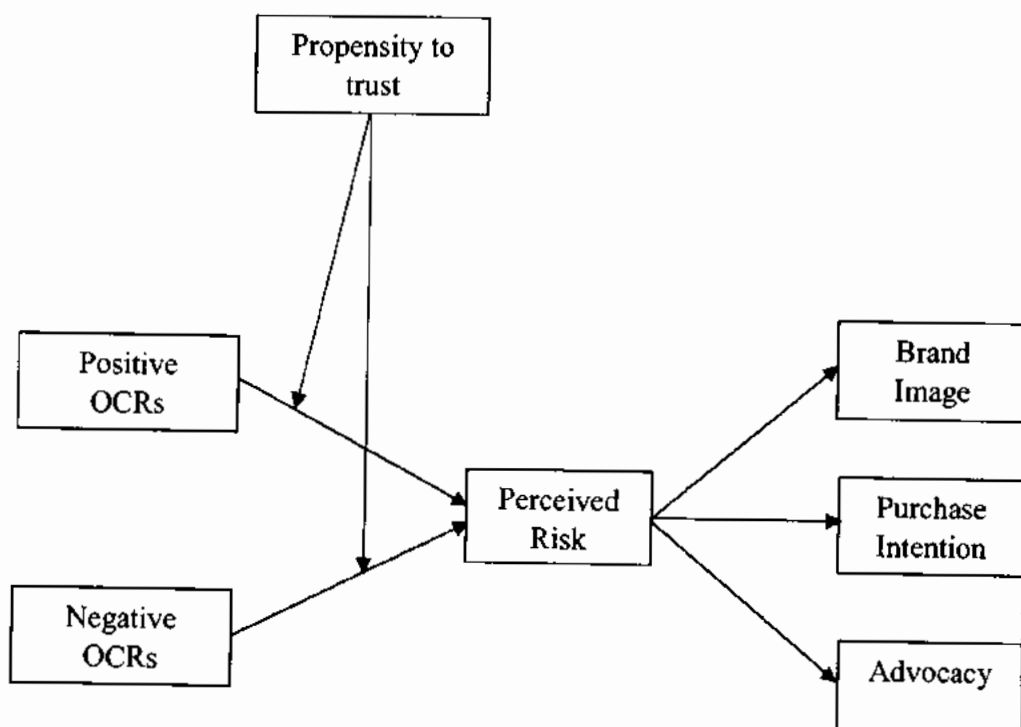
In an online shopping context, uncertainty can be experienced regarding products, processes, and emotions (Hu, Liu, & Zhang, 2008; Kawaf & Istanbuluoglu, 2019). For example, the level of uncertainty may increase if there is a discrepancy between the actual product and what the shopper was expecting to find. Uncertainty may also increase if shoppers are purchasing a product from a seller without any previous experience or knowledge of the seller (Hong & Pavlou, 2014). To help consumers gather information online, consumer reviews can be used to reduce consumers’ uncertainty by confirming their purchase decisions with comments from peer

consumers about product-related information (Berger and Calabrese, 1975; Brumfield, 2008; Hogg, 2000; Hu, Liu, & Zhang, 2008; Ramirez, Walther, Burgoon, & Sunnafrank, 2002). Hu, Liu, and Zhang (2008) revealed that information about product quality and the security and safety of shopping at a specific online retailer can be easily gleaned from web sites (Hu, Pavlou, & Zhang, 2017; Kawaf & Istanbuluoglu, 2019). When a consumer feels that more information is needed, online reviews can be used to reduce uncertainty related to products, new processes (such as purchasing online or from an unknown web site), or companies. However, at the same time, uncertainty can be increased by consumer reviews if consumers experience cognitive incongruence because of conflicting information in other consumers' opinions (Yao, Fang, Dineen, & Yao, 2009). Similarly, surplus information presented in consumer reviews can cause information overload (Park & Lee, 2009; Zhang, Wu, & Mattila, 2016), which often occurs when consumers are not confident about their decision and in an ambiguous situation (Schneider, 1987).

Companies can reduce customers' uncertainty by disclosing patterns of past performance, provide references from past and current users, get third-party certifications, and make it easy to locate, read and enforce policies involving privacy and security (Schneiderman, 2000). Lim, Leung, Sia, and Lee (2004) suggest that uncertainty can be enhanced by credit card loss assurance, product warranty and merchandise return policies, availability of escrow service, ability to schedule human customer service, and availability of user friendly interfaces. An survey of U.S.-based online surfers, found the shoppers were fascinated by international shopping opportunities on the Web, but they were skeptical about actual purchasing from overseas sites (Jarvenpaa & Todd, 1997; Prentice et al, 2019) report widespread distrust among consumers about Internet-based merchants (Culnan & Armstrong, 1999).

## 2.9 Proposed Research model

Figure 1. Proposed model of the study



## **CHAPTER 3**

### **METHODOLOGY**

## **CHAPTER OVERVIEW**

This chapter describes the methodology used in the study. Since it is an experimental study by design, in the very first part of the chapter, the rationale for using experimental design has been discussed. The next part discusses the method through which the stimulus was created. The stimulus used was based on online consumer reviews to be shown to the respondents. The selection of products (i.e., durable and commodity) as well as description of the two types of reviewers (i.e., expert and novice) is given along with the detailed justification and methodology of selection and creation of the stimulus. The later part of the chapter describes the method in which the experiment was conducted. Measures used in the study are given in this chapter. The techniques used for analysis are also mentioned in this chapter.

## METHODOLOGY

### 3.1 Research Design

Marketing researchers have used different methods in previous studies like, random sample approach (Lee & Ma, 2012), cross-sectional (Huang et al., 2012), experimental design (Dou et al., 2012; Kirmani, Hamilton, Thompson, & Lantzy, 2017) and content analysis which is also known as text mining (Bag et al. 2019; Lantzy, Stewart, & Hamilton, 2013; Salehan & Kim, 2016). The experiments permit a researcher to control the effects of any other variables in a causal relationship. Due to the very dynamics involved in online reviews, several studies in past have deployed experimental designs to investigate the impact of online reviews on the purchase intentions and other outcome variables (Park & Lee, 2008; Perdue & Summers, 1986). Hence, the present study uses experimental method to test the relationship between study variables. This study used a factorial design of between subjects 2 (OCRs: positive, negative) x 2 (reviewer expertise: expert, novice) x 2 (product type: durable, commodity). Using the between-subjects factorial design is considered more effective because in this design the subjects are exposed to only one of the treatment conditions (Kantowitz et al., 2009). Factorial design allows the interactions among study variables to help draw more inferences from the data (Myers & Hansen, 2012). This study explored direct and interactive effects of review valance (positive and negative reviews) and propensity to trust as well as reviewer expertise and product type on the perceived risk.

### **3.1.1 Rationale for use of Experimental Design**

Experiments are a commonly used method by marketing researchers and scholars (Kuhfeld, Tobias, & Garratt, 1994; Oh et al., 2004). Researchers can use experiments to determine cause and effect, rule out substitute elucidations and draw substantial causal inferences related to any study topic (Cook & Campbell, 1979; Ziegele & Weber, 2015; Huang et al. 2016). The examination of causal effects helps in theory development and theory testing. Researchers in other domains such as computer science, education, environmental studies, finance, management, research method, psychology and political science have also been using experimental design. Experiments are a characteristically preferred method to observe specific situations (Highhouse, 2009). Such experimental designs have the provision for researchers to understand customers' potential preferences even for the products or services that are not yet launched for consumption (Leung and Law, 2007). Experiments are the best methods used in most of the studies related to this area as they are considered most useful for inferring results for the various choice situations and comparing effect strengths (Floyd et. al., 2014; Kirmani et al., 2015; Neumann & Bockenholt, 2014; Ziegele & Weber, 2015).

There have been efforts to encounter some methodological issues in experimentation and field studies, mainly related with the internal and external validity (Ramos-Álvarez, Moreno-Fernández, Valdés-Conroy, & Catena, 2008). Internal validity is concerned with the actual effects caused by manipulation of independent variable (Shadish et al., 2002), whereas the external validity raises questions about the generalization of causal effects across individuals and contexts (Shadish et al., 2002). Researchers can control some elements in the experimental studies that helps



understand and apprehend how the customers would behave in the real world situations (Carson et al., 1994). This is crucial to ensure internal validity. At the same time, external validity has been considered a limitation of laboratory experiment due to the low level of contextual realism (Dahlstrom, Nygaard, & Crosno, 2008). This was ensured in the current study by employing business students most of whom belonged to the working class. The current study participants were randomly assigned/exposed to one of the eight experimental conditions. This practice has been used by previous studies to reduce the effect of threat to the external validity in the experimental studies such as the individual differences (Myers and Hansen, 2012). Random assignment of treatment condition also considered appropriate by some researchers to draw causal inferences (Ro, 2012).

### **3.2 Qualitative Study**

Based on the recommendations of recently conducted meta analyses and experimental studies (mentioned above) the research idea was conceived. However, in order to further strengthen the basis for the current study, the researcher conducted a qualitative study based on 2 focus group interviews. Each focus group comprised of 10 individuals. The participants were mid-career professionals, business teachers and PhD scholars in business studies. The participants of focus groups were selected based on the following characteristics:

- All of them were active internet users.
- All of them were educated enough to represent the population of the current study.

- All of them were mature and willing to participate in the focus group discussions on voluntarily basis. The average age of the participants was 33.95 years (Min. 24 years, Max. 47 years).
- Most of the participants (80%) were married and involved in decisions related to household purchases.
- All the participants had post graduate qualification and a minimum of 3 years of practical experience.

The participants were asked several questions about the importance of online reviews in the process of evaluating or purchasing a product. The question posed if they were familiar with the online reviews. Another question stated if they used online reviews as a source of information in evaluating or purchasing a product. Most of the respondents (75%) shared that they considered OCRs an important source of information for purchase of new products (Marchand, Hennig-Thurau, & Wiertz, 2016). Majority of participants (65%) termed OCRs as an important source of information for purchasing products online. They informed that they did not only consult OCRs for gathering information about the product for an online purchase, but also for the purchase from a brick-n-mortar (physical) store. Interestingly, 15% did not agree with the idea of relying on OCRs alone for an online purchase. In their opinion, the OCRs could be written by companies or their hired representatives, therefore, an uncertainty was always present in the online purchase (Zhang et al., 2016). Participants' individual and collective disposition / propensity to trust was assessed and discussed. The findings revealed that two participants (10%) seriously doubted the credibility of the reviewers and/or the source of online reviews. One of them had a bad experience with online purchase, while the other one had heard someone saying bad about the online purchase.

The above findings further strengthened the idea of exploring the impact of OCRs and Propensity to Trust on product evaluation (Brand Image), Purchase Intentions and Advocacy. Participants were further asked if they ever felt the potential risk of information theft, malfunctioned product resulting in loss of money. Half of them (40%) posed a potential of deception in trading with an unknown vendor, specially online. However, as discussed above, the credible online vendors like [www.dataz.pk](http://www.dataz.pk) had a good impact on the participants. Convenience provided by online sellers in form of cash on delivery (COD) and return / exchange options were also discussed. It was found that trust played an important role in online buying. When asked about the products for which risk was relatively higher and OCRs could help reduce it, that participants mentioned that OCRs were most sought after in case of the newer products, experience goods and high involvement or durable products (Bag et al. 2019; Marchand, Hennig-Thurau, & Wiertz, 2016).

### **3.3 Preparation of Stimulus Material for the Experimental Study**

In experimental studies, a stimulus has to be shown the respondents, after viewing or reading which they provide their response in the shape of an opinion, evaluation or intention (Summers, 2006). The stimulus is normally a communication made by the initiator, in this case the experimenter to gauge any response from the receiver of the message (Cheung & Thadani, 2012; Halstead, 2002). Therefore, developing the stimulus material was a crucial phase and required careful consideration of the study setting and participants. For the current study, the stimulus material was developed following the work of Allen and Rush, (1986). The development of stimulus material included selection of the products, review statements and description about reviewers.

The stimulus material was further refined and finalized during the second focus group discussion involving another group of 12 expert participants from different fields of life. The respondents included marketing practitioners, management personnel, businessmen, PhD scholars and faculty at business schools. All the participants were well versed with the online purchase mechanism, online reviews and the dynamics of consumer behavior. The participants were briefed by the researcher about the nature of research, study variables and their relationship with each other so that they could provide their inputs and feedback considering study context accurately.

### **3.3.1 Selection of Product Types**

Selection and determination of the right study sample was the first concern to be presented to the focus group participants. Being technology savvy and exposed to the internet, university students were considered the best for this study sample. Another support to this selection was the use of student sample by several experimental studies in past (Fisher, 1993; Kirmani et al. 2015; Oliver, 1993; Stephen, 2019). The focus group therefore, reinforced and agreed with the approach of using students as the study sample in the current study as they were easy to access particularly for the experimental study. Majority of the past experimental studies have used student sample (Kirmani, 2015; Stephen, 2019). Selection of appropriate products was the next challenge for the study as it could largely impact the results of the study. Product attributes play a significant role in determining how consumers evaluate products (Chua & Banerjee, 2016; Deighton, 1997; Klein, 1998; Liu & Karahanna, 2017; Smith, 1993; Smith & Swinyard, 1982; Wright & Lynch, 1995). Different product classifications have been conceptualized based on product attributes. McCabe and

Nowlis (2001) found that the consumer's preference for either on-line or off-line information search largely depends on different product attributes. A recent meta-analysis conducted by You, Vadakkepatt, and Joshi (2015) recommended in the future research directions that upcoming studies should use durable vs commodity goods to study the impact of OCRs. Responding to this call for future research, this study used one durable and one commodity product. Previous studies investigating product characteristics have used Mobile phone, LED Tv, laptop, portable media players, microwave oven, digital cameras (Liu & Karahanna, 2017) as high complexity or high involvement products (Chua & Banerjee, 2016) whereas detergent, DVDs (Hu, Pavlou & Zhang, 2017), tooth paste, cooking oil, air freshener, mosquito killer coil as low complexity or low involvement products (Chua & Banerjee, 2016). However, in majority of the studies, the authors refined their product selection through feedback by a group of expert respondents. Therefore, the current study followed the methodology used by Chiang and Dholakia (2003), for selection of durable as well as commodity products.

Based on past studies, several products were considered (i.e., hospital, smartphone, laptop, LED TV, restaurant, Digital camera and the services of a wedding photographer) and discussed with the 12 participants of the second focus group. After rigorous discussions, arguments and justifications, majority of the participants agreed on the selection of a laptop as the durable product and a toothpaste as the commodity product. This methodology was consistent with Chiang and Dholakia, (2003). A laptop was judged appropriate because it represents a durable or high involvement purchase item that can be evaluated based on the OCRs (Bag et al. 2019). Similarly, toothpaste was considered appropriate as a low involvement or commodity product. One of the important consideration while selecting the products was the demographics

of the study participants (Chua & Banerjee, 2016). Another consideration was the decision making and paying capacity of the participants (Liu & Karahanna, 2017). Since, the experiment was supposed to be conducted on the university students, the products were required to be of concern and relevance to the study participants. Several brand names with specific features were also discussed for their relevance to the study context and congruence with the sample characteristics. Finally, Dell 7000 Series Convertible (Two-in-One) Touch Screen Laptop and Crest Pro (Whitening) Toothpaste were selected as durable and commodity products respectively. Since almost every university student happens to buy and use a laptop during the studies, Dell laptop with touch screen and other attractive features deemed suitable. Similarly, a toothpaste with whitening characteristics was considered appropriate as it is a commodity product for daily use and falls within the price range of every study participant. However, both of these products (and their features) are relatively new and role of OCRs could largely affect the product evaluation (brand image) and purchase intentions (Bag et al. 2019; Hu, Pavlou & Zhang, 2017).

### **3.3.2 Selection of Online Reviews**

To examine and understand the relative impact of positive or negative OCRs, all the online reviews needed to (1) effectively represent the positive and negative reviews, and (2) engage participants to involve in information processing (Simon, 1990). The first challenge is to minimize the variances between the stimulus materials to segregate the positive and negative OCRs properly as the influencing variables. Second concern was to encourage participants to actively process the information while evaluating the reviews. This is normally practiced in consumer behavior research by informing

participants at the start of the experiment that they will be required to state their views and thoughts upon end of the experiment (Kempf & Smith, 1998).

