THE EFFECT OF ONLINE CONSUMER REVIEWS AND BRAND EQUITY

ON THE CONSUMER DECISION MAKING PROCESS

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Dissertation Prepared for the Degree of

DOCTOR OF PHILOSOPHY

UNIVERSITY OF NORTH TEXAS

December 2021

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Ahmad, Fayez. *The Effect of Online Consumer Reviews and Brand Equity on the Consumer Decision Making Process*. Doctor of Philosophy (Business), December 2021, 147 pp., 5 tables, 18 figures, chapter references.

This research aims to investigate the (1) review effects on consumer decision making process, (2) effects of negative reviews on brand equity, and (3) consumers' likely response to a brand's request for reviews. The objective of the first essay is to investigate the nature of the relationship between skepticism and consumer decision making in an online behavior context. Its second objective is to know whether people's belief on their abilities or their hedonic principle moderates the relationship between a person's skepticism toward online reviews and their reliance on online reviews. The objective of the second essay is to explore whether negative online reviews that focus on service quality specific dimensions have a different effect on a service organization's perceived brand equity. Its second objective is to analyze the role of emotional contagion in the relationship between negative reviews related to various service quality dimensions and its effect on perceived brand equity. The main objective of the third essay is to know whether consumers are more likely to write an online review for a brand when the request comes from a higher equity brand. This essay also investigates how message trust and persuasion knowledge influence the relationship between a brand's request to write online reviews and the likelihood of consumers to write reviews. These three essays altogether contribute to the online review and the brand equity literature by providing new insights about the intricate relationship between online reviews, brand equity, and consumer decision-making.

ACKNOWLEDGEMENTS

First, I would like to thank my dissertation committee chair, Dr. Francisco Guzmán for his enormous support and guidance during my Ph.D. journey. I am honored to work with you, and I believe all I have learned from you will help me in my future career. You are a great motivator and your motivation has always given me confidence and courage to complete this difficult but memorable journey. I am also thankful to my dissertation committee member Dr. Audhesh Paswan for his continuous guidance and professional advice in my Ph.D. journey. Dr. Paswan was always there for me when I needed advice. Dr. Priyali Rajagopal is my other committee member and her critical suggestions were always helpful in solving my theoretical and experimental challenges.

I am thankful to all of my Ph.D. committee members for their effort and help in completing my Ph.D. journey. They were always considerate and helpful to all the Ph.D. students. My gratitude also goes to all the faculty members who taught the various courses, their training has was an enormous help in completing this dissertation. Thanks to all the faculty members of my department for their valuable suggestions formally, during my annual paper presentations, and informally, when I simply asked for help.

Lastly, but most importantly, I am grateful to my lovely wife for the sacrifices she made to see me complete this journey. Thank you for your support and your belief in me.

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INTRODUCTION

Online sales of physical goods in the U.S. during 2016 were $360.3 billion and are projected to be over $603.4 billion by the year 2021 (U.S. e-commerce market size 2015-2022, 2017). In today's marketplace, online reviews play a significant role in shaping consumer online purchase decisions (Mudambi & Schuff, 2010; Senecal & Nantel, 2004; Zhang *et al*., 2014). In one study, the Pew Research Center finds that 82% of the American adults read online reviews before purchasing any item (Smith & Anderson, 2016). Interestingly, the same survey, the also finds that almost half of the American adult believe that it is hard to tell that online reviews are truthful and unbiased. Another survey by YouGov, finds that 90% of the respondents mention that online reviews are very important in their purchase decisions, but the same 90% respondents believe that businesses manipulate reviews (Gammon, 2014).

Despite consumer skepticism, a growing number of consumers are expected to make online purchases in future years, and thus managing online reviews has become a key brand management concern. Considering the growth of online expenditure, consumer reliance on online reviews in making purchase decisions, and the number of online reviews written by consumers after receiving a request from a brand, understanding the influence that brand equity has on online reviews is timely and relevant for firms.

In addition to knowing the effect of brand equity regarding consumer response to a request to write reviews for brands, the effects of various types of reviews on brands are also important to know. This research thus aims to investigate the (1) review effects on consumer decision making process, (2) effects of negative reviews on brand equity, and (3) consumers' likely response to a brand's request for reviews.

The objective of the first essay is to investigate the nature of the relationship between

skepticism and consumer decision making in an online behavior context. Its second objective is to know whether people's belief on their abilities or their hedonic principle moderates the relationship between a person's skepticism toward online reviews and their reliance on online reviews.

The objective of the second essay is to explore whether negative online reviews that focus on service quality specific dimensions have a different effect on a service organization's perceived brand equity. Its second objective is to analyze the role of emotional contagion in the relationship between negative reviews related to various service quality dimensions and its effect on perceived brand equity.

The main objective of the third essay is to know whether consumers are more likely to write an online review for a brand when the request comes from a higher equity brand. This essay also investigates how message trust and persuasion knowledge influence the relationship between a brand's request to write online reviews and the likelihood of consumers to write reviews.

These three essays altogether contribute to the online review and the brand equity literature by providing new insights about the intricate relationship between online reviews, brand equity, and consumer decision making.

ESSAY 1

CONSUMER SKEPTICISM ABOUT ONLINE REVIEWS AND THEIR DECISION-MAKING

PROCESS: THE ROLE OF REVIEW SELF-EFFICACY AND REGULATORY FOCUS*

Introduction

Online reviews are becoming a critical consumption decision factor. As recent research

suggests, eWOM is perceived as less misleading and more specific and trustworthy than

traditional marketing communications (Ngarmwongnoi *et al*., 2020; Ozanne *et al*., 2019;

Ryanarzewska, 2019). The Pew Research Center finds that 82% of American adults read online

reviews before purchasing any item (Smith and Anderson, 2016). The same survey, however,

indicates that almost half of American adults believe that it is hard to tell if online reviews are

truthful and unbiased. Another study by YouGov finds that 90% of respondents consider online

reviews very important in their purchase decisions but also believe that businesses manipulate

reviews (Gammon, 2014). Academic research predominantly suggests that skepticism is a strong

predictor of consumer behavior withdrawal (Becker-Olsen *et al.*, 2006; Chylinski and Chu, 2010;

Mendini *et al.*, 2018; Webb and Mohr, 1998; Youn and Kim, 2008). It is thus perplexing that,

despite their doubts about them, so many consumers generally rely on online reviews for their

purchase decisions. Therefore, knowing whether past evidence of a strong negative relationship

between skepticism and consumer purchase decision making holds, or if in line with YouGov's

and the Pew Research Center's findings general consumer skepticism towards online reviews is

not a significant predictor of consumer purchasing behavior, is essential. Alternatively, if both

perspectives are right, other factors may explain why skepticism does not detract consumer s

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from making review-based purchase decisions. This paper sets to analyze the effect of overall consumer skepticism toward online reviews on consumer purchase decisions.