Once the products were finalized, the next step was to adopt or develop the review statements for each of the selected products. In this regard, the researcher visited several leading review websites to find the most common statements as positive and negative reviews about laptop and toothpaste. These websites included [www.yelp.com](http://www.yelp.com), [www.amazon.com](http://www.amazon.com), [www.tripadvisor.com](http://www.tripadvisor.com), [www.facebook.com](http://www.facebook.com), [www.google.com](http://www.google.com), [www.notebookreview.com](http://www.notebookreview.com), [www.pcworld.com](http://www.pcworld.com), [www.consumersearch.com](http://www.consumersearch.com) and [www.reviews.com](http://www.reviews.com). The statements were supposed to give an impression as they were a real online review. Therefore, using the similar wording as used in the online reviews written on these websites, positive and negative statements were formulated as online reviews. Initially the length of review statements ranged from two to three paragraphs. However, the length of the reviews was considered too long by the 12 participants of the second focus group. Based on the recommendations of the participants of focus group, the statements were further refined and the length of each statement was reduced to around 5-7 lines comprising 40-60 words for the convenience and better understanding of the respondents. This practice was consistent with the methodology adopted by Park and Lee, (2009). The finalized review statements for each product are given in the Table 1 below.

**Table 1. Positive and negative review statements (OCRs)**

| Products  | Positive  | Negative   |
|-----------|---|--|
| Commodity | <p>“This is a brilliant product. I use this toothpaste twice a day and I have found it very effective. It has whitened my teeth within weeks and gave me better result than other toothpastes I have used. It gives me a refreshing breath. I feel pleased when people notice and appreciate a significant improvement in my tooth color.”</p>  | <p>“It leaves you with a very dry feeling mouth. I also really disliked the taste of this toothpaste. No minty flavor that I could detect, as claimed by the manufacturer! I felt like I needed to brush my teeth with another toothpaste just to get the lingering bad taste out of my mouth. In summary... 1) Not a sure if I saw whitening results. 2) Even if I did, the bad taste would discourage me from buying it again. After 3-4 uses I started to feel sensitivity in a few of my teeth.”</p>                     |
| Durable   | <p>“This laptop is amazing! Everything works well, especially the touchscreen and keyboard. The display is incredibly reflective. The design is very attractive. The battery gives a long backup time. It is incredibly lightweight. This is ideal for someone that wants both a tablet and laptop and can only afford one or the other. The 2-in-1 makes it adaptable for any occasion. It's got great specs for the price (i5, 500 GB). The price is much better than most ultra-books and is less than similar models from another brand.”</p> | <p>“Frustrating when it freezes during startup and hangs on the logo screen. This is one of the most unreliable computers I've ever used. It's specs and price made it seem so promising but, ever since I first started using it, it has had so many issues. The computer is not all that fast and is a bit heavy. The worst problem is the Wi-Fi connectivity. Every single time I browse the web I constantly have to reconnect to our wireless network. For the money I'd say you should better buy something else.”</p> |



### **3.3.3 Selection of Reviewer Expertise**

Since the study also wants to investigate the impact of the expertise of the reviewer(S), it was important to prepare a description of the reviewers as experts of novice reviewers (Zhang et al., 2016). The statements about the expert and novice reviewers were drafted and refined them with the help of 12 participants of the second focus group discussion. A description for expert reviewer portrayed him a person with thorough understanding and knowledge about the product, whereas the non-expert or novice reviewer was portrayed as someone who does not have enough expertise in the area or has little knowledge about the product (Banerjee, Bhattacharyya, & Bose, 2017). The statements are given in the Table 2 below.

**Table 2. Description of Reviewers**

| <b>Products</b>                            | <b>Expert Reviewer</b>  | <b>Novice Reviewer</b>   |
|--|---|--|
| Durable (Laptop)                           | “The reviewer has been using computers and laptops for over two decades. He has also used this model. He works in the IT industry and has much familiarity with the computer hardware and software. He often evaluates the products and writes reviews about them on popular websites.” | “The reviewer is a first-year engineering student at a university. His father bought him this laptop when he entered the university. He plays games and watches movies on his new laptop. He also enjoys internet surfing and making his class presentations on his laptop.”   |
| Commodity (Crest Pro Whitening Toothpaste) | “The reviewer is a healthcare professional and works in a dental clinic. He often comes across patients with varying dental and oral hygiene related issues. He uses new dental products for himself and his family.”   | “The reviewer lives in the suburbs of Islamabad. He has recently finished his high school education. He is conscious about his health and keeps trying products that appeal him through advertisements or personal referrals. He has recently heard about this product and has started using it since last few weeks.” |

### 3.4 Pretest

After developing the stimulus material, a pretest ( $n = 39$ ) was conducted to test if selection of products, review statements and description about reviewers was as per the study requirements. Apart from the demographics, the participants were asked several questions to establish the relevance of the stimulus material with the study requirements. An important step in developing the stimulus material was to differentiate expert and novice reviewers for each product using a free elicitation technique recommended by Fishbein and Ajzen (1975) and commonly used in consumer research (Kempf & Smith 1998; Smith 1993). First four questions were about the reviewer expertise while the next four questions were about the valence (positive or negative) of the online reviews. The respondents were asked to answer all questions on a 7-point Likert scale where 1 was strongly disagree and 7 was strongly agree.

The results of the pretest validated that the statements were perceived by the participants as per the researcher's manipulation. The first question asked if the person writing the review about commodity product (i.e., Crest toothpaste) was considered to be an expert by the respondents. The mean value of the responses was  $M = 5.38$  on the scale of 7, which means that they agreed that the reviewer was an expert. Similarly, the second question asked if the person writing review about the durable product (i.e., Dell Laptop) was considered to be an expert by the respondents. The mean value of the responses was  $M = 5.90$  which confirmed that the respondents agreed that the reviewer was an expert. The next two questions were about the novice reviewers. The third question asked if the person writing the review about commodity product (i.e., Crest toothpaste) was considered to be an expert by the respondents. Since the actual

statement showed that the reviewer was novice, the mean value of the responses was  $M = 3.05$  which showed that the respondents did not agree to the statement that he was an expert. Similarly, the fourth question asked if the person writing the review about durable product (i.e., Dell Laptop) was considered as an expert by the respondents. Since the actual statement showed that the reviewer was novice, the mean value of the responses was  $M = 3.21$  which means that the respondents did not consider him as an expert. The above results of the first part of pretest confirmed that the manipulation related to the reviewer expertise was successful based on the difference in statements about reviewers.

The second part of the pretest was carried out to determine if the positive and negative OCRs were understood by the respondents and would provide results as anticipated by the experimenter (Gardner, 1985; Summers, 2001). The participants were shown positive and negative OCRs with the aim to know if they could differentiate between them. The first question asked if the respondents considered the statement about commodity product (i.e., Crest Toothpaste) as a positive OCR. The mean value ( $M = 5.77$ ) revealed that the respondents agreed to the assumption and considered the statement as a positive review. The next question asked if the respondents considered the statement about the durable product (i.e., Dell Laptop) as a positive OCR. The mean value ( $M = 6.08$ ) revealed that the respondents agreed to the assumption and considered the statement as a positive review.

Similarly, the third question asked if the respondents considered the statement about the durable product (i.e., Dell Laptop) as a positive OCR. Since the actual statement comprised of a negative review, the mean value ( $M=2.26$ ) revealed that the respondents did not agree with the assumption in our question. Their response showed that they considered the statement as a negative review. The last question asked if the

respondents considered the statement about the durable product (i.e., Dell Laptop) as a positive OCR. Since the actual statement comprised of a negative review, the mean value ( $M = 2.36$ ) revealed that the respondents did not agree with the assumption in our question. Their response showed that they considered the statement as a negative review. The results of the pretest are given in the table below.

The findings of the pretest were helpful in finding out that the stimulus material being used in the study was accurate and adequate and no changes were required to be made. The results of this pretest also showed that the results were according to the prediction of researcher and that the manipulations were articulated well. Participants of the pretest were different from the participants of focus groups conducted earlier, to avoid any bias (Liu & Karahanna, 2017). Further, the respondents of the pretest as well as the two focus group discussions were not the part of the actual study (Chang & Fang, 2013).

### **3.5 Actual Study/Experiment**

#### **3.5.1 Population**

The population of this study consisted of the all the internet users in Pakistan with the basic literacy level to operate a cell phone or a computer. The study aims at exploring the impact of online reviews on purchase intentions, and not the actual purchase behavior, therefore, purchasing power or even the purchase decision making was not a hurdle in selecting the population. In general, all the potential buyers of a commodity good or a durable product formulated the population for this study. Population also consisted of the individuals with a basic understanding of online consumer reviews (OCRs). Since majority of the internet users and potential online buyers are the

population between the age of 18 to 50, they form the population of the study. Therefore, a large majority of the study population consists of young adults and students. All the current and potential buyers and users of the products discussed in this study formed the study population. With the aim to check the actual impact of the OCRs, the effect of prior experience may create biased responses, therefore, the effect of past experience was controlled to get the reliable results (Luca, 2016).

### **3.5.2 Sample**

There are several limitations including a very large population size, time and resource constraints due to which it is difficult to include whole population in the study. Secondly, the present study is an experimental study which requires a representative sample that was selected through convenience sampling method (Shadish et al., 2002). Random sampling further enhances the representativeness of the sample size (Mullinix, Leeper, Druckman, & Freese, 2015). The use of a student sample was considered acceptable because of the nature of the study, students' literacy for the computer and Internet and their fundamental understanding of the study variables (Shen, Kiger, Davies, Rasch, Simon, & Ones, 2011). Druckman and Kam (2011) stated that using students as subjects in experimental studies did not compromise external validity.

This study was a between subjects 2 (OCRs: positive, negative) x 2 (reviewer expertise: expert, novice) x 2 (product type: durable, commodity) factorial design. Since a standard cell size in an experimental study has been reported as between 25 to 40 (Kirmani, 2015, Stephen, 2019), this study employed a student sample of 252 business students from three different universities of Islamabad was selected for this study so that to have enough respondents in a cell size for each of eight experimental

conditions. The researcher followed the same inclusion criteria as mentioned earlier. The participants were a homogeneous sample and were randomly assigned to one of the eight treatment conditions (Li, Daugherty, & Biocca, 2002). A large number of experimental studies have used undergraduate university students as the participants for several reasons. Firstly, they are easily accessible, they are willing to take part in the research, they are tech savvy and adaptable to the technology and lastly, they are educated enough to understand the basic requirements of the research. Moreover, past studies have largely used student samples for consumer-related experimental studies as such samples are considered appropriate (Fisher, 1993; Oliver, 1993). Dellarocas et al, 2007 and Tata et al (2019) used valence (e.g., positive eWOM vs. negative eWOM) to test their persuasive effects.

### **3.5.3 Measures**

All scales to be used in this study have been adopted from previous studies. The responses were measured on a 7-point Likert scale where 1 indicates "strongly disagree" and 7 indicates "strongly agree".

#### **3.5.3.1 Online consumer reviews**

Online consumer reviews being the independent variable were manipulated in a way that four groups were exposed to positive reviews and the other four groups were exposed to negative reviews. The statements for positive and negative online consumer reviews were developed for this study (Refer to table 1 above). These groups were exposed to positive OCRs about commodity goods and durable goods. Similarly, the two other groups were exposed to negative OCRs about commodity and durable goods. Four groups were exposed to the OCRs by expert and other four groups were exposed to the OCRs by notice reviewers.

### **3.5.3.2 Propensity to trust**

Propensity to trust was measured through a 4-item scale adopted from Gefen (2010). The response was measured on a 7-point Likert scale where 1 indicates "strongly disagree" and 7 indicates "strongly agree". Scale's sample item included "I feel that people are generally reliable."

### **3.5.3.3 Perceived risk**

Perceived risk was measured using 4-items scale which is developed by Simon, Houghton, and Aquino (2004). The original scale contained 9 items, however, this study used its shortened version used by Teo and Liu, (2007). Recent studies have used this shortened version of the scale to measure PR. Sample item included "There is a high probability of losing a great deal by purchasing this product."

### **3.5.3.4 Brand Image**

Brand image as also a dependent variable. This was measured using 5-item scale adopted from Aaker (1996). Sample item of brand image was "This brand has a strong image in my mind".

### **3.5.3.5 Purchase intention**

Purchase intention was the main dependent variable of this study. This was measured through a 6-item scale adapted from Dodds (1991), Thang, Mizerski, Sadeque, and Mizerki (2008). Sample item of purchase intention scale included "I am eager to check this product because of its reviews."

### **3.5.3.6 Advocacy**

Advocacy was measured through a 7-point Likert scale adopted from Yi and Gong (2013). This scale has 3 items. Sample items include "I will recommend this product to others".



### 3.6 Control Variables

The impact of all demographic variables on study outcomes was tested using ONE WAY ANOVA in SPSS 21. The results revealed that none of the demographic variables had a potential impact on the main study outcomes except for past and current usage. As the usage has been categorized in two categories, (i.e., used=1 and did not use=2) and the impact of usage on dependent variables was found to be significant, therefore, the effect of past and current usage was controlled for further analysis.

**Table 2a. One-way ANOVA by used (the product before?)**

|       |                | ANOVA          |     |             |        |       |
|-------|----------------|----------------|-----|-------------|--------|-------|
|       |                | Sum of Squares | df  | Mean Square | F      | Sig.  |
| BI_M  | Between Groups | 31.483         | 1   | 31.483      | 20.499 | 0     |
|       | Within Groups  | 363.994        | 237 | 1.536       |        |       |
|       | Total          | 395.477        | 238 |             |        |       |
| PI_M  | Between Groups | 17.51          | 1   | 17.51       | 9.252  | 0.003 |
|       | Within Groups  | 448.542        | 237 | 1.893       |        |       |
|       | Total          | 466.052        | 238 |             |        |       |
| ADV_M | Between Groups | 25.117         | 1   | 25.117      | 11.54  | 0.001 |
|       | Within Groups  | 515.835        | 237 | 2.177       |        |       |
|       | Total          | 540.952        | 238 |             |        |       |

\*BI=Brand Image

\*PI=Purchase Intentions

\*ADV=Advocacy

**Table 2b. One-way ANOVA by using (the product currently?)**

|       |                | ANOVA          |     |             |       |       |
|-------|----------------|----------------|-----|-------------|-------|-------|
|       |                | Sum of Squares | df  | Mean Square | F     | Sig.  |
| BI_M  | Between Groups | 7.601          | 1   | 7.601       | 4.645 | 0.032 |
|       | Within Groups  | 387.876        | 237 | 1.637       |       |       |
|       | Total          | 395.477        | 238 |             |       |       |
| PI_M  | Between Groups | 6.879          | 1   | 6.879       | 3.55  | 0.061 |
|       | Within Groups  | 459.173        | 237 | 1.937       |       |       |
|       | Total          | 466.052        | 238 |             |       |       |
| ADV_M | Between Groups | 8.64           | 1   | 8.64        | 3.847 | 0.051 |
|       | Within Groups  | 532.313        | 237 | 2.246       |       |       |
|       | Total          | 540.952        | 238 |             |       |       |

\*BI=Brand Image

\*PI=Purchase Intentions

\*ADV=Advocacy

Table 2a and 2b show that the impact of these two demographic variables is significant on the outcome variables. Table 2a shows the result of past usage and table 2b shows the result of current usage. The participants were asked about their usage of the product at the end of the experiment. So, these results prove that the past and/or current usage may impact the results of the study. Therefore, the impact of these two variables was controlled for further analysis.

### **3.7 Participants**

A total of 252 business students enrolled at 3 universities in Islamabad participated in the experiment and were randomly assigned to one of the eight experimental conditions. The 252 students who participated in study included 172 males (72%) and 67 females (28%) who ranged in age from 20 to 47 years ( $M = 25.15$ ,  $SD = 4.37$ ). Each group consisted of 28-34 participants consisting group of homogeneous individuals. Contrary to the field survey research, an experimental design usually has fewer subjects mainly because the statistical analyses generally used in experimental research, such as t-tests and ANOVA, are robust with a small sample size (Myers & Hansen, 2012). Therefore, an experimental condition employing 30 subjects in each group was considered sufficient for inferring statistical power (Lynn & Lynn, 2003). Participants were asked to participate in the study on voluntary basis. Add 2017 references.

### **3.8 Procedure**

Study participants were first briefed about the purpose of the study which was "to investigate how consumers respond to the online consumer reviews" and that the study findings would solely be used for the academic purposes and the confidentiality of the information and opinions was ensured to gain voluntary participation. The participation was voluntary. All the respondents were properly briefed about the purpose of research. And the data was only accessed by the PhD scholar and was used anonymously.