Skepticism has been widely studied as a predictor of consumer behavior (Darke and Ritchie, 2007; Obermiller and Spangenberg, 1998; Obermiller *et al.*, 2005). Past studies provide evidence of the negative effect of skepticism on reliance on advertising (Obermiller and Spangenberg, 1998) or prescriptions (Ford *et al.*, 1990). Research also establishes the effect of skepticism on purchase decisions (Albayrak *et al.*, 2011; Chen and Leu, 2011; Elving, 2013). Moreover, past research has studied the reasons behind consumers' skepticism toward online reviews (Banerjee *et al.*, 2017; Ozanne *et al.*, 2019) and general consumer skepticism toward online reviews (Reimer and Benkenstein, 2016). However, some gaps in the literature exist about the relationship among skepticism, reliance, and purchase decision that require attention. First, there is a possibility that the relationship among skepticism, reliance, and purchase decision making in an online review context may be different than the past established relationship found in other contexts. Second, the mediating role of reliance on online reviews on the relationship between skepticism and purchase decision has not been statistically examined. Although a linear relationship between skepticism and reliance on online reviews might be found, the findings of the Pew research center and YouGov are worth further exploring. It is possible that there are people that know which reviews to believe in and which ones to discard who may still rely on online reviews despite their skepticism. We label this knowledge as review self-efficacy and investigate its effect in the relationship between skepticism and reliance on online reviews. In addition to review self-efficacy, we suspect that consumers' reliance on online reviews despite their skepticism may originate from their motivational principle. People driven by a promotion motivational principle seek to accomplish their goal despite that the mean to achieve the goal

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involves risk (Higgins and Spiegel, 2004). Hence, promotion-oriented people may make their purchase decision (considered as a goal achievement) despite their skepticism toward online reviews.

People with stronger self-efficacy have higher levels of self-confidence (Chelariu and Stump, 2011; Hill *et al.*, 1987; Bandura and Locke, 2003) and are more likely to believe in their capability to understand technology (Hill *et al.*, 1987), their ability to exercise (Sylvia-Bobiak and Caldwell, 2006), and their ability to eat healthy food (Gaughan, 2003). People with stronger self-efficacy, labeled as review self-efficacy in our context, are thus more likely to rely on online reviews despite their skepticism because of their believed capability to identify false reviews. Promotion-focused people seek to achieve their goals despite risk while prevention-focused people seek to minimize risk (Crowe and Higgins, 1997; Higgins, 1998). Therefore, promotion-focused people are more likely, while prevention-focused people are less likely, to use online reviews in their purchase decision regardless of their skepticism toward online reviews.

The aim of this study is thus to contribute to the skepticism, self-efficacy, and regulatory focus literature in three specific ways. First, it contributes to the online review literature by studying the effect of review specific skepticism on purchase decisions. More importantly, the investigation of the mediating role of reliance contributes to the skepticism, reliance, and purchase decision literature. Second, by studying the effect of review self-efficacy, it adds to the self-efficacy literature by examining another form of efficacy—*physical activity self-efficacy* (Sylvia-Bobiak and Caldwell, 2006); *computer self-efficacy* (Hill *et al.*, 1987); *negotiation efficacy* (Hung and Petrick, 2012). This study explains the nature of the relationship among review-specific skepticism reliance and consumer purchase decision in high and low review self-efficacy conditions. It posits that high review self-efficacy consumers are more likely to rely on

online reviews than low review self-efficacy consumers despite similar levels of skepticism toward online reviews. Third, as promotion-oriented people seek to achieve their goal (Crowe and Higgins, 1997), the investigation of promotion vs. prevention motivational orientation helps finding whether similar motivational orientation exists in review-based purchase decision making. This study extends the regulatory principal theory to the online review literature and explains how promotion and prevention-oriented people rely on online reviews. Similar to the review self-efficacy argument, the study posits that promotion-oriented consumers are more likely to rely on online reviews than prevention-oriented consumers despite similar levels of skepticism toward online reviews. Finally, review self-efficacy and promotional motivation orientation may further explain why consumers with high skepticism still rely on online reviews. With this evidence, it can be argued that the relationship among skepticism, reliance, and consumer purchase decisions also needs to be evaluated from a self-efficacy and motivational theory perspective.

Theoretical Background and Hypotheses

Skepticism and Reliance on Online Reviews

A skeptic is someone who is "highly sensitive to negative evidence but ignores positive evidence" (Hogarth and Einhorn, 1992, p. 40). Skepticism has been previously studied in marketing within the contexts of purchase behavior (Goh and Balaji, 2016), corporate social responsibility messages (Vlachos, 2012; Zhang and Hanks, 2017), taxonomic versus thematic partnerships (Mendini *et al.*, 2018), cause-related marketing (Vlachos *et al.*, 2016), and online reviews (Sher and Lee, 2009). Related to online reviews, past research primarily focuses on understanding both the reasons behind consumer skepticism and how consumers with different degrees of skepticism evaluate online reviews. Highly skeptical consumers do not rely on

product information mentioned in online reviews if they lack confidence in the source credibility, and consumers who are less skeptical of online reviews view the quantity of reviews as a signal of product popularity (Sher and Lee, 2009). Further, consumer skepticism toward online reviews is high when a company offers monetary incentives to write reviews, and low when a corporate donation is offered instead (Reimer and Benkenstein, 2018).

An abundance of studies exists that explore when consumers become skeptical about a review or a group of reviews of a particular organization. For example, consumer skepticism toward online reviews is tied to message content and style, and review extremity and valence (Filieri, 2016). The profile photo—or attractiveness of the reviewer (Ozanne *et al.*, 2019)—, linguistic style, and reported experience of the reviewers reduce the social-psychological distance between the reviewer and the potential consumer, ultimately reducing consumer skepticism toward the online reviewer (Hernández-Ortega, 2018). Review characteristics such as positivity, involvement, and sociability can generate skepticism among readers (Banerjee *et al.*, 2017). Therefore, this study does not investigate what makes consumers skeptical about a particular review but rather consumer skepticism about online reviews in general, given that none of these studies provide this evidence or whether consumers rely or not on online reviews despite their skepticism. Although Reimer and Benkenstein (2016) measure general consumer skepticism toward online reviews and Gottschalk and Mafael (2017) profile consumers who look at online reviews, neither measure the relationship between skepticism and reliance on online reviews.

Given that past studies suggest that skepticism inversely affects consumer reliance (Goh and Balaji, 2016; Hernández-Ortega, 2018; Reimer and Benkenstein, 2016; Vlachos *et al.*, 2016), we argue that skepticism on online reviews negatively affects consumer reliance on online

reviews. Formally stated:

> *Hypothesis 1- consumers with high skepticism toward online reviews are less reliant on them.*

Skepticism on Online Reviews and Purchase Decision

The influence of skepticism on purchase behavior has been analyzed in the context of green purchase behavior (Albayrak *et al.*, 2011), advertising (Chen and Leu, 2011), company motives (Elving, 2013), corporate social responsibility (Newman and Trump, 2019; Skarmeas and Leonidou, 2013); and online product purchasing (Koo, 2015; Soopramanien, 2011). All of these past studies argue that higher skepticism leads to a reduced purchase decision. Likewise, if consumers are more skeptical about online reviews they are less likely to make a review-based purchase decision (Albayrak *et al.*, 2011; Chen and Leu, 2011; Goh and Balaji, 2016; Ruiz-Mafeet *et al.*, 2018). Reimer and Benkenstein (2016) specifically argue that higher review skepticism leads to reduced trust on those reviews, leading to a reduced purchase decision. This study focuses on the general consumer perception toward online reviews, not toward a specific review and its effect on trust. However, if skepticism toward a particular review leads to a reduced trust on that review, it is highly likely that general skepticism toward online reviews will also result in less review-based purchase decisions. Moreover, if consumers are skeptical about the motive of the company then they are less likely to make a purchase decision based on the claim of the company (Elving, 2013). Similarly, skepticism about a particular advertisement reduces consumers' advertising-based purchase decision (Chen and Leu, 2011). Thus, consistent with these studies, we posit that if consumers are skeptical toward online reviews then they are less likely to make a review-based purchase decision. Formally stated:

> *Hypothesis 2- increased skepticism on online reviews leads to reduced review-based purchase decisions.*