Participants were informed that the purpose of the study was to assess their evaluation of the product being shown to them in the stimulus (Kantrowitz et al., 2009). An

important criterion to effectively conduct experiments is to seriously engage the participants for the evaluation of the OCRs. This was ensured by informing participants at the start of experiment that they should thoroughly examine the reviews and statement about the reviewers to determine how they think and feel about the product. They were further informed that they would be required to fill out a questionnaire to report their opinions and thoughts about the OCRs and the product under consideration (Kempf & Smith 1998). This served the objective to engage the participants in cognitive processing and this method was consistent with previous consumer experience studies (Kempf & Smith 1998). The stimulus and response sheets for each experimental condition were given a color code for identification purposes and to make study further interesting for the respondents. The detail of eight experimental conditions is as follows:

**Table 3. Experimental Conditions**

| <b>Group</b> | <b>Reviewer</b> | <b>Review</b> | <b>Product</b> |
|--------------|-----------------|---------------|----------------|
| 1            | Expert          | Positive      | Commodity      |
| 2            |                 |               | Durable        |
| 3            |                 | Negative      | Commodity      |
| 4            |                 |               | Durable        |
| 5            | Novice          | Positive      | Commodity      |
| 6            |                 |               | Durable        |
| 7            |                 | Negative      | Commodity      |
| 8            |                 |               | Durable        |

As shown in Table 3, the participants were randomly assigned to one of eight experimental conditions. In such random distribution, any participant has 100% probability to be exposed to any of the treatment conditions. Each group consisted of 28-34 participants. To find out the real impact of OCRs in the experiment, the experimenter needs to effectively represent the OCRs (Li et al., 2002). Therefore, the

participants were first provided with the stimuli. After an average time of 10 minutes, they were provided with the response sheets. For convenience of the researcher and create interest of the respondents, the stimuli and response sheets for each condition were given a color code such that the stimuli and response sheets for each condition/group were printed on the same color, whereas the stimuli and response sheets for the other groups were printed in other colors. Finally, following the work of MacKenzie, Lutz, and Belch (1986), immediately after viewing the OCRs, respondents were asked to respond to the questionnaire.

## **CHAPTER 4**

### **RESULTS**

## **CHAPTER OVERVIEW**

This chapter discusses results of the study. Firstly, all the study hypotheses are enlisted in the start of the chapter. Next, the reliabilities of the study variables are mentioned followed by confirmatory factor analysis, descriptive statistics and table of frequencies. The chapter discusses manipulation checks and the mean comparisons. Next part discusses the correlation analysis and ANOVA results. The third part of this chapter discusses the results of mediation and moderation analyses to test the study hypotheses.

#### 4.1 Reliability Check

Prior to the main data analysis, preliminary data screening was conducted. Cases with missing data or incomplete responses were removed. Out of 252, 13 responses were deleted. Data was analyzed using 239 usable responses. All the scales were tested for internal consistency and reliability.

**Table 4. List of Instruments Used and Reliabilities**

| Variable            | Items | Authors                     | Reliability |
|---------------------|-------|-----------------------------|-------------|
| Propensity to trust | 4     | Bansal and Gefen (2010)     | .70         |
| Perceived risk      | 4     | Teo and Liu (2007)          | .74         |
| Brand image         | 5     | Aaker (1996)                | .87         |
| Purchase intention  | 6     | Dodds (1991) & Thang (2008) | .89         |
| Advocacy            | 4     | Yi and Gong (2013)          | .92         |

Reliability assessment was conducted using Cronbach's (1951) alpha for each scale. Table 4 shows that the Cronbach (1951) alpha values for all variables were in acceptable range such as propensity to trust ( $\alpha = 0.70$ ), perceived risk ( $\alpha = 0.74$ ), brand image ( $\alpha = 0.87$ ), purchase intention ( $\alpha = 0.89$ ) and advocacy ( $\alpha = 0.92$ ); and all exceeded the generally accepted guideline of 0.60 (Hair, Black, Babin, Anderson, & Tatham, 1998) which ensures internal consistency of the variables (Cooper & Schindle, 2005).



## 4.2 Confirmatory Factor Analysis

**Table 5. Results of confirmatory factor analyses**

| Model Test                           | $\chi^2$      | DF         | $\chi^2/DF$ | CFI        | TLI        | NFI        | GFI        | AGFI       | RMR        | RMSEA      |
|--------------------------------------|---------------|------------|-------------|------------|------------|------------|------------|------------|------------|------------|
| <b>2 Factor (BI, PI)</b>             | <b>63.99</b>  | <b>40</b>  | <b>1.60</b> | <b>.98</b> | <b>.98</b> | <b>.96</b> | <b>.95</b> | <b>.93</b> | <b>.08</b> | <b>.05</b> |
| 1 Factor (BI, PI)                    | 160.80        | 44         | 3.65        | .93        | .91        | .90        | .89        | .84        | .12        | .11        |
| <b>2 Factor (PI, AD)</b>             | <b>52.62</b>  | <b>32</b>  | <b>1.64</b> | <b>.99</b> | <b>.98</b> | <b>.97</b> | <b>.96</b> | <b>.93</b> | <b>.76</b> | <b>.05</b> |
| 1 Factor (PI, AD)                    | 178.61        | 35         | 5.10        | .92        | .89        | .90        | .85        | .77        | .14        | .13        |
| <b>3 Factor (BI, PI, AD)</b>         | <b>133.47</b> | <b>83</b>  | <b>1.61</b> | <b>.98</b> | <b>.98</b> | <b>.95</b> | <b>.93</b> | <b>.90</b> | <b>.84</b> | <b>.05</b> |
| 1 Factor (BI, PI, AD)                | 347.01        | 90         | 3.86        | .90        | .88        | .87        | .83        | .78        | .13        | .11        |
| <b>4 Factor (PR, BI, PI, AD)</b>     | <b>251.69</b> | <b>142</b> | <b>1.77</b> | <b>.96</b> | <b>.95</b> | <b>.92</b> | <b>.90</b> | <b>.87</b> | <b>.18</b> | <b>.05</b> |
| 1 Factor (PR, BI, PI, AD)            | 627.29        | 152        | 4.13        | .84        | .82        | .80        | .77        | .71        | .23        | .11        |
| <b>5 Factor (PT, PR, BI, PI, AD)</b> | <b>358.63</b> | <b>216</b> | <b>1.66</b> | <b>.95</b> | <b>.95</b> | <b>.89</b> | <b>.89</b> | <b>.86</b> | <b>.17</b> | <b>.05</b> |
| 1 Factor (PT, PR, BI, PI, AD)        | 899.45        | 230        | 3.91        | .79        | .77        | .74        | .73        | .68        | .23        | .11        |

Better fit indices are shown in bold.

Table 5 provides details of the CFA results for various combinations of variables. We conducted CFAs for several combinations to see which models are better supported by the data. As shown in Table 1, a two-factor model for BI and PI provided a better fit as compared to a single factor model. Similarly, a two-factor model for PI and AD also provided a better fit as compared to a one-factor model. When compared a three-factor model for BI, PI, and AD against a single-factor model, it was found that the three-factor model provided a better fit. Moreover, a four-factor model for PR, BI, PI, and AD provided a superior fit as compared to the single factor model. Finally, the CFA revealed that a five-factor model for PT, PR, BI, PI, and AD provided a better fit to the data as compared to a one-factor model.

### 4.3 Descriptive Statistics

Table 6 shows the descriptive statistics mentioning means, standard deviations, minimum and maximum values for the demographic variables used in the study. The sample consisted of 252 respondents, however, 13 responses were discarded due to missing information or wrong entries. Finally, the analysis was carried out on 239 usable responses. The respondents out of which 172 (72%) were males and 67 (28%) were females ( $M = 1.28$ ,  $SD = 0.45$ ).

**Table 6. Descriptive Statistics**

|                     | <i>N</i> | Minimum | Maximum | Mean  | Std. Deviation |
|---------------------|----------|---------|---------|-------|----------------|
| Age (Years)         | 239      | 20      | 47      | 25.15 | 4.37           |
| Gender              | 239      | 1       | 2       | 1.28  | 0.45           |
| Experience (Years)  | 239      | 0       | 27      | 2.39  | 4.02           |
| Qualification       | 239      | 1       | 5       | 2.51  | 0.70           |
| Shop Online         | 239      | 1       | 2       | 1.44  | 0.50           |
| Read Reviews        | 239      | 1       | 2       | 1.28  | 0.45           |
| Propensity to Trust | 239      | 1.50    | 6.75    | 4.53  | 1.04           |
| Perceived Risk      | 239      | 1.00    | 7.00    | 4.01  | 1.28           |
| Brand Image         | 239      | 1.00    | 7.00    | 4.21  | 1.29           |
| Purchase Intention  | 239      | 1.00    | 6.83    | 4.19  | 1.40           |
| Advocacy            | 239      | 1.00    | 7.00    | 4.15  | 1.51           |

Table 6 shows that most of the respondents ( $N = 219$ , 91%) were aged between 21 and 30 ( $M = 25.15$ ,  $SD = 4.37$ ). All the respondents were business students out of which 108 (45%) were full time students. Those working ( $N = 131$ , 55%) had job experience ranging from 1 to 27 years ( $M = 2.39$ ,  $SD = 4.01$ ). Majority of the students ( $N = 139$ , 58%) were enrolled in the undergraduate courses, whereas second majority ( $N = 74$ , 31%) were enrolled in masters and a small number of respondents ( $N = 23$ , 9.6%) was enrolled in the postgraduate courses. Cell size for all groups ranged from 28 to 32. Almost two- third of the respondents ( $N = 173$ , 72%) revealed that they read online

reviews ( $M = 1.28$ ,  $SD = 0.45$ ) to get information about a product, service or a company regardless of the purchase associated with it. However, more than half of the respondents ( $N = 133$ , 55.6%) mentioned that they had shopped online ( $M = 1.44$ ,  $SD = 0.50$ ) at least once in life.

**Table 7. Frequencies**

| Variable             | Frequency | Percentage (%) |
|----------------------|-----------|----------------|
| <i>Gender</i>        |           |                |
| Male                 | 172       | 72.0           |
| Female               | 67        | 28.0           |
| <i>Qualification</i> |           |                |
| Intermediate         | 2         | .8             |
| Bachelors            | 139       | 58.2           |
| Masters              | 74        | 31.0           |
| MS / M. Phil         | 23        | 9.6            |
| PhD                  | 1         | .4             |
| <i>Read Reviews</i>  |           |                |
| Yes                  | 173       | 72.4           |
| No                   | 66        | 27.6           |
| <i>Shop Online</i>   |           |                |
| Yes                  | 133       | 55.6           |
| No                   | 106       | 44.4           |

Table 7 shows that two third of the participants (72%) were male. The frequencies table also shows that the largest number of participants (58%) were bachelor degree holders. Whereas second largest sample (31%) comprised of master degree holders. 72% of the respondents had read the online reviews about a product or service regardless of the purchase associated with it. Interestingly, 56% of the participants had experienced online shopping.

#### 4.4 Manipulations Check

An independent sample t-test was conducted to compare the mean differences between the positive and negative reviews for each of the dependent variables. In any experimental study, it is vital to check if the manipulations worked for the experimental conditions. The manipulations required that participants evaluating positive OCRs would experience a lower sense of perceived risk whereas participants evaluating negative OCRs would experience a higher sense of perceived risk.

**Table 8. Means for Measured Variables in Experimental Conditions**

| Variables | Expert    |          |          |          | Novice    |          |          |          |
|-----------|-----------|----------|----------|----------|-----------|----------|----------|----------|
|           | Commodity |          | Durable  |          | Commodity |          | Durable  |          |
|           | Positive  | Negative | Positive | Negative | Positive  | Negative | Positive | Negative |
| PR        | 3.72***   | 4.25***  | 3.16***  | 4.57***  | 3.38***   | 4.85***  | 3.62***  | 4.56***  |
| BI        | 4.41***   | 3.25***  | 5.06***  | 4.02***  | 4.30***   | 3.25***  | 5.03***  | 4.35***  |
| PI        | 4.84***   | 2.91***  | 4.96***  | 3.64***  | 4.71***   | 3.26***  | 5.10***  | 4.04***  |
| Advocacy  | 4.59***   | 3.30***  | 4.95***  | 3.66***  | 4.27***   | 3.33***  | 5.28***  | 3.73***  |

Note. OCRs = Online Customer Reviews, PR = Purchase Risk, PI = Purchase Intention, BI = Brand Image

\* $p < 0.05$ , \*\* $p < 0.01$ , \*\*\* $p < 0.001$

Table 8 shows that the mean differences proved these manipulations to be correct as the effects of positive and negative OCRs showed significant differences across both product categories. In first instance, the response to the positive and negative reviews by expert reviewers was gauged. The results showed that, for commodity product, participants evaluating positive OCRs reported low level of perceived risk ( $M = 3.72$ ,  $SD = .91$ ,  $p < .01$ ) as compared to the participants evaluating negative OCRs who reported higher level of perceived risk ( $M = 4.25$ ,  $SD = 1.17$ ,  $p < .01$ ). Similarly, for

durable product, participants evaluating positive OCRs reported low level of perceived risk ( $M = 3.16$ ,  $SD = 1.22$ ,  $p < .01$ ) as compared to the participants evaluating negative OCRs who reported higher level of perceived risk ( $M = 4.57$ ,  $SD = 1.49$ ,  $p < .01$ ).

Next, the response to the positive and negative reviews by novice reviewers was gauged. Table 8 shows that the manipulations for reviews by novice reviewer was also correct as the mean values for both product types were significantly different. The results showed that, for commodity product, participants evaluating positive OCRs reported low level of perceived risk ( $M = 3.38$ ,  $SD = 1.08$ ,  $p < .01$ ) as compared to the participants evaluating negative OCRs who reported higher level of perceived risk ( $M = 4.85$ ,  $SD = .89$ ,  $p < .01$ ). Similarly, for durable product, participants evaluating positive OCRs reported low level of perceived risk ( $M = 3.62$ ,  $SD = 1.18$ ,  $p < .01$ ) as compared to the participants evaluating negative OCRs who reported higher level of perceived risk ( $M = 4.56$ ,  $SD = 1.20$ ,  $p < .01$ ).

The results showed that the reviews by experts had stronger impact as compared to the reviews by novice reviewers. The participants exposed to positive reviews by experts reported lower perceived risk for durable product as compared to commodity product ( $M_{Durable}=3.16$  vs.  $M_{Commodity}=3.72$ ). Similarly, the respondents exposed to negative reviews by experts reported higher perceived risk for durable products as compared to commodity product ( $M_{Durable}=4.57$  vs.  $M_{Commodity}=4.25$ ).

It was noticeable that in case of the durable product, the respondents exposed to positive reviews by experts reported lowest perceived risk as compared to those exposed to positive reviews by novice reviewers ( $M_{Durable}=3.16$  vs.  $M_{Commodity}=3.62$ ). As shown in Table 8, the mean comparisons prove that the impact of reviews by expert reviewers is stronger than novice reviewers on the durable products which is the basic premise of this study.

**Table 9. Means for Measured Variables in Experimental Conditions**

| Variables           | Positive |      | Negative |      |
|---------------------|----------|------|----------|------|
|                     | Mean     | S.D. | Mean     | S.D. |
| Perceived Risk      | 3.47     | 1.12 | 4.57     | 1.21 |
| Brand Image         | 4.71     | 1.06 | 3.71     | 1.31 |
| Purchase Intentions | 4.91     | 1.02 | 3.46     | 1.36 |
| Advocacy            | 4.79     | 1.21 | 3.50     | 1.51 |

Note. OCRs = Online Customer Reviews

Table 9 shows that the participants exposed to positive reviews reported lower level of perceived risk as compared to those exposed to negative reviews ( $M_{\text{Positive}} = 3.47$ , vs.  $M_{\text{Negative}} = 4.57$ ). Similarly, the impact of positive reviews yielded positive responses for the study outcomes such as brand image ( $M_{\text{Positive}} = 4.71$ , vs.  $M_{\text{Negative}} = 3.71$ ), purchase intentions ( $M_{\text{Positive}} = 4.91$ , vs.  $M_{\text{Negative}} = 3.46$ ) and advocacy ( $M_{\text{Positive}} = 4.79$ , vs.  $M_{\text{Negative}} = 3.50$ ).

The independent variable in the study (OCRs) is a categorical variable with two categories (positive and negative). Following the work of Kirmani, 2015 and Allen & Rush, 1998, the categorical variables were dummy coded before conducting the statistical tests. Negative OCRs were coded as zero and positive OCRs were coded as one (Neg=0, POS=1). Similarly, commodity product was coded as zero and durable product was coded as one (Commodity=0, Durable=1).

## 4.5 Correlation Analysis

**Table 10. Correlations Among the Study Variables**

| Variables | Age  | Positive | Negative | PT    | PR     | BI    | PI    | ADV |
|-----------|------|----------|----------|-------|--------|-------|-------|-----|
| Age       | 1    |          |          |       |        |       |       |     |
| Positive  | .04  | 1        |          |       |        |       |       |     |
| Negative  | -.40 | -1.00    | 1        |       |        |       |       |     |
| PT        | .12  | .04      | -0.4     | 1     |        |       |       |     |
| PR        | -.08 | -.43**   | .43**    | .18   | 1      |       |       |     |
| BI        | .14* | .39**    | -.39**   | .25** | -.24** | 1     |       |     |
| PI        | .14* | .52**    | -.52**   | .21** | -.31** | .81** | 1     |     |
| ADV       | .12  | .43**    | -.43**   | .17** | -.28** | .78** | .81** | 1   |

POS = Positive OCRs, PI = Propensity to Trust, BI = Brand Image, PI = Purchase Intention, ADV = Advocacy

Usage=Current and past usage was controlled in the analysis. (used=1, not used=2)

\*\* . Correlation is significant at the 0.01 level (2-tailed).