Mediating Role of Reliance on Online Reviews

Reliance and purchase decision are two different constructs, as research shows that consumer reliance may not always lead to a purchase decision (Srinivasan *et al.*, 2016). Nevertheless, Chang and Hung (2018) mention that if a consumer relies on a particular information then they are going to make their decision based on that information. However, online review studies show that reviews that are more credible lead to higher purchase intention (Jiménez and Mendoza, 2013; Lee *et al.*, 2011). Does reliance on online reviews positively influence consumers making a purchase decision? Although Jiménez and Mendoza (2013) and Lee *et al.* (2011) did not study the role of reliance, this study posits that reliance on online reviews mediates the relationship between skepticism and purchase decision, given that when consumers rely on online reviews it may be because they view those reviews as credible. Furthermore, information helpfulness predicts purchase decision and mediates the relationship between source expertise and purchase decision (Filieri *et al.*, 2018). Although information helpfulness is different from reliance on online reviews, if consumers believe that the reviews are reliable then the information provided by them is helpful. Filieri *et al.*'s (2018) study thus indirectly supports the argument that reliance on online reviews can be a potential mediator. We thus propose that there is a negative relationship between skepticism and reliance on online reviews and between skepticism and purchase decision. Wang and Chien (2012) measure the effect of skepticism of blog product reviews on purchase decision and find that skepticism reduces the credibility of the review leading to reduced purchase intention. Although credibility of the review is different from reliance on the review, given that skepticism leads to reduced credibility, skepticism may lead to reduced reliance. Formally stated:

> *Hypothesis 3- reliance on online reviews mediates the relationship between skepticism on online reviews and purchase decision.*

Although we hypothesize that skepticism negatively affects consumer reliance on online reviews and review based purchase decisions, we also believe that people with a promotional motivation orientation and high review efficacy may still rely on online reviews despite their skepticism toward online reviews, as per the findings of YouGov and the Pew Research Center. This is further explained in the following sections.

Self-Efficacy

Self-efficacy refers to a person's beliefs on their capability to make a well-judged decision (Bandura, 1995). A belief that makes a person be confident enough to take a challenge when the outcome is uncertain (Bandura, 1982; Ouschan *et al.*, 2006; Wood and Bandura, 1989). Social cognitive theory depicts that self-efficacy is a key self-regulatory mechanism that guides peoples' motivation and performance excellence (Bandura, 1986). Self-efficacy has a positive impact on academic performance (Bandura, 1993), controlling eating disorders (Kirkley *et al.*, 1985), increasing individuals' level of physical activity (Bandura and Cervone, 1983), and individuals' confidence in decision making (Block and Keller, 1995; Marcus and Owen, 1992; Xie *et al.*, 2008). A higher level of confidence in decision-making increases an individual's belief of being able to achieve their goals and objectives (Phillips and Gully, 1997; Schuster *et al.*, 2013). The source of confidence in high self-efficacy people is the perceived knowledge of a subject matter (Hill *et al.*, 1987; McAuley, 1992; Sylvia-Bobiak and Caldwell, 2006). Past research thus studies self-efficacy in the context of the specific subject and develops a subject-specific measurement instrument to examine the effect of self-efficacy in decision-making (Giacobbi *et al.*, 2005; Hill *et al.*, 1987; McAuley, 1992; Ryckman *et al.*, 1982; Sylvia-Bobiak and Caldwell, 2006).

In line with studying self-efficacy in the context of a specific situation, this study posits

that even though a person may be skeptical about online reviews, they may still rely on them if they know which reviews to believe in and which ones to discard. We label this capability as review self-efficacy and define it as the confidence in consumers' ability to decide which review to consider and which review to discard when using reviews in their purchase decision making— just like Sylvia-Bobiak and Caldwell (2006) label capability to do physical activity as physical activity self-efficacy, Hill *et al.* (1987) label computer knowledge as computer self-efficacy, and Hung and Petrick (2012) label confidence about a negotiation as negotiation efficacy. Additionally, these studies support the notion that those content specific efficacies are related to self-efficacy.

This study posits that skepticism toward online reviews has a negative effect on consumer reliance on online reviews, and that this negative relationship is moderated by review efficacy. More specifically, high review self-efficacy results in high reliance on online reviews compared to low review self-efficacy, regardless of the level of skepticism toward online reviews. The reason behind this argument is that people with high efficacy are more confident in their decision making (Phillips and Gully, 1997) and have stronger beliefs in their diagnostic skill (Bandura, 1993). Furthermore, high internet efficacy people are less worried about internet security and thus more involved with internet (Akhter, 2014). Therefore, high review self-efficacy people will rely more on online reviews because they have a stronger belief on their diagnostic skill and in their ability to make a right decision. In other words, and consistent with Akhter's (2014) findings, we posit that high review self-efficacy people will rely more on online reviews than low review self-efficacy people despite their higher level of skepticism toward online reviews. Formally stated:

Hypothesis 4- review self-efficacy moderates the relationship between skepticism and reliance on online reviews as high review self-efficacy people rely more on online reviews than low review self-efficacy people.

Regulatory Focus

Regulatory focus theory distinguishes between a promotion principle specific to nurturance, advancement, and fulfilling hopes, and a prevention principle specific to security, safety, and fulfilling duties (Higgins, 1998; Strauman *et al.*, 2015). Promotion-focused people pursue a goal when they see that the goal is a path towards achievement, while prevention-focused people stop pursuing a goal if they find that achieving the goal presents a security concern (Förster *et al.*, 1998; Strauman *et al.*, 2015). As promotion-focused people seek to achieve their desired goal, they tend to downgrade the risk factor (Friedman and Förster, 2002), which may lead to making online review-based purchase decisions despite their skepticism toward online reviews. Conversely, prevention-focused people tend to focus more on risk and safety, which may restrict them from using online reviews when they are skeptical. This argument finds support in Strauman and Wilson (2010) who mention that promotion-focused people follow an approach strategy, while prevention-focused people follow an avoidance strategy. Moreover, promotion-focused people tend to focus on positive cues in their environment and hence consider the environment as largely nonthreatening, while prevention-focused people focus on negative cues and thus consider the environment as risky (Friedman and Förster, 2002). Furthermore, promotion-focused consumers still search for information despite the negative word of mouth about a search item, whereas prevention-focused consumers stop searching when they receive negative word (Roy and Naidoo, 2017).

Both Strauman and Wilson's (2010) and Roy and Naidoo's (2017) findings suggest that promotion-oriented consumers keep pursuing their purchase decision despite the negativity

surrounding the information seeking process. Likewise, when prevention-focused people have

doubts they quit the decision-making process, while promotion-focused people try to decide

despite their doubts or fears (Crowe and Higgins, 1997). Skepticism thus leads promotion and

prevention-focused people to react differently. While prevention-focused people are more likely

to quit (avoidance strategy), promotion-focused people are more likely to continue (approach

strategy) an online review-based purchase decision when skeptical. Moreover, prevention-

focused people look for information from other sources when they are skeptical about a decision

(Förster and Higgins, 2005); further indicating that prevention-focused people may be less likely

to make an online review based purchased decision. Mendini *et al.*'s (2018) work further

supports our argument as they find that promotion focused orientation reduces consumer

skepticism, while Friedman and Förster (2002) argue that promotion-oriented people focus more

on positivity. We thus hypothesize:

> *Hypothesis 5- regulatory focus moderates the relationship between skepticism and reliance on online reviews as promotion-oriented people will rely more on online reviews than prevention-oriented people.*

The study's conceptual framework is presented in Figure 1.1.

Figure 1.1: Conceptual framework
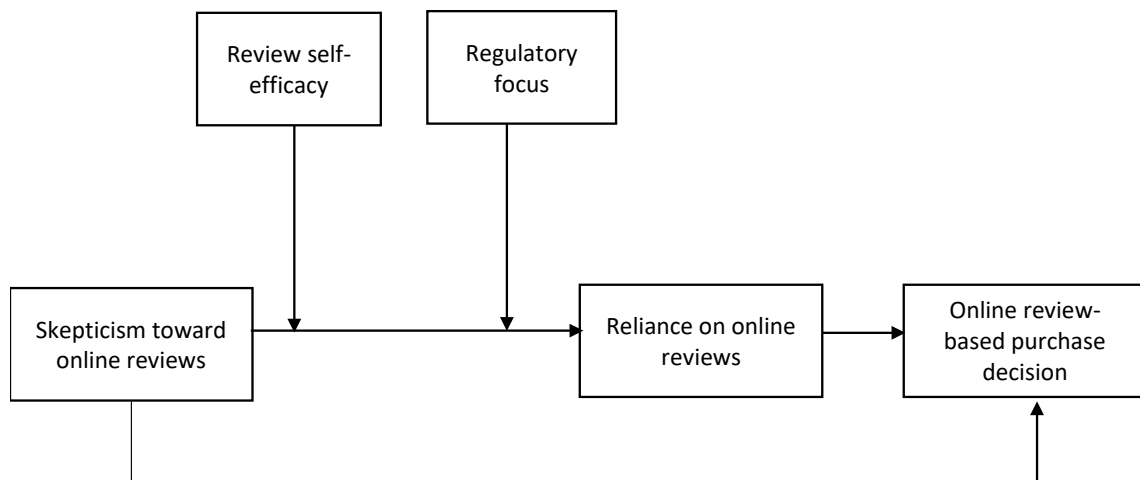
Study 1: Customer Survey

Design and Procedure

A nationally representative sample of 430 consumers from the United States, recruited using Qualtrics Panels, responded the survey (for detailed descriptive statistics see Table 1.1).

Table 1.1: Profile of respondents

Profile Category		Frequency	%
Age	18-24	50	11.6
	25-34	80	18.6
	35-44	79	18.4
	45-54	68	15.8
	55-64	71	16.5
	65+	82	19.1
Race	Non- Hispanic White	277	64.4
	Non-Hispanic Black	49	11.4
	Hispanic	69	16.0
	Asian	22	5.1
	American Ind.	3	0.7
	Other Race	10	2.3
Education	No Schooling	1	0.2
	Nursery to 8th	2	0.5
	High School, No Diploma	10	2.3
	High School Graduate	89	20.7
	Some College Credit	105	24.4
	Vocational Training	22	5.1
	Associate Degree	39	9.1
	Bachelor's Degree	105	24.4
	Master's Degree	41	9.5
	Professional Degree	9	2.1
	Doctorate Degree	7	1.6
Gender	Male	233	54.2
	Female	195	45.3
	Other	2	0.5

Table 1.2: Descriptive statistics

Constructs	M	SD	CR	AVE	1	2	3	4	5	6	7
A: Study 1											
Skepticism	3.82	.97	.92	.57	1						
Reliance	4.79	1.04	.86	.68	-.41**	1					
Purchase Decision	4.89	1.20	.95	.75	-.34**	.64**	1				
B: Study 2											
Skepticism	5.01	.85	.91	.62	1						
Reliance	4.94	1.01	.86	.67	.61**	1					
Purchase Decision	5.09	.88	.86	.62	.49**	.61**	1				
Review self-efficacy	5.50	.88	.94	.66	.18	.07	.06	1			
C: Study 3											
Skepticism	4.53	1.05	.93	.60	1						
Reliance	4.78	.95	.85	.66	.18	1					
Purchase Decision	4.82	1.04	.87	.66	.30**	.49**	1				
Promotion focus	5.50	.96	.92	.58	.23*	.31**	.35**	1			
Prevention focus	4.67	1.06	.91	.52	-.01	.30**	.27**	.40**	1		
Independent	5.19	.75	.95	.47	.06	.32**	.23*	.69**	.33**	1	
Interdependent	4.54	.73	.95	.46	-.04	-.09	-.01	.55**	.35*	.29	1

Note: *$p<.05$, **$p<.01$

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Participants first answered questions regarding their skepticism toward online reviews (Zhang et al., 2016; α = .92). Then, reliance on online reviews was measured (Soh *et al.*, 2009; α = .86). Finally, participants were asked about their review-based purchase decisions (Ayeh *et al.*, 2013; α= .91). Appendix presents all scale items for each construct. Table 1.2 (panel A) presents all descriptive statistics. The composite reliability of all constructs exceeds .70, AVE exceeds .50, and the inter construct correlation is less than AVE, providing evidence of adequate convergent and discriminant validity (Fornell and Larcker, 1981).

Findings

The hypotheses were tested using structural equation modeling (SEM) (Anderson and Gerbing, 1988; Bagozzi and Yi, 1988; Jöreskog and Sörbom, 1996). All λs are significant. All global fit indices (Bagozzi and Yi, 1988) are within the acceptable limits ($\chi 2 = 223$, df = 75, p value = 0.00; RMSEA = 0.05; GFI = 0.94; AGFI = 0.91; NFI = 0.96; NNFI = 0.97; CFI = 0.98; and RMR = 0.04). The results suggest that skepticism on online reviews is a statistically significant predictor of consumers' reliance on online reviews (t- statistic = -8.32, estimates = -.58), supporting hypothesis one (see Table 1.3). They also provide evidence of the influence of skepticism on consumers' review-based purchase decision (t- statistic = -6.08, estimates = -.31), supporting hypothesis two (see Table 1.3).

Table 1.3: Estimates of structural equation model

Parameters	Path	Std. est.	t-stats
Skepticism (ξ1)			
S_1	λ1	.64	Set to 1
S_2	λ2	.75	14.53
S_3	λ3	.77	13.51
S_4	λ4	.72	12.82
S_5	λ5	.87	14.77
S_6	λ6	.78	13.64

Parameters	Path	Std. est.	t-stats
S_7	λ7	.71	12.57
S_8	λ8	.73	12.92
S_9	λ9	.67	12.00
Reliance (η1)			
R_1	λ10	.89	Set to 1
R_2	λ11	.85	22.55
R_3	λ12	.73	17.60
Purchase Decision (η2)			
P_1	λ13	.58	Set to 1
P_2	λ14	.96	14.26
P_3	λ15	.97	14.45
P_4	λ16	.90	13.87

Figure 1.2 presents the structural paths of skepticism, reliance, and review-based

purchase decision.