\* . Correlation is significant at the 0.05 level (2-tailed).

Table 10 shows the correlation between the study variables. The positive OCRs were negatively correlated with PR ( $r = -.43, p < .001$ ). Similarly, the positive OCRs were significantly and positively correlated with the outcomes such as BI ( $r = .39, p < .001$ ), PI ( $r = .52, p < .001$ ) and Advocacy ( $r = .43, p < .001$ ). The negative OCRs were positively correlated with PR ( $r = .43, p < .001$ ). Similarly, the negative OCRs were significantly and negatively correlated with the outcomes such as BI ( $r = -.39, p < .001$ ), PI ( $r = -.52, p < .001$ ) and Advocacy ( $r = -.43, p < .001$ ).

Table 10 also shows that the mediating variable Perceived Risk was significantly and negatively correlated with Brand Image ( $r = -.24, p < .001$ ), Purchase Intention ( $r = -.31, p < .001$ ) and Advocacy ( $r = -.28, p < .001$ ). Similarly, the moderating variable Propensity to Trust was significantly correlated with all the outcome variables such as

Brand Image ( $r = .25, p < .001$ ), Purchase Intention ( $r = .21, p < .001$ ) and Advocacy ( $r = .17, p < .001$ ).

**Table 11. Main Effects (Relationship of Independent Variables with Dependent Variables)**

| Categories and Variables |                      | BI       |       | PI       |       | AD       |       |
|--------------------------|----------------------|----------|-------|----------|-------|----------|-------|
|                          |                      | <i>F</i> | Sig.  | <i>F</i> | Sig.  | <i>F</i> | Sig.  |
| <i>Expert Reviewers</i>  |                      |          |       |          |       |          |       |
| 1                        | Positive – Commodity | 0.79     | 0.373 | 7.26     | 0.008 | 2.89     | 0.091 |
| 2                        | Positive – Durable   | 15.71    | 0.001 | 10.81    | 0.001 | 10.01    | 0.005 |
| 3                        | Negative – Commodity | 19.98    | 0.001 | 30.96    | 0.001 | 10.9     | 0.001 |
| 4                        | Negative – Durable   | 0.70     | 0.403 | 4.95     | 0.027 | 3.83     | 0.067 |
| <i>Novice Reviewers</i>  |                      |          |       |          |       |          |       |
| 5                        | Positive – Commodity | 0.15     | 0.695 | 4.81     | 0.029 | 0.23     | 0.63  |
| 6                        | Positive – Durable   | 15.8     | 0.001 | 16.57    | 0.001 | 22.67    | 0.001 |
| 7                        | Negative – Commodity | 22.5     | 0.001 | 17.47    | 0.001 | 11.48    | 0.001 |
| 8                        | Negative – Durable   | 0.42     | 0.519 | 0.38     | 0.537 | 2.55     | 0.111 |

**Note.** OCRs = Online Customer Reviews, PR = Purchase Risk, PI = Purchase Intention, BI = Brand Image, AD = Advocacy

Table 11 shows the result of ANOVA that the mean values for most of the experimental conditions were significant for all three dependent variables of this study. Interestingly, the mean values for the eighth group (Negative OCRs for Durable product) were not significant for all three dependent variables.



## 4.6 Hypotheses Testing

### 4.6.1 Analysis of Relationship between IVs & Mediating variable

One-way ANOVA was used to test the relationship of OCRs with the mediating variable. ANOVA is used when there is one independent categorical variable and one dependent continuous variable.

**Table 12. Tests of Between-Subjects Effects for Positive OCRs**

| Source          | Type III Sum of Squares | <i>df</i> | Mean Square | <i>F</i> | Sig. |
|-----------------|-------------------------|-----------|-------------|----------|------|
| Corrected Model | 71.579 <sup>a</sup>     | 1         | 71.579      | 52.959   | .000 |
| Intercept       | 3858.608                | 1         | 3858.608    | 2854.862 | .000 |
| Positive OCRs   | 71.579                  | 1         | 71.579      | 52.959   | .000 |
| Error           | 320.327                 | 237       | 1.352       |          |      |
| Total           | 4237.938                | 239       |             |          |      |
| Corrected Total | 391.906                 | 238       |             |          |      |

a. R Squared = .183 (Adjusted R Squared = .179)  
Dependent Variable: Perceived Risk

Table 12 shows that the impact of positive as well as negative OCRs on perceived risk was significant ( $F_{1,237} = 52.96, p < .001$ ).

Additionally, the regression analysis was carried out as it provides better understanding of the causal relationship between the study variables. The results in table 12 in next section show that the relationship of OCRs with PR accounted for 18% variance due to OCRs ( $\Delta R^2 = .18, F_{1,237} = 52.95, p < .001$ ). The positive OCRs were negatively and significantly related with perceived risk and positive OCRs accounted for 42% decrease in perceived risk ( $B = -.42, t = -7.27, p < .001$ ). On the contrary, the negative OCRs were positively and significantly related with perceived risk and negative OCRs accounted for 42% increase in perceived risk ( $B = .42, t = 7.27, p < .001$ ). These results support the hypothesis 1 and 2 of this study.

#### 4.6.2 Test of Relationship between Mediator and DVs

The regression results show that Perceived Risk was significantly and negatively related with Brand Image ( $B = -.24, t = -3.86, p < .001$ ), Purchase Intention ( $B = -.30, t = 4.96, P < .001$ ) and Advocacy ( $B = -.28, t = -4.55, p < .001$ ).

**Table 13. Relationship of Perceived Risk with Dependent Variables**

| Dependent Variables | $\Delta R^2$ | $F$   | $B$      | $t$   |
|---------------------|--------------|-------|----------|-------|
| Brand Image         | 0.059        | 14.91 | -0.24*** | -3.86 |
| Purchase Intentions | 0.094        | 24.62 | -0.30*** | 4.96  |
| Advocacy            | 0.081        | 20.75 | -0.28*** | -4.55 |

Note. PR = Purchase Risk, PI = Purchase Intention, BI = Brand Image,  
\* $p < 0.05$ , \*\* $p < 0.01$ , \*\*\* $p < 0.001$

Table 13 shows that the relationship of Perceived Risk was significant with Brand Image ( $\Delta R^2 = .059, F_{1, 237} = 14.91, p < .001$ ), Purchase Intentions ( $\Delta R^2 = .094, F_{1, 237} = 24.62, p < .001$ ) and Advocacy ( $\Delta R^2 = .081, F_{1, 237} = 20.75, p < .001$ ). These results support hypotheses 10, 11 and 12 respectively.

#### 4.6.3 Test of relationship between IVs and DVs (Main effects)

MANOVA was used to test the relationship of OCRs and outcomes. MANOVA is used when there are more than one outcome variables.

**Table 14. Relationship of OCRs with Dependent Variables**

| Dependent Variables                               | $\Delta R^2$ | <i>F</i> | <i>B</i> | <i>t</i> |
|---|--------------|----------|----------|----------|
| Dummy coding of OCRs (Negative = 0, Positive = 1) |              |          |          |          |
| <i>Positive OCRs</i>                              |              |          |          |          |
| Perceived Risk                                    | 0.18         | 52.95    | -0.42*** | -7.27    |
| Brand Image                                       | 0.14         | 42.57    | 0.39***  | 6.52     |
| Purchase Intention                                | 0.26         | 87.22    | 0.51***  | 9.33     |
| Advocacy  | 0.17         | 52.86    | 0.42***  | 27.83    |
| <i>Negative OCRs</i>                              |              |          |          |          |
| Perceived Risk                                    | 0.18         | 52.95    | 0.42***  | -7.27    |
| Brand Image                                       | 0.14         | 42.57    | -0.39*** | 6.52     |
| Purchase Intention                                | 0.26         | 87.22    | -0.51*** | 9.33     |
| Advocacy  | 0.17         | 52.86    | -0.42*** | 27.83    |

Note. OCRs = Online Customer Reviews, PR = Purchase Risk, PI= Purchase Intention, BI = Brand Image. \* $p < 0.05$ , \*\* $p < 0.01$ , \*\*\* $p < 0.001$

Table 14 shows that the relationship of positive and negative OCRs was significant with Brand Image ( $\Delta R^2 = .14$ ,  $F_{1, 237} = 42.57$ ,  $p < .001$ ), Purchase Intention ( $\Delta R^2 = .26$ ,  $F_{1, 237} = 87.22$ ,  $p < .001$ ) and Advocacy ( $\Delta R^2 = .17$ ,  $F_{1, 237} = 52.86$ ,  $p < .001$ ). Multiple linear regression was used to test the effect impact of OCRs on the dependent variables. Table 14 shows that the positive OCRs accounted for 14% variance in Brand Image ( $B = .39$ ,  $t = 6.52$ ,  $p < .001$ ), 26% variance in Purchase Intention ( $B = .51$ ,  $t = 9.33$ ,  $p < .001$ ) and 17% variance in Advocacy ( $B = .42$ ,  $t = 27.83$ ,  $p < .001$ ). These results show that the hypotheses 7, 8 and 9 were supported.

#### 4.6.4 Moderation Analysis

##### 4.6.4.1 Moderation analysis for positive and negative OCRs

Hypothesis 3 states that the interactive effects of positive OCRs and propensity to trust would have stronger impact on perceived risk when propensity to trust would be high than low. Similarly, hypothesis 4 states that the interactive effects of negative OCRs and propensity to trust would have stronger impact on perceived risk when propensity to trust would be high than low. Moderation was tested using Model 1 in PROCESS by Preacher and Hayes (2013).

**Table 15. Interactive Effects of OCRs and Propensity to Trust on PR Model Summary**

|   |                                    | <b>R</b>         | <b>R2</b>    | <b>F</b>     | <b>df1</b> | <b>df2</b>  | <b>p</b>     |
|---|------------------------------------|------------------|--------------|--------------|------------|-------------|--------------|
|   |                                    | <b>0.466</b>     | <b>0.217</b> | <b>21.74</b> | <b>3</b>   | <b>235</b>  | <b>0.001</b> |
| <b>Path Coefficients</b>  |                                    |                  |              |              |            |             |              |
|   |                                    | <b>B</b>         | <b>SE</b>    | <b>t</b>     | <b>p</b>   | <b>LLCI</b> | <b>ULCI</b>  |
| Step 1  | Constant                           | 4.57             | 0.11         | 43.50        | 0.000      | 4.37        | 4.79         |
|   | Positive OCRs                      | -1.11            | 0.15         | -7.49        | 0.000      | -1.40       | -0.82        |
| Step 2  | Negative OCRs                      | 1.10             | 0.14         | 7.49         | 0.001      | 0.81        | 1.39         |
|   | Propensity to Trust                | 0.33             | 0.10         | 3.22         | 0.001      | 0.13        | 0.53         |
| Step 3  | Positive OCR x Propensity to Trust | -0.32            | 0.14         | -2.26        | 0.024      | -0.60       | -0.04        |
|   | Negative OCR x Propensity to Trust | 0.32             | 0.14         | 2.25         | 0.024      | 0.04        | 0.60         |
| <b>Interactions: Positive &amp; Negative OCRs x Propensity to Trust</b> |                                    |                  |              |              |            |             |              |
|   |                                    | <b>R2 Change</b> | <b>F</b>     | <b>df1</b>   | <b>df2</b> | <b>p</b>    |              |
| Positive OCRs x Propensity to Trust                                     |                                    | 0.017            | 5.098        | 1            | 235        | 0.024       |              |
| Negative OCRs x Propensity to Trust                                     |                                    | 0.017            | 5.098        | 1            | 235        | 0.024       |              |

Note: N=239. Bootstrap sample size = 5,000. Unstandardized regression coefficients are reported. Level of confidence for all confidence intervals in output: 95.00. OCRs = Online Customer Reviews, LL = lower limit; CI = confidence interval; UL = upper limit.

PROCESS allows mean centering of the variables for interaction plots and provides the slope test at -1 and +1 standard deviation from the mean values of moderator which shows the direction of the slope (Preacher & Hayes, 2004; Rucker & Hayes, 2007). Table 15 shows that the interaction term of positive OCRs and propensity to trust was significant ( $B = -.32$ ,  $SE = .14$ ,  $t = -2.25$ ,  $p = .024$ ). The interaction brought a significant change ( $\Delta R^2 = .017$ ,  $F_{1,235} = 5.09$ ,  $p = .024$ ). The confidence interval was significant for low ( $B = -.77$ ,  $SE = .20$ ,  $t = -3.69$ , 95% CI: LLCI = -1.18 to ULCI = -.36), medium ( $B = -1.10$ ,  $SE = .14$ ,  $t = -7.49$ , 95% CI: LLCI = -1.39 to ULCI = -.81) and high ( $B = -1.44$ ,  $SE = .20$ ,  $t = -6.88$ , 95% CI: LLCI = -1.85 to ULCI = -1.02) levels of propensity to trust. These results support hypothesis 3 of the study.

Table 15 shows that the interaction term of negative OCRs and propensity to trust was significant ( $B = .32$ ,  $SE = .14$ ,  $t = 2.25$ ,  $p = .024$ ). The interaction brought a significant change ( $\Delta R^2 = .017$ ,  $F_{1,235} = 5.09$ ,  $p = .024$ ). The confidence interval was significant for low ( $B = .77$ ,  $SE = .20$ ,  $t = 3.69$ , 95% CI: LLCI = .36 to ULCI = 1.18), medium ( $B = 1.11$ ,  $SE = .14$ ,  $t = 7.49$ , 95% CI: LLCI = .82 to ULCI = 1.40) and high ( $B = 1.44$ ,  $SE = .20$ ,  $t = 6.88$ , 95% CI: LLCI = 1.03 to ULCI = 1.86) levels of propensity to trust. These results support the moderation hypothesis 4 of this study.

**Figure 6. Moderation Effects of Positive & Negative OCRs on PR**

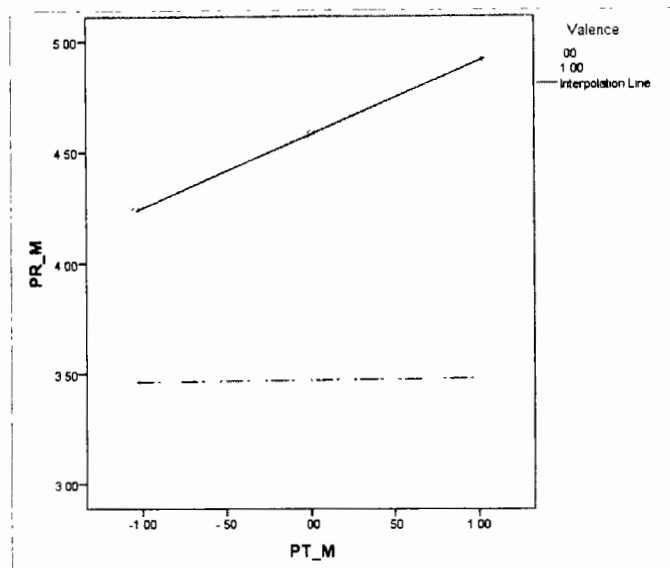


Figure 6 shows that when propensity to trust was low, the perceived risk for positive OCRs was low as compared to the negative OCRs. Whereas, when propensity to trust was high, the negative OCRs increase the perceived risk significantly while the positive OCRs did not cause any increase or decrease in perceived risk.

#### **4.6.4.2 Moderation Analysis for Reviewer Expertise**

Hypothesis 5 of this study states that the positive OCRs by expert reviewers would have stronger negative impact on perceived risk in presence of high propensity to trust. Moderation effect of reviewers' expertise level was tested using model 1 in PROCESS. The results show that the interactive effects of positive OCRs by expert reviewer and propensity to trust on perceived risk were not significant. Table 15 shows that the interaction term was insignificant ( $B = -.25$ ,  $SE = .16$ ,  $t = -1.50$ ,  $p = .130$ ). The F value was also not significant ( $F_{3,231} = 2.67$ ,  $p = .134$ ). This means that the impact of positive OCRs by Expert was not significant with Perceived Risk. These results show that the hypothesis 5 of this study was not supported.

**Table 16. Interactive Effects of OCRs by Expert Reviewers and Propensity to Trust on Perceived Risk**

|  |  | <b>Model Summary</b> |                      |          |            |            |          |
|--|--|----------------------|----------------------|----------|------------|------------|----------|
|  |  | <b>R</b>             | <b>R<sup>2</sup></b> | <b>F</b> | <b>df1</b> | <b>df2</b> | <b>p</b> |
|  |  | 0.479                | 0.23                 | 9.864    | 7          | 231        | 0        |

|        |   | <b>Path Coefficients</b> |           |          |          |             |             |
|--------|---|--------------------------|-----------|----------|----------|-------------|-------------|
|        |   | <b>B</b>                 | <b>SE</b> | <b>t</b> | <b>p</b> | <b>LLCI</b> | <b>ULCI</b> |
| Step 1 | Constant                                      | 3.43                     | 0.15      | 22.93    | 0.000    | 3.14        | 3.73        |
| Step 2 | Positive OCRs by Expert                       | -0.76                    | 0.18      | -4.09    | 0.000    | -1.12       | -0.39       |
|        | Negative OCRs by Expert                       | -1.11                    | 0.15      | -7.49    | 0.000    | -1.40       | -0.82       |
|        | Propensity to Trust                           | -0.05                    | 0.13      | -0.397   | 0.691    | -0.31       | 0.20        |
| Step 3 | Positive OCRs by Expert x Propensity to Trust | -0.25                    | 0.16      | -1.50    | 0.130    | -0.58       | 0.07        |
|        | Negative OCRs by Expert x Propensity to Trust | 0.52                     | 0.19      | 2.74     | 0.006    | 0.15        | 0.90        |

**Table 17. Interactions: Positive & Negative OCRs x Propensity to Trust**

|   | $\Delta R^2$ | <b>F</b> | <b>df1</b> | <b>df2</b> | <b>p</b> |
|---|--------------|----------|------------|------------|----------|
| Positive OCRs by Expert x Propensity to Trust | 0.01         | 2.25     | 1          | 235        | 0.134    |
| Negative OCRs by Expert x Propensity to Trust | 0.03         | 2.67     | 3          | 231        | 0.048    |

Note: N=239. Bootstrap sample size = 5,000. Unstandardized regression coefficients are reported. Level of confidence for all confidence intervals in output: 95.00. OCRs = Online Customer Reviews, LL = lower limit; CI = confidence interval; UL = upper limit.

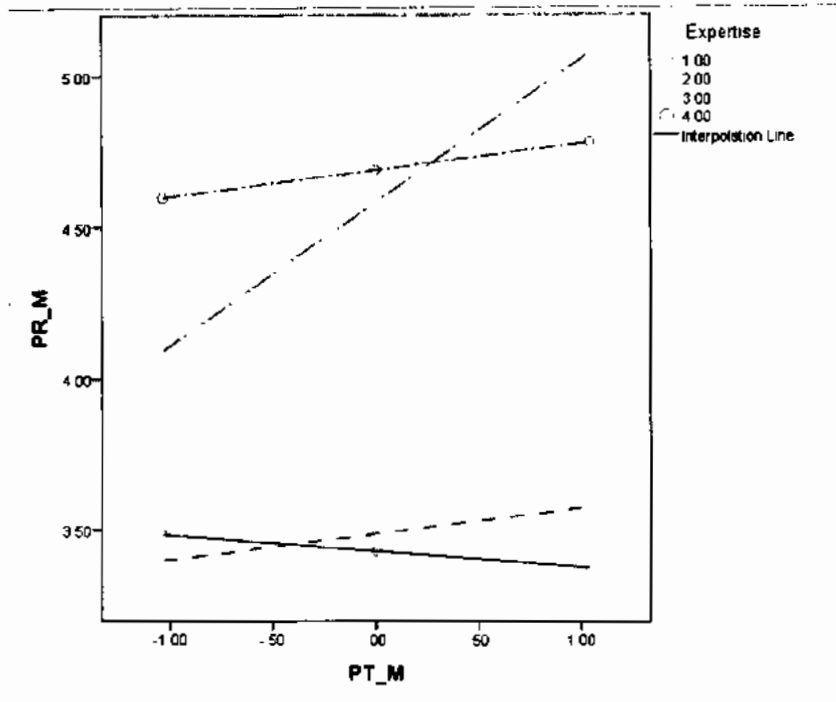
Hypothesis 6 of this study states that the negative OCRs by expert reviewers would have stronger positive impact on perceived risk in presence of high propensity to trust. Moderation effect of reviewers' expertise level was tested using model 1 in PROCESS. The results show that the interactive effects were significant between the negative OCRs by Expert reviewer and Propensity to Trust on perceived risk.

Table 16 shows that the interaction term was significant ( $B = .52$ ,  $SE = .19$ ,  $t = 2.74$ ,  $p = .006$ ). The interaction brought a significant change ( $\Delta R^2 = .03$ ,  $F_{3,231} = 2.67$ ,  $p = .048$ ). The confidence interval was significant for low ( $B = .60$ ,  $SE = .26$ ,  $t = 2.33$ , Bootstrap 95% CI: LLCI = .09 to ULCI = 1.12), medium ( $B = 1.15$ ,  $SE = .21$ ,  $t = 5.26$ , Bootstrap 95% CI: LLCI = .72 to ULCI = 1.58) and high ( $B = .169$ ,  $SE = .32$ ,  $t = 5.19$ , Bootstrap 95% CI: LLCI = 1.05 to ULCI = 2.34) levels of propensity to trust. This means that the impact of Negative OCRs by Expert was already strong in increasing Perceived Risk. But, with the increase in Propensity to Trust, the intensity of the relationship was stronger and the Perceived Risk was much higher than when the Propensity to Trust was low. These results support hypothesis 6 of this study.

The moderation graph in shows that the positive OCRs by the experts reduced the Perceived Risk whereas the Negative OCRs by the Experts increased the Perceived Risk.



**Figure 7. Moderation Effects of Positive & Negative OCRs, PT and Reviewer Type on PR**



The figure 7 shows that when Propensity to Trust was low, the Perceived Risk value was higher with Negative OCRs as compared to the Positive OCRs (Expert:  $M_{\text{Negative}} = 4.09$  vs.  $M_{\text{Positive}} = 3.48$ ; Novice:  $M_{\text{Negative}} = 4.59$  vs.  $M_{\text{Positive}} = 3.39$ ). However, when propensity to trust was high, the Perceived Risk further increased with Negative OCRs and decreased with Positive OCRs (Expert:  $M_{\text{Negative}} = 5.07$  vs.  $M_{\text{Positive}} = 3.37$ ; Novice:  $M_{\text{Negative}} = 4.78$  vs.  $M_{\text{Positive}} = 3.57$ ). The value of Perceived Risk was much higher when Propensity to Trust was high as compared to the initial level when Propensity to Trust was low.

## **4.6.5 Mediation Analysis**

### **4.6.5.1 Indirect effects of positive and negative OCRS on brand image through perceived risk**

Hypothesis 13 of this study states that the perceived risk would mediate the relationship between positive OCRs and brand image. Similarly, hypothesis 16 of this study states that the perceived risk would mediate the relationship between negative OCRs and brand image. Hypotheses for mediation were tested using model 4 in PROCESS. The mediation was tested both for expert and novice reviewers. The results show that Perceived Risk mediates between positive as well as negative OCRs and Brand Image.

**Table 18. Mediation of PR Between OCRs and BI**

| Sr. No | Variable                                 | Expert |                |   |      |           | Novice    |      |                |   |      |           |           |
|--------|--|--------|----------------|---|------|-----------|-----------|------|----------------|---|------|-----------|-----------|
|        |  | R      | R <sup>2</sup> | B   | SE   | t         | P         | R    | R <sup>2</sup> | B   | SE   | t         | P         |
|        | <b>Step-1</b>                            | 0.36   | 0.13           |   |      |           | 0.35      | 0.12 |                |   |      |           |           |
| 1      | Direct effects of Positive OCRs on PR    |        |                | -0.74   | 0.19 | -3.87     | 0.000     |      |                | -0.69   | 0.18 | -3.80     | 0.000     |
|        | Negative OCRs on PR                      |        |                | 0.60  | 0.19 | 3.18      | 0.002     |      |                | 0.86  | 0.18 | 4.61      | 0.000     |
|        | <b>Step-2</b>                            | 0.42   | 0.17           |   |      |           | 0.41      | 0.16 |                |   |      |           |           |
| 2      | Direct effects of Positive OCRs on BI    |        |                | 0.54  | 0.19 | 2.78      | 0.006     |      |                | 0.46  | 0.18 | 2.50      | 0.013     |
|        | Direct effects of Negative OCRs on BI    |        |                | -0.69   | 0.18 | -3.73     | 0.000     |      |                | -0.31   | 0.20 | -1.58     | 0.115     |
| 3      | Direct effects of PR on BI               |        |                | -0.17   | 0.06 | -2.59     | 0.01      |      |                | -0.17   | 0.06 | -2.65     | 0.008     |
|        | <b>Step-3</b>                            | 0.39   | 0.15           |   |      |           | 0.37      | 0.14 |                |   |      |           |           |
|        | Mediation of PR btw Positive OCRs and BI |        |                | 0.66  | 0.19 | 3.48      | 0.000     |      |                | 0.58  | 0.18 | 3.20      | 0.001     |
| 4      | Mediation of PR btw Negative OCRs and BI |        |                | -0.79   | 0.18 | -4.30     | 0.000     |      |                | -0.47   | 0.19 | -2.45     | 0.015     |
|        |  |        |                | <b>Indirect Effect and Significance using normal distribution</b> |      |           |           |      |                | <b>Indirect Effect and Significance using normal distribution</b> |      |           |           |
|        |  |        |                | Effect  | SE   | Z         | p         |      |                | Effect  | SE   | Z         | p         |
|        |  |        |                | 0.10  | 0.03 | 2.84      | 0.004     |      |                | 0.10  | 0.03 | 2.84      | 0.004     |
|        |  |        |                | <b>Bootstrap results for indirect effects</b>                     |      |           |           |      |                | <b>Bootstrap results for indirect effects</b>                     |      |           |           |
|        |  |        |                | Effect  | SE   | LL95 % CI | UL95 % CI |      |                | Effect  | SE   | LL95 % CI | UL95 % CI |
| Effect | Positive OCRs on BI                      |        |                | 0.12  | 0.07 | 0.02      | 0.29      |      |                | 0.11  | 0.06 | 0.03      | 0.26      |
|        | Negative OCRs on BI                      |        |                | -0.10   | 0.05 | -0.24     | -0.02     |      |                | -0.16   | 0.07 | -0.32     | -0.04     |

Note: n=239. Unstandardized regression coefficients. Bootstrap sample size=5000. LL=Lower limit, CI= Confidence Interval, UL= Upper Limit.

Table 18 shows that perceived risk mediates the relationship between positive OCRs and brand image. For the positive OCRs by expert reviewers, there existed no zero value between the lower level and upper level confidence interval (95% CI: UL = .02, LL = .29). Similarly, for the positive OCRs by novice reviewers, there existed no zero value between the lower level and upper level confidence interval (95% CI: UL = .03, LL = .26). These results support the hypothesis 13 of the study.

The results in table 18 also show that perceived risk mediates the relationship between negative OCRs and brand image. For the negative OCRs by expert reviewers, there existed no zero value between the lower level and upper level confidence interval (95% CI: UL = -.24, LL = -.02). Similarly, for the negative OCRs by novice reviewers, there existed no zero value between the lower level and upper level confidence interval (95% CI: UL = -.32, LL = -.04). These results prove the hypothesis 16 of this study.

#### **4.6.5.2 Indirect effects of positive and negative OCRs on purchase**

##### **intention through perceived risk**

Hypotheses 14 of this study states that the perceived risk would mediate the relationship between positive OCRs and Purchase Intentions. Similarly, Hypotheses 17 of this study states that the perceived risk would mediate the relationship between negative OCRs and Purchase Intentions. Mediation was tested using model 4 in PROCESS. The mediation was tested both for expert and novice reviewers. The results show that Perceived Risk mediates between positive as well as negative OCRs and Purchase Intention.

**Table 19. Mediation of PR Between OCRs and PI**

| Sr. No  | Variable                                 | Expert |      |        |      |          | Novice     |      |      |        |      |           |           |
|---|--|--------|------|--------|------|----------|------------|------|------|--------|------|-----------|-----------|
|   |  | K      | R2   | B      | SE   | t        | p          | R    | R2   | B      | SE   | t         | p         |
| <b>Step-1</b>   |  |        |      |        |      |          |            |      |      |        |      |           |           |
| 1   | Direct effects of Positive OCRs on PR    | 0.36   | 0.13 | -0.74  | 0.19 | -3.87    | 0.000      | 0.36 | 0.13 | -0.69  | 0.18 | -3.81     | 0.000     |
|   | Negative OCRs on PR                      |        |      | 0.6    | 0.19 | 3.18     | 0.001      |      |      | 0.87   | 0.19 | 4.61      | 0.000     |
| <b>Step-2</b>   |  |        |      |        |      |          |            |      |      |        |      |           |           |
| 2   | Direct effects of Positive OCRs on PI    | 0.43   | 0.18 | 0.74   | 0.21 | 3.54     | 0.000      | 0.44 | 0.19 | 0.79   | 0.20 | 3.97      | 0.000     |
|   | Direct effects of Negative OCRs on PI    |        |      | -1.10  | 0.19 | -5.70    | 0.000      |      |      | -0.43  | 0.22 | -1.99     | 0.048     |
| 3   | Direct effects of PR on PI               |        |      | -0.25  | 0.07 | -3.54    | 0.000      |      |      | -0.24  | 0.07 | -3.48     | 0.000     |
| <b>Step-3</b>   |  |        |      |        |      |          |            |      |      |        |      |           |           |
|   | Mediation of PR btw Positive OCRs and PI | 0.37   | 0.14 | 0.92   | 0.21 | 4.44     | 0.000      | 0.39 | 0.15 | 0.95   | 0.20 | 4.86      | 0.000     |
| 4   | Mediation of PR btw Negative OCRs and PI |        |      | -1.24  | 0.19 | -6.40    | 0.000      |      |      | -0.66  | 0.21 | -3.12     | 0.002     |
| <b>Indirect Effect and Significance using normal distribution</b> |  |        |      |        |      |          |            |      |      |        |      |           |           |
|   |  |        |      | Effect | SE   | Z        | P          |      |      | Effect | SE   | Z         | P         |
|   |  |        |      | 0.10   | 0.03 | 2.84     | 0.004      |      |      | 0.10   | 0.03 | 2.84      | 0.004     |
| <b>Bootstrap results for indirect effects</b>                     |  |        |      |        |      |          |            |      |      |        |      |           |           |
|   |  |        |      | Effect | SE   | LL95% CI | UL 95 % CI |      |      | Effect | SE   | LL95 % CI | UL95 % CI |
| Effect  | Positive OCRs on PI                      |        |      | 0.18   | 0.08 | 0.06     | 0.38       |      |      | 0.17   | 0.07 | 0.06      | 0.34      |
|   | Negative OCRs on PI                      |        |      | -0.14  | 0.06 | -0.31    | -0.04      |      |      | -0.23  | 0.08 | -0.40     | -0.10     |

Note: n=239. Unstandardized regression coefficients. Bootstrap sample size=5000. LL=Lower limit, CI= Confidence Interval, UL= Upper Limit.

Table 19 shows that perceived risk mediates the relationship between positive OCRs and purchase intention. For the positive OCRs by expert reviewers, there existed no zero value between the lower level and upper level confidence interval ( $B = .18$ ,  $SE = .08$ , Bootstrap 95% CI: UL = .06, LL = .38). Similarly, for the positive OCRs by novice reviewers, there existed no zero value between the lower level and upper level confidence interval ( $B = .17$ ,  $SE = .07$ , Bootstrap 95% CI: UL = .06, LL = .34). These results support the hypothesis 14 of the study.

The results in table 19 also show that perceived risk mediates the relationship between negative OCRs and purchase intention. For the negative OCRs by expert reviewers, there existed no zero value between the lower level and upper level confidence interval ( $B = -.14$ ,  $SE = .06$ , Bootstrap 95% CI: UL = -.31, LL = -.04). Similarly, for the negative OCRs by novice reviewers, there existed no zero value between the lower level and upper level confidence interval ( $B = -.23$ ,  $SE = .08$ , Bootstrap 95% CI: UL = -.40, LL = -.10). These results support the hypothesis 17 of the study.

#### **4.6.5.3 Indirect Effects of positive and Negative OCRs on Advocacy through Perceived Risk**

Hypothesis 15 of this study states that the perceived risk would mediate the relationship between positive OCRs and Advocacy. Similarly, hypothesis 18 of this study states that the perceived risk would mediate the relationship between negative OCRs and Advocacy. Mediation was tested using model 4 in PROCESS. The mediation was tested both for expert and novice reviewers. The results show that Perceived Risk mediates between positive as well as negative OCRs and Advocacy.