Figure 1.2: Structural equation model of linkages among skepticism, reliance, and review based purchase decision.
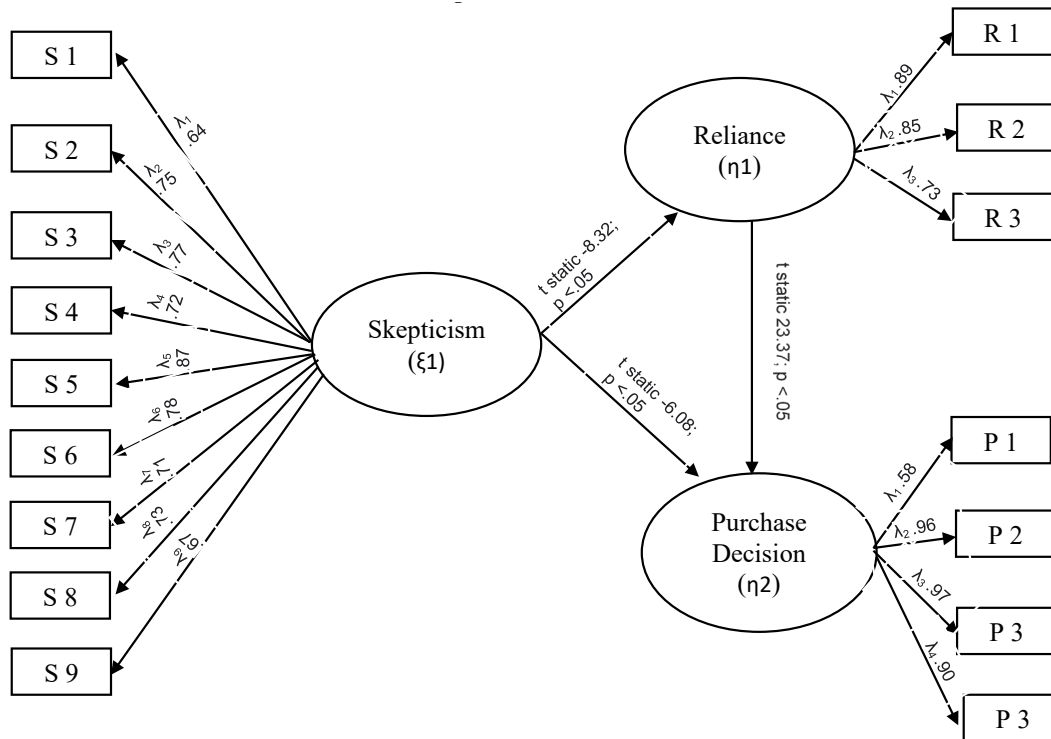
To examine the mediating role of the reliance on online reviews, we used Hayes PROCESS SPSS macro (Hayes, 2018, model 4, 5000 bootstrap samples). The result shows that skepticism is a statistically significant predictor of the reliance on online reviews ($\beta = -.42$, $t = -9.40$, $p = < .001$). Regarding the effect of skepticism and reliance on consumer purchase decisions, skepticism is not a statistically significant predictor of review-based purchase decision making ($\beta = -.02$, $t = -.53$, $p = > .10$), but the reliance on online reviews is a significant predictor of purchase decision ($\beta = .84$, $t = 23.37$, $p = < .001$). Although the direct effect of skepticism on consumer purchase decision is not statistically significant (CI: -.09, .05), the indirect effect is, with an effect of -.35, 95% CI (-.46, -.26) that supports full mediation, supporting hypothesis 3.

Discussion

The results of the first survey-based study show that consumer skepticism toward online reviews has a statistically significant negative effect on both online reviews and review-based purchase decision. This means that the higher the level of consumer skepticism toward online reviews, the lower the consumer reliance on online reviews and review-based purchase decisions. The mediation analysis also shows that without reliance on online reviews, consumers will not make a review-based purchase decision.

Study 2: Experimental Study

Design and Procedure

Ninety-two participants (51% male, median age between 18 and 22) from a state university located in south-central U.S. were recruited through a research pool. Given the study's experimental nature, a student sample is appropriate given its objective of increasing the experiment's internal validity (Brinberg and McGrath, 1985; Hanel and Vione, 2016). First, participants answered questions about their skepticism toward online reviews (Zhang *et al.*,

2016; α = .89). Then participants read a scenario that described them traveling to a new place and having to select a local restaurant for dinner. Local restaurants were used given that participants may have past knowledge about nationally recognized restaurants and may not have believed that they manipulate reviews or create fake reviews. To strengthen participants' beliefs that some organizations manipulate reviews, they were asked to read a short article explaining how businesses manipulate reviews. Following, participants saw ten reviews. They were told that some of the reviews were fake and given the task to identify them. After making their selections, participants were shown how they had performed in identifying fake reviews, mentioning they had done very well—high review self-efficacy condition—or poorly—low review self-efficacy condition (see Appendix B for manipulation based on Fu *et al.*, 2010; Locke *et al.*, 1984; Park and John, 2014). Following, participants' reliance on online reviews (Reid and King, 2009; α = .75) and review based purchase decisions (Ayeh *et al.*, 2013; α = .72) were measured. Participants' review self-efficacy (α = .93) was measured as a manipulation check (see Appendix for all scale items for each construct and Table 1.2 (panel B) for all descriptive statistics). The composite reliability of all constructs exceeds .70, AVE exceeds .50, and the inter construct correlation is less than AVE, providing evidence of adequate convergent and discriminant validity (Fornell and Larcker, 1981).

Results

Manipulation Check

To check the effectiveness of the manipulation of participants' review self-efficacy, participants' review self-efficacy was measured (Ellen *et al.*, 1991; McAuley and Blissmer, 2000). Results suggest that the mean efficacy value of participants assigned to the high review

self-efficacy condition is 5.94 versus 5.10 for those assigned to the low review self-efficacy condition ($F_{(1, 94)}$ = 28.77, $p < .001$), confirming the effectiveness of the manipulation.

Effect of Skepticism

A regression analysis suggests that skepticism on online reviews is a statistically significant predictor of consumers' reliance on online reviews ($F_{(1, 90)}$ = 18.46, p = <.001, R^2 = .17, β= -.56), supporting hypothesis 1. The regression analysis also provides evidence of the influence of skepticism on consumers' review-based purchase decisions ($F_{(1, 90)}$ = 7.86, p = <.01, R^2 = .08, β= -.36), supporting hypothesis 2.

Role of Reliance as a Mediator

To examine the mediating role of reliance on online reviews, we used Hayes PROCESS SPSS macro (Hayes, 2018, model 4, 5000 bootstrap samples). The result shows that skepticism is a statistically significant predictor of the reliance on online reviews (β = -.56, t = -4.30, p= < .001). Also, reliance on online reviews (β = .67, t = 8.70, p= < .001) is a statistically significant predictor of purchase decision. Although the direct effect of skepticism on consumers' purchase decision is not statistically significant (95% CI: -.19, .22, p>.05), the indirect effect is with an effect of -.38, 95% CI (-.52, -.14) that supports full mediation, supporting hypothesis 3.

Review Self-Efficacy as a Moderator

To examine the moderating role of review self-efficacy, we used the Hayes PROCESS SPSS macro (Hayes, 2018, model 1, 5000 bootstrap samples). The result shows that skepticism is a statistically significant predictor of the reliance on online reviews (β = -1.55, t = -4.24, p= < .001). Both review self-efficacy (β = -2.61, t = -3.47, p= < .01) and the interaction effect of skepticism and review self-efficacy (β = .72, t = 2.87, p= < .01) are statistically significant

predictors of consumer reliance on the online review, supporting hypothesis 4. Regarding the direction of the relationship, the effect of skepticism on consumer reliance on online reviews is found in the high review self-efficacy condition ($\beta = -.84$, $t = -5.40$, 95% CI: -1.15, -.53, $p < .01$), but not in the low review self-efficacy condition ($\beta = -.12$, $t = -.61$, 95% CI: -.51, -.27, $p > .10$). The result of a spotlight analysis (Spiller *et al.*, 2013) further suggests that when participants have low levels of skepticism ($M_{Skepticism} = 2.07$), participants in the high review self-efficacy condition are more likely to rely on online reviews than in the low review self-efficacy condition ($M_{High\ review\ self-efficacy} = 5.80$; $M_{Low\ review\ self-efficacy} = 4.67$). However, when participants have high levels of skepticism ($M_{Skepticism} = 3.73$), the difference between high review self-efficacy and low review self-efficacy is non-significant ($M_{High\ review\ self-efficacy} = 4.40$; $M_{Low\ review\ self-efficacy} = 4.47$), see Figure 1.3.