**Table 20. Mediation of PR Between OCRs and Advocacy**

| Sr. No | Variable                                    | Expert  |      |           |           |        | Novice  |           |           |        |       |           |           |
|--------|---|---|------|-----------|-----------|--------|---|-----------|-----------|--------|-------|-----------|-----------|
|        |   | R   | R2   | B         | SE        | t      | p   | R         | R2        | B      | SE    | t         | p         |
|        | <b>Step-1</b>                               | 0.36  | 0.13 |           |           |        |   | 0.36      | 0.13      |        |       |           |           |
| 1      | Direct effects of Positive OCRs on PR       | -0.74   | 0.19 | -3.87     | 0.000     |        |   | -0.69     | 0.18      | -3.81  | 0.000 |           |           |
|        | Negative OCRs on PR                         | 0.6   | 0.19 | 3.18      | 0.001     |        |   | 0.87      | 0.19      | 4.61   | 0.000 |           |           |
|        | <b>Step-2</b>                               | 0.4   | 0.16 |           |           |        |   | 0.41      | 0.17      |        |       |           |           |
| 2      | Direct effects of Positive OCRs on Advocacy | 0.58  | 0.23 | 2.52      | 0.012     |        |   | 0.68      | 0.22      | 3.13   | 0.002 |           |           |
|        | Direct effects of Negative OCRs on Ad       | -0.77   | 0.22 | -3.55     | 0.000     |        |   | -0.50     | 0.23      | -2.17  | 0.031 |           |           |
| 3      | Direct effects of PR on Ad                  | -0.25   | 0.08 | -3.27     | 0.001     |        |   | -0.24     | 0.08      | -3.16  | 0.002 |           |           |
|        | <b>Step-3</b>                               | 0.35  | 0.12 |           |           |        |   | 0.37      | 0.13      |        |       |           |           |
|        | Mediation of PR btw Positive OCRs and Ad    | 0.76  | 0.23 | 3.36      | 0.000     |        |   | 0.84      | .21       | 3.94   | 0.000 |           |           |
| 4      | Mediation of PR btw Negative OCRs and Ad    | -0.92   | 0.22 | -4.22     | 0.000     |        |   | -0.72     | 0.23      | -3.17  | 0.002 |           |           |
|        |   | <b>Indirect Effect and Significance using normal distribution</b> |      |           |           |        | <b>Indirect Effect and Significance using normal distribution</b> |           |           |        |       |           |           |
|        |   | Effect  | SE   | Z         | p         | Effect | SE  | Z         | p         | Effect | SE    | Z         | p         |
|        |   | 0.10  | 0.03 | 2.84      | 0.004     | 0.10   | 0.03  | 2.84      | 0.004     | 0.10   | 0.03  | 2.84      | 0.004     |
|        |   | <b>Bootstrap results for indirect effects</b>                     |      |           |           |        | <b>Bootstrap results for indirect effects</b>                     |           |           |        |       |           |           |
|        |   | Effect  | SE   | LL95 % CI | UL95 % CI | Effect | SE  | LL95 % CI | UL95 % CI | Effect | SE    | LL95 % CI | UL95 % CI |
|        | Positive OCRs on AD                         | 0.18  | 0.08 | 0.06      | 0.39      | 0.17   | 0.07  | 0.06      | 0.35      | 0.17   | 0.07  | 0.06      | 0.35      |
|        | Negative OCRs on AD                         | -0.15   | 0.07 | -0.32     | -0.04     | -0.22  | 0.08  | -0.40     | -0.08     | -0.22  | 0.08  | -0.40     | -0.08     |

Note: n=239. Unstandardized regression coefficients. Bootstrap sample size=5000. LL=Lower limit, CI= Confidence Interval, UL= Upper Limit.

Table 20 shows that perceived risk mediates the relationship between positive OCRs and advocacy. For the positive OCRs by expert reviewers, there existed no zero value between the lower level and upper level confidence interval ( $B = .18$ ,  $SE = .08$ , Bootstrap 95% CI:  $UL = .06$ ,  $LL = .39$ ). Similarly, for the positive OCRs by novice reviewers, there existed no zero value between the lower level and upper level confidence interval ( $B = .17$ ,  $SE = .07$ , Bootstrap 95% CI:  $UL = .06$ ,  $LL = .35$ ). These results support hypothesis 15 of the study.

The results in table 20 also show that perceived risk mediates the relationship between negative OCRs and advocacy. For the negative OCRs by expert reviewers, there existed no zero value between the lower level and upper level confidence interval ( $B = -.15$ ,  $SE = .07$ , Bootstrap 95% CI:  $UL = -.32$ ,  $LL = -.04$ ). Similarly, for the negative OCRs by novice reviewers, there existed no zero value between the lower level and upper level confidence interval ( $B = -.22$ ,  $SE = .08$ , Bootstrap 95% CI:  $UL = -.40$ ,  $LL = -.08$ ). These results support hypothesis 18 of the study.



**Table 21. Summary of Hypotheses and Results**

| <b>Sr. No.</b> | <b>Hypotheses</b>  | <b>Supported/Not Supported</b> |
|----------------|--|--------------------------------|
| 1              | Positive OCRs will be negatively related with perceived risk.  | Supported                      |
| 2              | Negative OCRs will be positively related with perceived risk.  | Supported                      |
| 3              | Propensity to trust will moderate the negative relationship between positive OCRs and perceived risk such that the relationship will be stronger when the propensity to trust will be high than low. | Supported                      |
| 4              | Propensity to trust will moderate the positive relationship between negative OCRs and perceived risk such that the relationship will be stronger when the propensity to trust will be low than high. | Supported                      |
| 5              | In case of the expert reviewers, negative relationship between positive OCRs and perceived risk will be stronger when the propensity to trust will be high than low.                                 | Not Supported                  |
| 6              | In case of the expert reviewers, positive relationship between negative OCRs and perceived risk will be stronger when the propensity to trust will be high than low.                                 | Supported                      |
| 7              | Positive OCRs will be positively related with brand image and negative OCRs will be negatively related with brand image.   | Supported                      |
| 8              | Positive OCRs will be positively related with purchase intentions and negative OCRs will be negatively related with purchase intentions.   | Supported                      |
| 9              | Positive OCRs will be positively related with advocacy and negative OCRs will be negatively related with advocacy.   | Supported                      |
| 10             | Perceived risk will be negatively related with brand image.  | Supported                      |
| 11             | Perceived Risk will be negatively related with Purchase Intention.   | Supported                      |
| 12             | Perceived risk will be negatively related with Advocacy.   | Supported                      |
| 13             | Perceived Risk will mediate the relationship between positive OCRs and Brand Image.  | Supported                      |
| 14             | Perceived Risk will mediate the relationship between positive OCRs and Purchase Intentions.  | Supported                      |
| 15             | Perceived Risk will mediate the relationship between positive OCRs and Advocacy.   | Supported                      |

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|    |  |           |
|----|--|-----------|
| 16 | Perceived Risk will mediate the relationship between positive OCRs and Brand Image.        | Supported |
| 17 | Perceived Risk will mediate the relationship between positive OCRs and Purchase Intentions | Supported |
| 18 | Perceived Risk will mediate the relationship between OCRs and Advocacy.                    | Supported |

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## **CHAPTER 5**

### **DISCUSSION AND CONCLUSION**

## **CHAPTER OVERVIEW**

This chapter is focused on discussion on the results of the study. The results are discussed in the light of literature review conducted for this study. First of all the discussion is made about direct effects that how positive and negative OCRs affect perceived risk and dependent variables. Next, the impact of perceived risk on dependent variables is discussed. Discussion is also made on the results of hypotheses. Each and every result including direct and indirect relationships, moderating and mediating effects are discussed. The possible causes for the support or rejection of the study hypotheses are proposed. Later in the chapter, the theoretical contributions and managerial implications of the study are discussed. The chapter concludes with the limitations of the study followed by future research directions.

## DISCUSSION AND CONCLUSION

### 5.1 Discussion

The purpose of this study was to investigate the impact of positive and negative OCRs on perceived risk, brand image, purchase intentions and advocacy. The study proposed that the negative OCRs would increase the perceived risk whereas the positive OCRs would reduce the perceived risk. The findings in the study show that over half of the participants make online purchases. This is in line with the findings of past studies that trend of purchasing products online is on the rise (e.g., Riegner, 2007; Nauta, Vianen, Heijden, Dam, & Willemsen, 2009; Floyd et al., 2014).

The past studies found that the easy access to product or seller related information and convenient purchase process further motivates the customers to read online reviews and even consider purchasing online (Hennig-Thurau, Walsh, & Walsh, 2003; Sorce, Perotti, & Widrick, 2005). As the use of internet increases in every field of life, a large number of internet users considers online reviews as a vital source of information for buying decisions (Riegner, 2007; Rainie, 2011; Floyd et al., 2014). The results of the study are consistent with the previous studies that the Positive reviews results in developing favorable attitude of potential customers toward the products (Park, Lee, & Han, 2006; Park, Lee, & Hang, 2006; Floyd et al., 2014).

The OCRs about durable products had stronger impact on perceived risk as compared to the OCRs about commodity products. This means that the participants were more concerned about the OCRs about durable products as it involves a great deal of involvement, financial resources and risk on part of the customers. The findings contradict the findings of Ho-Dac, Carson and Moore, (2013) who found in their study

that the positive or negative OCRs do not affect the sales of strong brands. In current research, the positive OCRs helped reduced perceived risk for the durable products.

### **5.1.1 OCRs and Perceived Risk**

The results of this study confirm the Hypothesis 1 which states that the Positive OCRs will be negatively related with perceived risk. These results are consistent with the previous studies (Pavlou, 2001; Sparks & Browning, 2011). The impact of positive and negative OCRs on perceived risk is in line with earlier research (Kim, Ferrin, & Rao, 2008; Park & Lee, 2009). This is an endorsement of the uncertainty reduction theory which states that a positive review about an unknown seller reduces uncertainty. The results proclaim that the positive reviews reduce the uncertainty of readers (Kogan & Wallach, 1964) and eventually result in favorable opinion about the products, services and the sellers. This negative relationship between positive OCRs and perceived risk substantiates the underlying assertion that the third party opinion online in the form of OCRs enhance the confidence of consumers on the products being reviewed and evaluated (Luo & Zhong, 2015). These findings support the theoretical base of the study, according to which the individuals tend to reduce their uncertainty by looking for clues about new products or services or the products or services that pose high involvement. Uncertainty reduction theory (Hogg, 2000) proved to be a good fit for the theoretical foundation of this research. The results are in line with the findings from past research that sturdy, relevant and reliable is more likely to reduce uncertainty as compared to the content that lacks sound arguments or evidence (Dillard & Shen, 2005). The results of this study confirm the Hypothesis 2 which states that the Negative OCRs will be positively related with perceived risk. These results are consistent with the previous studies (Liu & Park, 2015; Mauri & Minazzi, 2013; O'Connor, 2008; Sparks

& Browning, 2011; Ye et al., 2011). The impact of positive and negative OCRs on perceived risk is in line with earlier research (Cantalops & Salvi, 2014). This is an endorsement of the uncertainty reduction theory which states that a negative review about an unknown seller enhances risk (Dellarocas, 2003). The results assert that the negative reviews enhance the uncertainty of readers and eventually result in unfavorable evaluation of the products, services or the companies (Kogan & Wallach, 1964). This positive relationship between negative OCRs and perceived risk substantiates the underlying phenomenon that a negative opinion by the third party in the form of OCRs reduces the confidence of consumers on the products being reviewed and evaluated (Ye et al., 2011). The respondents of the current study exposed to the positive OCRs had significantly low perceived risk as compared to those who were exposed to the negative OCRs. In contrast with the findings of Ho-Dac, Carson, and Moore (2013) who found negative OCRs to be less impactful, whereas, the current study findings suggest that the negative OCRs had stronger impact as compared to the positive OCRs. The relationship was also stronger for the durable products as compared to the commodity products in which very low risk is involved and customers are not much concerned about the failure of purchase decision.

### **5.1.2 Propensity to Trust as Moderator between OCRs and Perceived Risk**

The study proposed the moderating role of propensity to trust in enhancing or reducing the perceived risk. Many customers perceive that the review sites do not have a strong filtering and reviewer identification mechanism. Internet user or company can post fake reviews with fake identity that can be easily spotted at some review sites (Stammer-Smith, 2010; Zhang et al., 2016). This results in ambiguity in the information presented

in the form of OCRs which increases potential uncertainty (Xiang & Gretzel, 2010). Therefore, it is believed that only those who believe on others, have high propensity to trust, would depend on the information given in the OCRs.

Personality of the readers was a unique variable studied in this research. Individuals vary in their degree of trust on other individuals and groups. Therefore, the propensity to trust was used as a moderator. It was hypothesized that the individuals with high propensity to trust would show more inclination towards the products in case of positive OCRs. The results of this study confirm the Hypothesis 3 which states that the propensity to trust will moderate the negative relationship between positive OCRs and perceived risk such that the relationship will be stronger when the propensity to trust will be high than low. These results are consistent with the previous studies. The findings suggest that propensity to trust was significantly related to the study variables. The results of the current study are in line with the findings from past research signifying that propensity to trust has a significant impact on the perceived risk (Lowry et al., 2008; Zahedi & Song 2008). The results revealed that the propensity to trust significantly moderated the relationship between the online reviews and perceived risk. Those high on propensity to trust reported lowest levels of perceived risk for the positive reviews than those individuals with low propensity to trust. The findings of moderation analysis exactly supported the assertion that the perceived risk was much lower in case of positive OCRs for individuals with high propensity to trust. In such cases, the brand image, purchase intentions and advocacy was reported high (Ratnasingam, 2012). On the contrary, when negative OCRs and high propensity to trust interacted, the perceived risk was higher when propensity to trust was high than low. In these situations, the participants reported lower brand image, purchase intentions and advocacy.



It was hypothesized in Hypothesis 4 that the individuals with high propensity to trust would show more inclination towards the products in case of negative OCRs. The results of this study confirm the Hypothesis 4 which states that the propensity to trust will moderate the positive relationship between negative OCRs and perceived risk such that the relationship will be stronger when the propensity to trust will be high than low. These results are consistent with the previous studies as the content generated on digital media is considered to be an influential source of information because of the perceived independence of the message source (Litvin, Goldsmith, & Pan, 2008). The findings suggest that propensity to trust was significantly related to the study variables. The results of the current study are in line with the findings from past research signifying that propensity to trust has a significant impact on the perceived risk (Zaheer, McEvily, & Perrone, 1998). The results revealed that the propensity to trust significantly moderated the relationship between the online reviews and perceived risk. Those high on propensity to trust reported highest levels of perceived risk for the negative reviews than those individuals with low propensity to trust. The findings of moderation analysis exactly supported the assertion that the perceived risk was much higher in case of negative OCRs for individuals with high propensity to trust. In such cases, the brand image, purchase intentions and advocacy was reported low (Ratnasingam, 2012).

The study also proposed that the OCRs generated by the experts would have stronger impact on perceived risk and other outcomes as compared to the OCRs generated by the novice reviewers. The findings suggested that only the negative OCRs generated by the experts were more influential in reducing perceived risk while risk was not reduced in case of positive OCRs by expert reviewers.

Interestingly, a few recent studies have also found similar results as of the current study that negative reviews have a stronger impact in formulation of opinions as compared to

the positive reviews (Dellarocas, 2003). Therefore, we can assume that the negative reviews by expert were given more importance by the study respondents. That is why they showed high perceived risk. However, in case of positive reviews by experts, the risk was not reduced even when propensity to trust was high. The rationale behind this result could be that the readers do not want to expose themselves to any potential risk related to the products.

Since the information provided in OCRs is not generated by the seller or company, it is largely thought to be quite credible and reliable (Bickart & Schindler 2001; (Cheong & Morrison, 2008; Li & Hung, 2007). In some cases, OCRs are posted by individuals who do not possess sufficient (and first hand) knowledge about or exposure to the product (Cheung et al., 2009). Such reviews are termed as novice reviewers (Zhang et al., 2016). The study also proposed the moderating role of reviews by experts in enhancing or reducing the perceived risk consistent with the recent research by Zhang et al., (2016). Many customers are concerned about the credibility and expertise of the reviewer writing a review (Banerjee, Bhattacharyya, & Bose, 2017; Racherla & Friske, 2012). This is manifestation of their fear that the review sites do not have a strong filtering and reviewer identification mechanism. This results in lack of confidence in the information presented in the form of OCRs which increases potential uncertainty (Xiang & Gretzel, 2010). Therefore, it is ascertained that the OCRs written by the experts would have much higher response by the readers (Zhang et al., 2016).

### **5.1.3 Role of OCRs by Expert Reviewers**

The results of this study do not support the Hypothesis 5 which states that the reviews by experts will moderate the negative relationship between positive OCRs and perceived risk such that the relationship will be stronger when the review will be written by an expert than by a non-expert (Zhang et al., 2016). This could be due to the fact that negative reviews are given more consideration as compared to the positive reviews by experts. These results are consistent with the previous studies (Vermeulen & Seegers, 2009; Ye, Law, & Gu, 2009). Since, customers feel more insecure and uncertain in presence of negative reviews, their response to negative reviews was significant. However, in case of positive reviews by the experts, increased propensity to trust did not affect the relationship between positive OCRs and perceived risk.