Figure 1.3: Skepticism, reliance on online reviews, and review self-efficacy
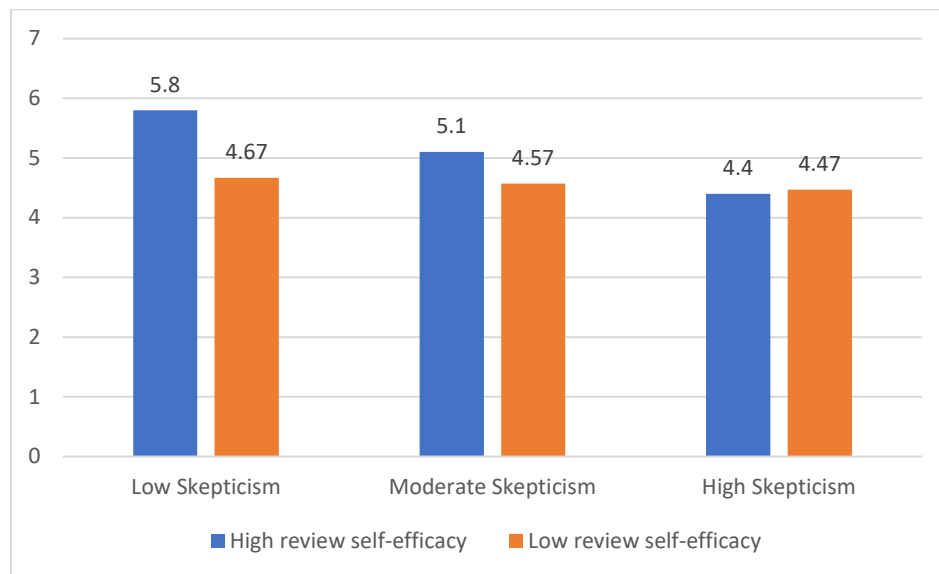
Moderated Mediation Analysis

   To examine the indirect effect of skepticism on consumer purchase decisions in high and low review self-efficacy conditions, we used the Hayes PROCESS SPSS macro (Hayes, 2018,

model 7, 5000 bootstrap samples). The results provide evidence of moderated mediation. The effect of skepticism on consumer purchase decision is mediated by reliance on the online review, as the direct effect of skepticism on consumer purchase decision is not statistically significant (b = .01, boot SE = .10, 95% bias corrected CI = [-.19, .22]). However, the indirect effect is statistically significant and the indirect path from skepticism to consumer purchase decisions varied significantly between the high and low review self-efficacy conditions. In the high review self-efficacy condition, skepticism has an indirect effect on consumer purchase decision (b = -.56, boot SE = .11, 95% bias corrected CI = [-.74, -.29]). In the low review self-efficacy condition, skepticism does not have an indirect effect on consumer purchase decision (b = -.08, boot SE = .25, 95% bias corrected CI = [-.38, .32]). The overall difference of the indirect effect of skepticism on consumer purchase decision in high and low review self-efficacy conditions is statistically significant (b = .48, boot SE = .25, 95% bias corrected CI = [.01, .97]), supporting moderated meditation.

Discussion

Similar to the results of the first study, the results of the second study also suggest that skepticism toward online reviews negatively affects consumer reliance on online reviews and review-based purchase decision. However, an interesting result from this study is that consumers who have high review self-efficacy will be more likely to rely on online reviews than their low review self-efficacy counterparts, despite the fact that both groups have similar levels of skepticism toward online reviews.

Study 3: Experimental Study

Design and Procedure

One hundred four participants (44.9% male, median age between 18 and 22) from a state

university located in south-central U.S. were recruited through a research pool. Given the study's

experimental nature, a student sample is appropriate given its objective of increasing the

experiment's internal validity (Brinberg and McGrath, 1985; Hanel and Vione, 2016).

Participants were randomly assigned to a promotion or prevention specific motivational focus

condition (see Appendix for manipulation based on Pham and Avnet, 2004; Kirmani and Zhu,

2007). Participants who were assigned to the promotion manipulation condition first answered

questions about their skepticism toward online reviews (Zhang *et al.*, 2016; α = .89). After

measuring their skepticism toward online reviews, they were asked to think about past hopes,

aspirations, and dreams and list two of them. They were also asked to think about current hopes,

aspirations, and dreams and list two of them. Then, participants' reliance on online reviews (Soh

et al., 2009; α = .72) and review based purchase decisions (Ayeh *et al.*, 2013; α = .78) were

measured. Participants in the prevention manipulation condition also answered questions about

their skepticism toward online reviews. Then they were asked to think about past duties,

obligations, and responsibilities and list two of them. They were also asked to think about current

duties, obligations, and responsibilities and list two of them. Finally, they answered questions

related to reliance on online reviews and review-based purchase decision. Participants'

regulatory focus (Lockwood et al., 2002; α $_{prevention}$= .83, α $_{promotion}$= .91) was measured as a

manipulation check. Participants' self-construal levels (Lu and Gilmour, 2007; α $_{Independent}$= .92, α

$_{Interdependent}$= .90) were also measured to provide evidence that self-construal does not affect the

relationship, given that Lee *et al.* (2000) find that self-construal is connected to regulatory focus.

Appendix A presents all scale items of each construct. Table 1.2 (panel C) presents all

descriptive statistics. The composite reliability of all constructs exceeds .70, AVE exceeds .50,

and the inter construct correlation is less than AVE, providing evidence of adequate convergent

and discriminant validity (Fornell and Larcker, 1981).

Results

Manipulation Check

To check the effectiveness of the manipulation of participants' promotion vs. prevention orientation, participants' regulatory focus was measured. Results suggest that the mean prevention orientation value of participants assigned to the promotion focus condition is 4.11 versus 4.81 for those assigned to the prevention focus condition ($F_{(1, 102)} = 13.80$, $p < .001$). The mean promotion orientation value of participants assigned to the promotion focus condition is 5.53 versus 4.80 for those assigned to the prevention focus condition ($F_{(1, 102)} = 12.04$, $p < .01$), confirming the effectiveness of the manipulation.

Effect of Skepticism

A regression analysis suggests that skepticism toward online reviews is a statistically significant predictor of consumers' reliance on online reviews ($F_{(1, 102)} = 26.44$, $p = <.001$, $R^2 = .21$, $\beta = -.45$), supporting hypothesis 1. The regression analysis also provides evidence of the influence of skepticism on consumers' review-based purchase decisions ($F_{(1, 102)} = 17.62$, $p = <.001$, $R^2 = .15$, $\beta = -.38$), supporting hypothesis two.

Role of Reliance as a Mediator

To examine the mediating role of reliance on online reviews, we used Hayes PROCESS SPSS macro (Hayes, 2018, model 4, 5000 bootstrap samples). The result shows that skepticism is a statistically significant predictor of reliance on online reviews ($\beta = -.45$, $t = -5.14$, $p = < .001$). Also, reliance on online reviews ($\beta = .35$, $t = 3.76$, $p = < .001$) is a statistically significant predictor of purchase decision. Both the direct effect (-.21, 95% CI: -.39, -.03, $p<.05$) and the

indirect effect (-.16, 95% CI: -.26, -.05) of skepticism on reliance are statistically significant predictors, indicating partial mediation and supporting hypothesis 3.

Regulatory Focus as a Moderator

To examine the moderating role of regulatory focus, we used Hayes PROCESS SPSS macro (Hayes, 2018, model 1, 5000 bootstrap samples). The result shows that skepticism is a statistically significant predictor of reliance on online reviews (β = -.21, t = -2.00, p= < .05).