The results of this study confirm the Hypothesis 6 which states that the negative reviews by experts will moderate the positive relationship between negative OCRs and perceived risk such that the relationship will be stronger when the negative review will be written by an expert than by a novice reviewer. These results are consistent with the previous studies (Gretzel & Yoo, 2008; Liu & Park, 2015;). The results revealed that the negative reviews by experts significantly moderated the relationship between the online reviews and perceived risk. Those exposed to negative OCRs by experts reported highest levels of perceived risk. The findings of the current study show that the customers paid more attention to the OCRs generated by the experts as the experts were perceived to have more knowledge and expertise as compared to the novice reviewers (Kim, Vogt, & Knutson, 2015). The findings of current research also support the evidence from the past studies that OCRS generated by experts contains pertinent, unbiased and verifiable information and are considered to be more persuasive

trustworthy (Banerjee, Bhattacharyya, & Bose, 2017; Cheung et al., 2009; Dillard & Shen, 2005; Kempf & Palan, 2006). The study supported the assumption that negative OCRs by experts have a significant role in enhancing the perceived risk.

#### **5.1.4 Perceived Risk and Outcomes**

Hogg et. al., (2007) state that a small amount of uncertainty may be thrilling as we like surprises, but when high costs are involved, customers tend to avoid risk and minimize uncertainty. Since, the durable products involve a great deal of risk related to purchase decision. This risk can be monetary, psychological or utility related risk. Individuals tend to minimize their risk by relying on the information available online about the products and services. Hypothesis 10 states that perceived risk will be negatively related with brand image. The results show that there was a significant and negative relation between perceived risk and brand image. These results are in line with the previous studies (Crowell, 2001; Dowling, 1986; Hoffman et al., 1999; Lowry et al., 2008). Positive opinions are assumed to increase customers' choice probability for a product, whereas negative opinions are assumed to discourage potential customers (Dellarocas, Zhang, & Awad, 2007). Past studies suggested that the high risk perceptions affect the consumers' product evaluations negatively (Huang (1993; Jarvenpaa, Tractinsky, & Vitale, 2000). The customers with high risk perceptions would not have a very good image of the brand which would further reduce the probability of purchasing that brand (Kim, Ferrin, & Rao, 2008; Xiang, Schwartz, & Uysal, 2017).

Hogg (2007) argue that uncertainty is embedded in the social context in which people find themselves. When people feel uncertain, they find clues to reduce uncertainty (Grieve & Hogg, 1999; Mullin & Hogg, 1998). They feel themselves part of the groups

of people with similar characteristics, common goals and common fate (Campbell, 1958; Hamilton & Sherman, 1996). Hypothesis 11 states that perceived risk will be negatively related with purchase intention. The results show that there was a significant and negative relation between perceived risk and purchase intention. These results are in line with the previous studies (Freedman, 2008; Park & Kim, 2008; Schlosser, 2011; Sen & Lerman, 2007). Past studies suggested that the high risk perceptions affect the consumers' product evaluations negatively (Chen et al., 2008; Fiore, Jin, & Kim, 2005). Huang (1993) found that low risk perception related to online purchases affects consumers' favorable attitude toward the seller. Past studies show that the positive OCRs reduce uncertainty and result in high level of purchase intentions and sales (Bauer, 1967; Duverger, 2013; Mauri & Minazzi, 2013; Vermeulen & Seegers, 2009; Ye et al., 2011). The results of current study show that the customers who had high risk perceptions showed low purchase intention for the product as they felt uncertain or at high risk (Burton & Soboleva 2011; Kim, Ferrin, & Rao, 2008).

Hypothesis 12 states that perceived risk will be negatively related with advocacy. The results show that there was a significant and negative relation between perceived risk and advocacy. These results are in line with the previous studies (Cui et al. 2012; Groth, Mertens, & Murphy, 2004; Karakaya & Barnes 2010; Park & Cho 2012). Past studies suggested that the high risk perceptions affect the consumers' product evaluations negatively (Bettencourt, 1997; Smith, Menon, & Sivakumar, 2005; Urban, 2005). The customers with high risk perceptions would have a low probability of purchasing that product. At the same time, they would not recommend that product to others among their friends and family members (Hoffman & Novak, 2009).

### **5.1.5 Mediating role of Perceived Risk between Positive OCRs and Outcomes**

Hypothesis 13 states that the perceived risk mediates the relationship between positive OCRs and brand image. The results are consistent with the previous studies (Snoj, Korda, & Mumel, 2004). Perceived risk or uncertainty affects people's confidence in their decisions. Risky situations can be those where the probabilities of outcomes are not known and the outcome is known or unknown. Through OCRs, customers have quick and easy access to an unprecedented amount of user-generated product information (Duan, Gu, & Whinston, 2008), which can help customers to choose the most appropriate product according to their idiosyncratic preferences based on other customers' experiences (Moe & Trusov, 2011). Feedback generated by users on a restaurant's quality of food, ambiance, and service is positively associated with its online popularity (Hu, Pavlou & Zhang, 2017; Zhang, Qiang, & Yijun, 2010). Online reviews enable consumers to share their evaluations and opinions of products or services to an extremely large audience (Dellarocas, 2003; Lee & Bradlow, 2011; Lu et al., 2013).

Hypothesis 14 states that the perceived risk mediates the relationship between positive OCRs and purchase intention. The results are consistent with the previous studies (Dellarocas, Zhang, & Awad, 2007; Snoj, Korda, & Mumel, 2004). One of the major advantage of online reviews is that communications made online are more quantifiable as compared to the traditional word of mouth (Lee, Park, & Han, 2008; Park & Kim, 2008). Information available online in the form of reviews is ample in quantity in contrast with information acquired from traditional sources of word of mouth (Chatterjee, 2010). Ghose et al. (2012) show that consumers base their purchases on the

available reviews. Comments generated by online users have a significant influence on sales (Duverger, 2013; Salehan & Kim, 2016; O'Connor, 2008; Yeet al., 2011). For example, the consumers looking for a good restaurant generally seek different opinions toward the same restaurant prior to consumption in order to assess whether such establishment can match their tastes (Hong et al., 2013; Liu et al., 2014; Sun, 2012).

Hypothesis 15 states that the perceived risk mediates the relationship between positive OCRs and advocacy. The results of present study augment the findings of past studies that the experiences and opinions from other customers can contribute information about the quality and value of a product and can therefore reduce customers' choice risk (Cui, Lui, & Guo, 2012; Zhu & Zhang, 2010) and complement other forms of business to customer communication (Chevalier & Mayzlin, 2006). The findings suggest that positive and negative online reviews influence the overall evaluations of the product through increase or decrease in perceived risk. The experiences and opinions from other customers can contribute information about the quality and value of a product and can therefore reduce customers' choice risk (Cui, Lui, & Guo, 2012; Hu, Pavlou & Zhang, 2017; Zhu & Zhang, 2010) and complement other forms of business to customer communication (Chevalier & Mayzlin, 2006). Dickinger (2011) reports that the content generated by other users is seen as extremely informative.

#### **5.1.6 Mediating role of Perceived Risk between Negative OCRs and Outcomes**

Hypothesis 16 states that the perceived risk mediates the relationship between negative OCRs and brand image. Negative product information is often more diagnostic or informative than positive information (Herr, Kardes, & Kim 1991). Therefore, negative information is weighed more heavily in consumer judgment and choice decisions.

Previous research has shown that negative WOM has a bigger impact than positive WOM (Arndt, 1968; Fiske, 1980). The present study findings support the findings of the previous research as the results show that the perceived risk mediates the relationship between negative OCRs and brand image. Ratings that deviate (either positively or negatively) from prior opinion are likely to stand out and offer unique information by presenting the “other side of the argument” (Cao, Duan, & Gan, 2011; Wu et al., 2016). This is very helpful in framing brand image of the product under consideration.

Hypothesis 17 states that the perceived risk mediates the relationship between negative OCRs and purchase intention. Customers think negative buzz is more credible (Chevalier & Mayzlin, 2006) and more informative (Lucking-Reiley et al., 2007) than positive buzz. Therefore, customers may suspect the trustworthiness of positive information providers (Dellarocas, 2003) since they are aware of the possibility of firms’ strategic manipulation of online buzz to boost sales (Dellarocas 2006; Salehan & Kim, 2016; Zhang et al., 2016). Negative reviews tend to be seen as more informative (Chen & Lurie, 2013; Mudambi & Schuff, 2010). The findings of the present study augment these past studies as the results show that the perceived risk mediates between negative OCRs and purchase intention.

Hypothesis 18 states that the perceived risk mediates the relationship between negative OCRs and advocacy. Past research shows that when customers feel a lower level of risk, they are more likely to display favorable behaviors and recommend the product to others (Groth, Mertens, & Murphy, 2004). Transparency and advocacy are strategic dimensions that are reflected in visual communication, advice, information content, and eventually, trust. The desire for social interactions and maintaining social connections, enjoyment of online activities, emotional support, altruism, identification, feeling of



solidarity, mutual help or self-esteem makes users of the products share information online in the form of OCRs (Hennig-Thurau et al., 2004; Munar & Jacobsen, 2014; Salehan & Kim, 2016). The findings of the present study augment these past studies as the results show that the perceived risk mediates between negative OCRs and advocacy (Duverger, 2013; Iverac, 2009; O'Connor, 2008; Ye et al., 2011).

The findings of this research support the idea of Park and Lee, (2009) that the potential customers read online reviews to reduce uncertainty about the more complex and sophisticated products. When buyer of a product is exposed to the customer reviews, it helps shape his/her opinion about the product and elicits positive or negative evaluations about the products. The results also suggest that the positive OCRs reduced the perceived risk and resulted in higher levels of brand image, purchase intentions and advocacy. This insight can be useful for the academicians and practitioners in many ways. The companies can encourage their customers to share their opinions with the other customers which would increase companies' credibility among new customers. The companies should provide a platform to the customers in order to facilitate the process. The positive reviews would be beneficial for the companies in acquiring new customers. At the same time, the negative reviews would be helpful for the companies to improve their products and services (Sparks, So, & Bradley, 2016). Presently, Google search provides reviews with every search results. Therefore, it is inevitable for the companies as they cannot undo those reviews posted by the customers but to improve their services and overcome the flaws in their products and services.

## **5.2 Theoretical Contributions of the Study**

This is one of the initial studies conducted in Pakistan on the online consumer reviews. The study tests several relationships among study variables that have not been tested

before. Particularly the use of propensity to trust as a moderator makes this study unique as the personality trait and trust disposition of the readers and potential customers plays an important role in product evaluations before and after purchase. This study uses advocacy as an outcome variable in response to the positive or negative reviews. This helps readers identify that the impact of positive or negative reviews is not limited to the readers alone. They may also refer several other customers for purchasing the product from the company. By investigating the impact of online reviews on consumer behavior, this research contributes to existing literature in three ways. First, the results will help researchers and marketing professionals to understand the role of online reviews for consumer behavior and marketing. Second, this study investigates the differential impact of positive and negative online reviews on consumer purchasing behavior, which can expand the application scope of online consumer reviews and provide theoretical implications for industry people and scholars. Third, by testing the moderating effect of consumer characteristics such as propensity to trust this study provides insights into how consumer characteristics might strengthen or weaken the influence of marketing efforts, particularly the consumer reviews on customer behavior through internet media (Bolton, Katok, & Ockenfels, 2004).

The theoretical framework of the study is based on the uncertainty reduction theory. Cultural setting plays an important role in the human behavior. Interestingly, majority of the previous studies on this topic have been conducted in the western context. This study does not only testify and validate the theory in the eastern context but adds literature to the body of knowledge with regards to the testing of uncertainty reduction theory in the eastern context.

### **5.3 Managerial Implications**

The study findings have several implications for the practitioners and managers. With the advent of internet there is a wave of information. The managers cannot hide any information about their products and services (Sparks, So, & Bradley, 2016). Customers do not only post reviews online at several forums but also make photos and videos of important occasions and post them. Technology has enabled the customers to access all kind of information within the fraction of a second, with the help of a single click. The findings of the study demand that the brand managers need to be aware of what is happening in the market and what kind of sentiments are floating in the market and on the media about their products and services (Salehan & Kim, 2016). This is a blessing in disguise for the brand managers in terms of instant and neutral feedback from the customers (Sparks, So, & Bradley, 2016). They cannot only rectify the issues but also gauge customers' expectations and try to satisfy them (de Barra, 2017). The findings also reveal the importance of online reviews for the manufacturers and promoters of the high-end, high-tech or durable goods such that the customers are more conscious about such products and are likely to pay more attention to the online reviews before purchase. The marketing managers should encourage their dealers and front office staff to make the customer experience good and pursue the customers to make good recommendations about the products or services online (De-Barra, 2017; Sparks, So, & Bradley, 2016). According to Dale Carnegie, 91% of the customers say they are willing to recommend the product to others but only 11% of the sales persons ask their customers to do so. Therefore, the managers should encourage their customers to share their experiences with other customers and facilitate the process of recommendation. The companies should also involve the customers in to the decision making process

such as new product development, naming the new products and pricing and so on. The process of co-creation would further boost customers' confidence on the company and would ease the process of decision making for them (See & Ho, 2014; Yi & Gong, 2013).

The managers also need to be aware of the shift from brick and mortar to the clicks (online sales). Many firms and individuals have already started facilitating online purchase along with the availability of the products at their specific outlets (Sparks, So, & Bradley, 2016). Several players are already in the market who act as the gateway between the customers and the companies. This includes the courier firms, the nearby vendors, delivery persons, transporters, banks and telecom operator facilitating payment process. The managers need to understand this process, liaise with the stakeholders in the process and forecast the future requirements of market and customers.

#### **5.4 Limitations of the Study**

This study has several limitations. First that it was conducted in an experimental setting which may affect the generalizability of the findings in the real-life setting. The study measured the purchase intentions and not the actual purchase behavior, which may be different if explored. Furthermore, the study was conducted in eastern context whereas results may have been different in the western context. Secondly, the products selected were the search goods and no experience goods or credence goods were part of this study. Several studies have used product attributes and website attributes. This was beyond the scope of this study. The study uses brand names for both durable and commodity goods due to which the effect of online reviews may

have been compromised. There was only one product in each of the durable and commodity products category. The present research employs only one experiment to see the findings. Although the respondents were undergraduate and graduate business students, there should not have been any problem in understanding the language. However, English not being the first language, may have been some trouble for the respondents (Schellekens, Verlegh, Smidts, 2010). For example, on few occasions the respondents did ask the meanings of a couple of words (e.g., suburbs) and the overall meaning of the sentences. It is possible that some other respondents may also have had difficulty understanding the meanings but did not ask for the explanation from researchers. This might be one of the reasons that 32 responses were to be discarded which is usually a high number in experimental studies with contrived settings. The study uses propensity to trust as a moderator variable. This study uses single review to examine the impact of reviews on the consumer behavior. The dependent variable showed high correlations such as the correlation between Brand Image and Purchase Intentions ( $r = .81, p < .001$ ) and Purchase Intention and Advocacy ( $r = .81, p < .001$ ). However the results of our CFA clearly highlighted the discriminant validity among all three dependent variables.

## **5.5 Future Research Directions**

Future research may explore the relationship between these variables in a field survey to further generalize the findings of the research. It may be interesting to see the results in a field experiment or real time setting. A combination of experimental and field studies may give more insights in to the topic. Longitudinal studies may also be conducted to see the impact of reviews on consumer behavior. Future researchers may

consider involving real purchase behavior instead of purchase intentions only. This study uses written reviews as stimulus. Future studies may use other forms of review such as stars, polls and video reviews. A comparison of written reviews and video reviews may reveal interesting findings. The study uses the impact of expert and novice reviewers. Though several other attributes of the reviewers have already been tested in past, future analysis of the reviewer attributes may be included in future studies, such as motives of the reviewers, personality of the reviewer, potential brand jealousy of the reviewers etc. (Banerjee, Bhattacharyya, & Bose, 2017). This study was conducted in the Pakistani context. The future research may explore and compare results in different cultural setting. Future researchers may like to explore the impact of the platform such as website that is providing the reviews, as in few studies the impact of platform has been studied. This study uses products with brand name. Future studies may consider using products without any name may be considered to check the more precise effects of online reviews on purchase intentions. Future studies may also consider having a set of products in both durable and commodity products categories. Future researchers may also use products and services and compare the findings. Use of search, experience and credence goods would also give interesting insights. This study is based on a single experiment. Future studies may also consider conducting multiple studies to support their findings which is a common practice in leading journals. This study is focused on the current or potential customers of the products. Future research may also involve brand managers, manufacturers and other decision makers to get more insights in to the topic. The impact of positive and negative reviews among brand communities and different social classes may also be explored. This study uses propensity to trust as a moderator. Other personality factors such as Big Five personality traits of the readers and reviewers may also be explored (Banerjee, Bhattacharyya, & Bose, 2017). This

study uses single review as a stimulus. Future studies may explore impact of aggregate reviews, multiple review or by combining reviews with star ratings to broaden the horizon of the research. The theoretical framework of this study is based on uncertainty reduction theory. Future research may also consider other theoretical foundations to study the impact of online reviews from varying perspectives.

## **5.6 Conclusion**

The study provides an interesting insight into the internet as an emerging media and its role in shaping opinions and consumer behavior. The study highlights the importance of online customer reviews among various online platforms that facilitate sharing of user experiences (Shneiderman, 2000). The study findings highlight the role of online reviews in reducing or enhancing perceived risk. The behavioral outcomes of online reviews as user generated content have been discussed. The study is among the first to discuss propensity to trust as a moderating variable in the relationship between online reviews and perceived risk. The study has various theoretical, managerial and economic implications and can be used as a tool to set benchmark for customer services leveraging online media. Despite a lot of work that has already started in this domain of online reviews, many areas still remain unexplored which should be addressed by the future researchers.

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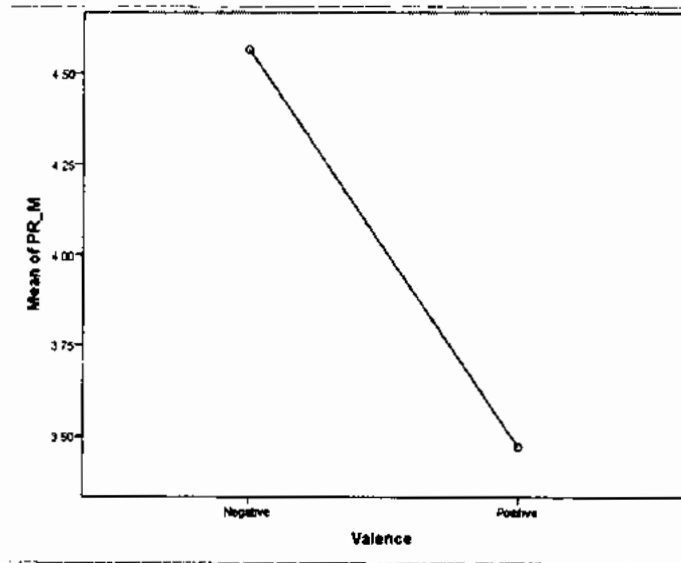
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## **LIST OF FIGURES**

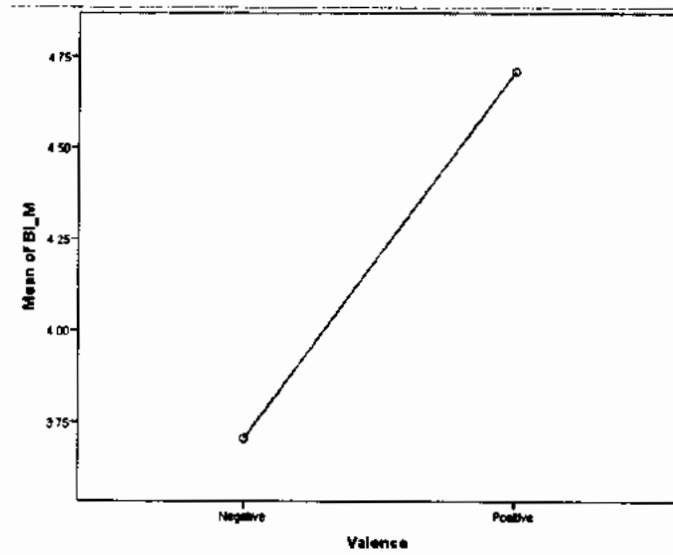
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## LIST OF FIGURES

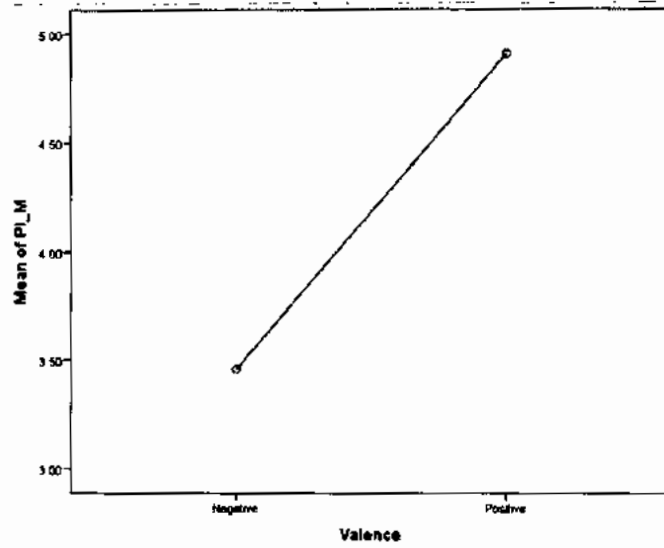
**Figure 2. Mean Differences for OCRs and PR**



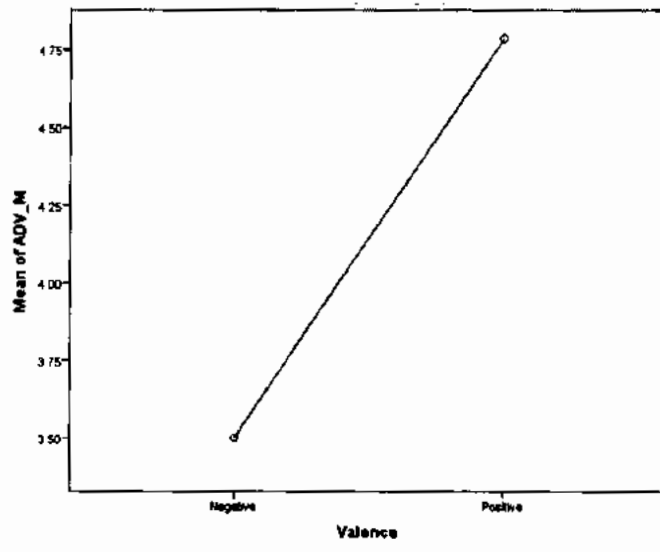
**Figure 3. Mean Differences for OCRs and BI**



**Figure 4. Mean Differences for OCRs and PI**



**Figure 5. Mean Differences for OCRs and Advocacy**



## APPENDIX



**INTERNATIONAL ISLAMIC  
UNIVERSITY, ISLAMABAD**  
*Faculty of Management Sciences*



P.O. Box: 1243, Sector H-10, Islamabad Tel: 9258020, Fax. 9257944

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Dear respondent,

I am a PhD student and working on my thesis in marketing. I intend to explore the impact of online customer reviews on the behavioral intentions of those reading them. You are kindly requested to fill out this questionnaire after reading the reviews given in a separate sheet (as explained by the researcher).

Please be assured that this is purely an academic research and data collected during this study will strictly remain confidential. The identity of the respondents will remain anonymous. I appreciate your time and participation in this research.

I thank you for taking time for being part of this academic research.

Best Regards,

*Aqeel Shahzad*

PhD Candidate (Marketing)

**STIMULUS**



## Group 1 – Crest Pro Whitening Toothpaste

Assume that you have to purchase a toothpaste for yourself that also has a whitening effect. Please read below a customer review posted online by a user of this product.

*“This is a brilliant product. I use this toothpaste twice a day and I have found it very effective. It has whitened my teeth within weeks and gave me better result than other toothpastes I have used. It gives me a refreshing breath. I feel pleased when people notice and appreciate a significant improvement in my tooth color.”*

Below statement describes the reviewer who posted the above customer review.



*“The reviewer is a healthcare professional and works in a dental clinic. He often comes across patients with varying dental and oral hygiene related issues. He uses new dental products for himself and his family.”*

## Group 2 – Dell Laptop 7000 Series

Assume that you have to purchase a laptop for yourself with a touch screen and is convertible to tablet mode. The mentioned laptop is within your price range. Please read below a customer review posted online by a user of this product.

*“This laptop is amazing! Everything works well, especially the touchscreen and keyboard. The display is incredibly reflective. The design is very attractive. The battery gives a long backup time. It is incredibly lightweight. This is ideal for someone that wants both a tablet and laptop and can only afford one or the other. The 2-in-1 makes it adaptable for any occasion. It's got great specs for the price (i5, 500 GB). The price is much better than most ultrabooks and is less than similar models from another brand.”*

Below is the statement that describes the reviewer who posted the above customer review.



*“The reviewer has been using computers and laptops for over two decades. He has also used this model. He works in the IT industry and has much familiarity with the computer hardware and software. He often evaluates the products and writes reviews about them on popular websites.”*

### Group 3 – Crest Pro Whitening Toothpaste

Assume that you have to purchase a toothpaste for yourself that also has a whitening effect. Please read below a customer review posted online by a user of this product.

*“It leaves you with a very dry feeling mouth. I also really disliked the taste of this toothpaste. No minty flavor that I could detect, as claimed by the manufacturer! I felt like I needed to brush my teeth with another toothpaste just to get the lingering bad taste out of my mouth. In summary... 1) Not sure if I saw whitening results. 2) Even if I did, the bad taste would discourage me from buying it again. After 3-4 uses I started to feel sensitivity in a few of my teeth.”*

Below is the statement that describes the reviewer who posted the above customer review.



*“The reviewer is a healthcare professional and works in a dental clinic. He often comes across patients with varying dental and oral hygiene related issues. He uses new dental products for himself and his family.”*

## Group 4 – Dell Laptop 7000 Series

Assume that you have to purchase a laptop for yourself with a touch screen and is convertible to tablet mode. The mentioned laptop is within your price range. Please read below a customer review posted online by a user of this product.

*“Frustrating when it freezes during startup and hangs on the logo screen. This is one of the most unreliable computers I’ve ever used. It’s specs and price made it seem so promising but, ever since I first started using it, it has had so many issues. The computer is not all that fast and is a bit heavy. The worst problem is the wifi connectivity. Every single time I browse the web I constantly have to reconnect to our wireless network. For the money I’d say you should better buy something else.”*

Below is the statement that describes the reviewer who posted the above customer review.



*“The reviewer has been using computers and laptops for over two decades. He has also used this model. He works in the IT industry and has much familiarity with the computer hardware and software. He often evaluates the products and writes reviews about them on popular websites.”*

## Group 5 – Crest Pro Whitening Toothpaste

Assume that you have to purchase a toothpaste for yourself that also has a whitening effect. Please read below a customer review posted online by a user of this product.

*“This is a brilliant product. I use this toothpaste twice a day and I have found it very effective. It has whitened my teeth within weeks and gave me better result than other toothpastes I have used. It gives me a refreshing breath. I feel pleased when people notice and appreciate a significant improvement in my tooth color.”*

Below is the statement that describes the reviewer who posted the above customer review.



*“The reviewer lives in the suburbs of Islamabad. He has recently finished his high school education. He is conscious about his health and keeps trying products that appeal him through advertisements or personal referrals. He has recently heard about this product and has started using it since last few weeks.”*

## Group 6 – Dell Laptop 7000 Series

Assume that you have to purchase a laptop for yourself with a touch screen and is convertible to tablet mode. The mentioned laptop is within your price range. Please read below a customer review posted online by a user of this product.

*“This laptop is amazing! Everything works well, especially the touchscreen and keyboard. The display is incredibly reflective. The design is very attractive. The battery gives a long backup time. It is incredibly lightweight. This is ideal for someone that wants both a tablet and laptop and can only afford one or the other. The 2-in-1 makes it adaptable for any occasion. It's got great specs for the price (i5, 500 GB). The price is much better than most ultrabooks and is less than similar models from another brand.”*

Below is the statement that describes the reviewer who posted the above customer review.



*“The reviewer is a first year engineering student at a university. His father bought him this laptop when he entered the university. He plays games and watches movies on his new laptop. He also enjoys internet surfing and making his class presentations on his laptop.”*

## Group 7 – Crest Pro Whitening Toothpaste

Assume that you have to purchase a toothpaste for yourself that also has a whitening effect. Please read below a customer review posted online by a user of this product.

*“It leaves you with a very dry feeling mouth. I also really disliked the taste of this toothpaste. No minty flavor that I could detect, as claimed by the manufacturer! I felt like I needed to brush my teeth with another toothpaste just to get the lingering bad taste out of my mouth. In summary... 1) Not sure if I saw whitening results. 2) Even if I did, the bad taste would discourage me from buying it again. After 3-4 uses I started to feel sensitivity in a few of my teeth.”*

Below is the statement that describes the reviewer who posted the above customer review.



*“The reviewer lives in the suburbs of Islamabad. He has recently finished his high school education. He is conscious about his health and keeps trying products that appeal him through advertisements or personal referrals. He has recently heard about this product and has started using it since last few weeks.”*

## Group 8 – Dell Laptop 7000 Series

Assume that you have to purchase a laptop for yourself with a touch screen and is convertible to tablet mode. The mentioned laptop is within your price range. Please read below a customer review posted online by a user of this product.

*“Frustrating when it freezes during startup and hangs on the logo screen. This is one of the most unreliable computers I’ve ever used. It’s specs and price made it seem so promising but, ever since I first started using it, it has had so many issues. The computer is not all that fast and is a bit heavy. The worst problem is the wifi connectivity. Every single time I browse the web I constantly have to reconnect to our wireless network. For the money I’d say you should better buy something else.”*

Below is the statement that describes the reviewer who posted the above customer review.



*“The reviewer is a first year engineering student at a university. His father bought him this laptop when he entered the university. He plays games and watches movies on his new laptop. He also enjoys internet surfing and making his class presentations on his laptop.”*



## QUESTIONNAIRE

Please read the statements given below and choose the best option that suits your opinion.

| <b>Propensity to Trust</b> |  |   |   |   |   |   |   |   |
|----------------------------|--|---|---|---|---|---|---|---|
| 1                          | I feel that people are generally reliable.   | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 2                          | I feel that people are generally dependable.                                       | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 3                          | I feel that people are generally trustworthy.                                      | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 4                          | I generally trust other people unless they give me reason not to.                  | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| <b>Perceived Risk</b>      |  |   |   |   |   |   |   |   |
| 5                          | I believe that the risk of purchasing Crest Pro Toothpaste is very high.           | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 6                          | There is a high probability of losing a great deal by purchasing Crest Pro.        | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 7                          | There is great uncertainty associated with purchasing Crest Pro Toothpaste.        | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 8                          | Overall, I consider the option of purchasing Crest Pro as something negative.      | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| <b>Brand Image</b>         |  |   |   |   |   |   |   |   |
| 9                          | Crest Pro Toothpaste has a strong personality among other brands.                  | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 10                         | I have a good impression of the type of people who use Crest Pro Toothpaste.       | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 11                         | Crest Pro has a strong image in my mind.   | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 12                         | The intangible attributes of Crest Pro Toothpaste are a reason enough to buy it.   | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 13                         | Crest Pro Toothpaste provides a high value in relation to the price we pay for it. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |

Please read the statements given below and choose the best option that suits your opinion.

| Purchase Intentions |  |   |   |   |   |   |   |   |
|---------------------|--|---|---|---|---|---|---|---|
| 14                  | The likelihood of purchasing Crest Pro Toothpaste is very high.                                  | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 15                  | If I were going to buy a product in this category, I would consider buying Crest Pro Toothpaste. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 16                  | The probability that I would be buying Crest Pro Toothpaste is very high.                        | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 17                  | My willingness to buy Crest Pro is very high.  | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 18                  | After reading the reviews about Crest Pro Toothpaste, I intend to try it.                        | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 19                  | I am eager to check out Crest Pro Toothpaste because of its reviews.                             | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| Advocacy            |  |   |   |   |   |   |   |   |
| 20                  | I would say positive things about Crest Pro Toothpaste to others.                                | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 21                  | I would recommend Crest Pro to others.   | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 22                  | I would encourage friends & relatives to use Crest Pro Toothpaste.                               | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 23                  | I would refer fellow students/coworkers to the Crest Pro Toothpaste.                             | 1 | 2 | 3 | 4 | 5 | 6 | 7 |

***Please tick the relevant answers below.***

1. Gender? Male  Female
2. What is your age: \_\_\_\_\_ years
3. Years of professional experience (if any)? \_\_\_\_\_ years
4. What is your marital status? Single  Married
5. What is your highest qualification?  
Intermediate  Bachelor  Masters  MS/M. Phil  PhD
6. Have you used this (company's) product/service before? Yes  No

*If your answer to the above question is Yes, then answer the question# 7. Otherwise skip.*

7. For how long have you used this (company's) product / service? Once   
Less than 6 months  6 months to 1 year  1 - 2 years  Over 2 years
8. Are you currently using this product / service? Yes  No
9. Have you ever shopped online? Yes  No

*If your answer to the above question is Yes, answer the question # 10. Otherwise skip.*

10. How often do you shop online? Once in lifetime so far   
Once a month  Twice a month  Once in 6 months  Once a year
11. Do you read Online Reviews or see Star ratings  
before making an online or offline purchase? Yes  No

*If your answer to the above question is Yes, please answer the below question.*

12. When and how often do you read Online Reviews? Before every purchase   
For newer products  For durable products  For expensive products

***Thank you very much for your cooperation!***