Figure 1.4: Skepticism, reliance on online reviews, and regulatory focus
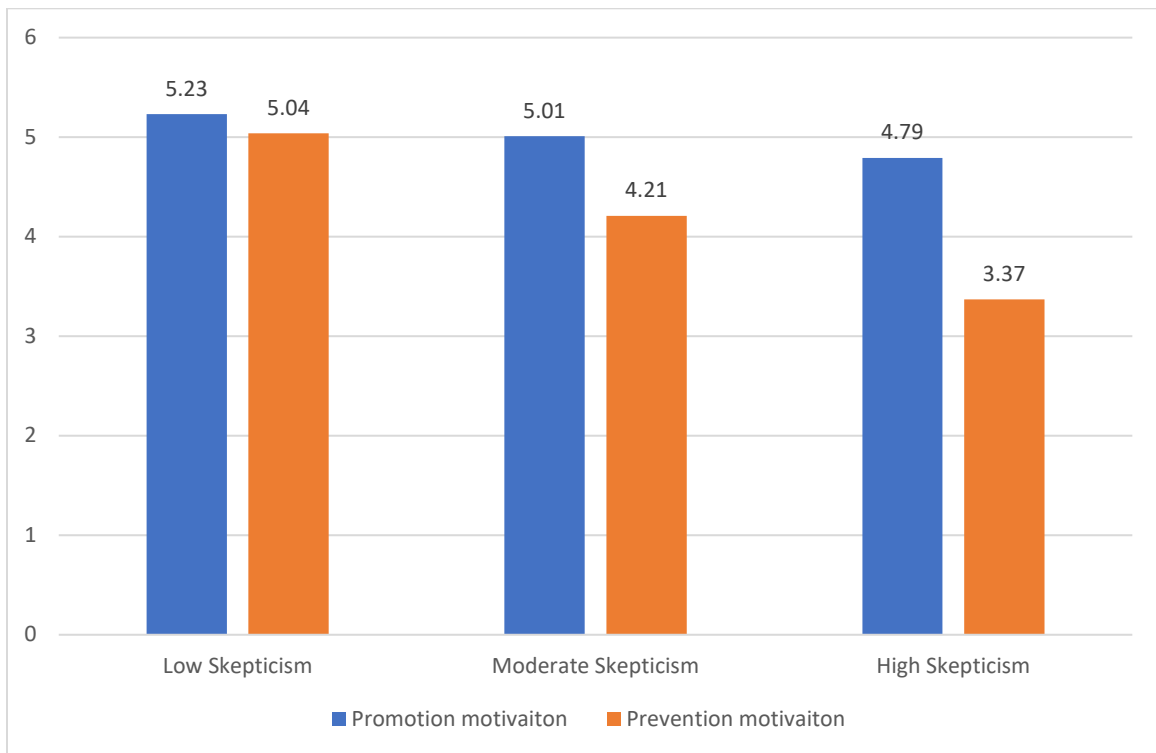
Regulatory focus is also statistically significant (β = 1.27, t = 2.34, p= < .05). More importantly, the interaction effect of skepticism and regulatory focus (β = -.60, t = -3.97, p= < .01) is a statistically significant predictor of consumer reliance on online reviews, supporting hypothesis 5. The mean value of consumer reliance on online reviews in the promotion condition is 4.99 and 4.29 in the prevention condition. The result of a spotlight analysis (Spiller *et al.*, 2013) further

shows that when participants have low levels of skepticism toward online reviews (M = 3.60), the difference between promotion and prevention participants in their reliance on online reviews is not different ($M_{Promotion}$ = 5.23; $M_{Prevention}$ = 5.04). However, when participants have moderate levels of skepticism (M = 4.64), the promotion group has a higher level of reliance than the prevention group ($M_{Promotion}$ = 5.01; $M_{Prevention}$ = 4.21), see Figure 1.4.

Moderated Mediation Analysis

To examine the indirect effect of skepticism on consumer purchase decision making in promotion and prevention conditions, we used the Hayes PROCESS SPSS macro (Hayes, 2018, model 7, 5000 bootstrap samples). The results provide evidence of moderated mediation. The indirect path from skepticism to consumer purchase decision varied significantly between the promotion and prevention conditions. In a promotion-oriented condition, skepticism does not have an indirect effect on consumer purchase decision (b = -.07, boot SE = .06, 95% bias corrected CI = [-.20, .06]). In a prevention-oriented condition, skepticism has an indirect effect on consumer purchase decision (b = -.28, boot SE = .09, 95% bias corrected CI = [-.44, -.10]). The overall difference of the indirect effect of skepticism on consumer purchase decision in promotion and prevention orientation conditions is statistically significant (b = -.21, boot SE = .11, 95% bias corrected CI = [-.44, -.03]), supporting moderated meditation.

Alternative Explanation

To rule out any alternative explanation, participants' self-construal levels were measured given that Lee *et al.* (2000) find that self-construal is connected to regulatory focus. We thus wanted to see whether our regulatory focus manipulation triggered self-construal. However, the findings suggest that the mean values of interdependent ($M_{promotion}$ = 4.61. $M_{prevention}$ = 4.82, F = .87, p > .10) and independent self-construal ($M_{promotion}$ = 5.13, $M_{prevention}$ = 5.25, F = .20, p > .10)

for both promotion and prevention-focused participants are not statistically significant, ruling out the potential arousal of self-construal because of the regulatory focus manipulation.

Discussion

The results of the third study also support the argument that skepticism toward online reviews negatively affects both the consumer reliance on online reviews and review-based purchase decision. Additionally, they confirm that promotion-oriented consumers are more likely to rely on online reviews than prevention-oriented consumers. This is especially evident when consumers have low and moderate levels of skepticism toward online reviews, given that in those situations, promotion-oriented consumers rely more on online reviews than prevention-oriented consumers.

Conclusion

Overall, the findings of a survey and two experimental studies suggest that higher levels of consumer skepticism result in lower levels of consumer reliance on online reviews. They also suggest that higher skepticism results in consumers being less likely to use reviews in their purchase decisions. Reliance on online reviews mediates the relationship between consumer skepticism and their purchase decisions. Review self-efficacy moderates the relationship between skepticism and consumer reliance on online reviews. Despite having high skepticism about online reviews, consumers with higher review self-efficacy rely more on online reviews compared to consumers with lower review self-efficacy. Regulatory focus moderates the relationship between skepticism and reliance on online reviews. Specifically, promotion-oriented consumers are more likely to rely on online reviews than prevention-oriented consumers despite similar levels of skepticism toward online reviews.

Theoretical Implications

This paper contributes to the theory of self-efficacy and regulatory focus as it provides evidence of a stronger decision-making motive of participants who have higher levels of self-efficacy. Despite numerous past studies focusing on self-efficacy, the role of self-efficacy in consumer decision-making situations with skepticism remained unknown. This study provides evidence of the effect of self-efficacy on consumers' motivation to rely on online review information despite their skepticism, and labels it review self-efficacy, adding another form of self-efficacy to the self-efficacy literature. Review self-efficacy is present when consumers believe that they can identify true and false reviews, motivating them to rely on them despite their skepticism. The results of this study demonstrate that skepticism toward online reviews does not deter consumers from relying on online reviews if they have high review self-efficacy. Also, that consumers with low review-efficacy are less likely to rely on online reviews than their counterparts. Therefore, the provided evidence of the effects of low and high review self-efficacy on consumer reliance on online reviews further enrich the skepticism, online review, and self-efficacy literature.

Although promotion-focused people pursue an approach strategy and prevention-focused people pursue an avoidance strategy (Strauman and Wilson, 2010), the likelihood of promotion-focused versus prevention-focused people's reliance—approach versus avoidance—on online reviews in the presence of skepticism remained unknown. This study explains why some consumers are more likely to rely on online reviews and make review-based purchase decisions and, therefore, contributes to the online review literature. Consistent with the findings of Strauman and Wilson's (2010), and Roy and Naidoo's (2017), this study shows that promotion-focused people follow an approach strategy and rely more on online review to make a review-

based purchase decision. Whereas prevention-focused consumers pursue an avoidance strategy and hence withdraw from the review-based purchase decision. The findings of this study suggest that promotion-focused people are more likely to rely on online reviews than prevention-focused people despite similar levels of skepticism toward online reviews. These findings thus contribute to regulatory focus theory.

Managerial Implications

The results of this study have relevant implications for managers given that they show that consumers have high levels of skepticism about online reviews and firms thus need to be careful when they ask consumers to write reviews. This serves as an important warning to managers despite recent research that suggests that brands with stronger brand equity could benefit from directly requesting consumers to write online reviews (Ahmad and Guzmán, 2020). Specifically, this study demonstrates that a) aggressive review seeking may make consumers more suspicious about the reviews, b) firms need to provide more information about how to identify genuine reviews, and c) educated consumers will have higher review self-efficacy which results in a higher reliance on online reviews. Given that high skepticism toward online reviews results in low reliance on online reviews, firms need to work more on confidence building initiatives to reduce review-specific skepticism. Firms also need to consistently monitor their review sites to identify any potential false reviews and take the necessary actions when they find one, with the sole objective of creating confidence among consumers about the authenticity of the reviews. The results also suggest that promotion-oriented people are more likely to rely on online reviews and make review-based purchase decisions. Therefore, firms need to redesign their review sites to ensure that promotion-oriented people rely on their past experiences and success to feel confident about their future review-based decision making.

Limitations and Future Research

This study suggests that skepticism on online reviews results in less reliance on online reviews. However, what type of reviews consumers are more skeptical about was not analyzed. In line with Lis and Fischer (2020), future research should focus on understanding the type of statements in online reviews that create or increase skepticism among consumers. Furthermore, although it is evident that high review self-efficacy results in higher reliance on online reviews despite skepticism, given that review self-efficacy was manipulated, the likelihood of consumers' reliance on online reviews when consumers can identify true reviews from false reviews remains unknown. Although a similar level of reliance is expected, future research should focus on exploring and validating the true nature of this relationship. There are other potential factors that may influence consumers to make review-based purchase decisions despite their high skepticism toward online reviews. These factors, among others, could be the scarcity of information from other sources, the lack of alternatives, or the urgency to make a quick decision. Further research needs to be undertaken to find out other potential moderators. Moreover, skepticism toward online reviews may also depend on the strength of the brand. Consumers may have more trust on reviews of a strong rather than of a weak brand. The present study did not address this issue. Lastly, skepticism about online reviews can vary depending on the industry, product category, size of business, or consumer culture. Future research could extend this work to analyze if any differences exist depending on any of these variants. In particular, a cross-cultural study that explores the differences on how people react to skepticism in their online purchase behavior could prove very valuable given how online reviews can be read and accessed all over the world.

References

Ahmad, F. and Guzmán, F. (2020), "Brand equity, online reviews, and message trust: the moderating role of persuasion knowledge", *Journal of Product & Brand Management*, https://doi.org/10.1108/JPBM-09-2019-2564.

Albayrak, T., Caber, M., Moutinho, L. and Herstein, R. (2011), "The influence of skepticism on green purchase behavior", *International Journal of Business and Social Science*, Vol. 2 No. 13, pp. 189-197.

Akhter, S. H. (2014), "Privacy concern and online transactions: The impact of internet self-efficacy and internet involvement", *Journal of Consumer Marketing*, Vol. 31 No. 2, pp. 118-125.

Anderson, J. C. and Gerbing, D. W. (1988), "Structural equation modeling in practice: A review and recommended two-step approach", *Psychological Bulletin*, Vol. 103 No. 3, pp. 411-423.

Ayeh, J. K., Au, N. and Law, R. (2013), "Do we believe in TripAdvisor? Examining credibility perceptions and online travelers' attitude toward using user-generated content", *Journal of Travel Research*, Vol. 52 No. 4, pp. 437-452.

Bagozzi, R. P. and Yi, Y. (1988), "On the evaluation of structural equation models", *Journal of the Academy of Marketing Science*, Vol. 16 No. 1, pp. 74-94.

Bandura, A. and Locke, E. A. (2003), "Negative self-efficacy and goal effects revisited", *Journal of Applied Psychology*, Vol. 88 No. 1, pp. 87-99.

Becker-Olsen, K. L., Cudmore, B. A. and Hill, R. P. (2006), "The impact of perceived corporate social responsibility on consumer behavior", *Journal of Business Research*, Vol. 59 No. 1, pp. 46-53.

Banerjee, S., Bhattacharyya, S. and Bose, I. (2017), "Whose online reviews to trust? Understanding reviewer trustworthiness and its impact on business", *Decision Support Systems*, Vol. 96, pp. 17-26.

Block, L. G. and Keller, P. A. (1995), "When to accentuate the negative: The effects of perceived efficacy and message framing on intentions to perform a health-related behavior", *Journal of Marketing Research*, Vol. 32 No. 2, pp. 192-203.

Brinberg, D. and McGrath J. E. (1985), *Validity and Research Process*, Sage Publications, Beverly Hills, CA.

Chang, H. H. and Hung, I. W. (2018), "Mirror, mirror on the retail wall: Self-focused attention promotes reliance on feelings in consumer decisions", *Journal of Marketing Research*, Vol. 55 No. 4, pp. 586-599.

Chelariu, C. and Stump, R. (2011), "A study of work-family conflict, family-work conflict and the contingent effect of self-efficacy of retail salespeople in a transitional economy", *European Journal of Marketing*, Vol. 45 No. 11/12, pp. 1660-1679.

Chen, F. P. and Leu, J. D. (2011), "Product involvement in the link between skepticism toward advertising and its effects", *Social Behavior and Personality: an International Journal*, Vol. 39 No. 2, pp. 153-159.

Chen, G., Gully, S. M. and Eden, D. (2001), "Validation of a new general self-efficacy scale", *Organizational Research Methods,* Vol. 4 No. 1, pp. 62-83.

Chen, Y. H. and Barnes, S. (2007), "Initial trust and online buyer behaviour", *Industrial Management and Data Systems*, Vol. 107 No. 1, pp. 21-36.

Chylinski, M. and Chu, A. (2010), "Consumer cynicism: Antecedents and consequences", *European Journal of Marketing*, Vol. 44 No. 6, pp. 796-837.

Coulter, R. A., Price, L. L., Feick, L. and Micu, C. (2005), "The evolution of consumer knowledge and sources of information: Hungary in transition", *Journal of the Academy of Marketing Science*, Vol. 33 No. 4, pp. 604-619.

Crowe, E. and Higgins, E. T. (1997), "Regulatory focus and strategic inclinations: Promotion and prevention in decision-making", *Organizational Behavior and Human Decision Processes*, Vol. 69 No. 2, pp. 117-132.

Darke, P. R. and Ritchie, R. J. (2007), "The defensive consumer: Advertising deception, defensive processing, and distrust", *Journal of Marketing Research*, Vol. 44 No. 1, pp. 114-127.

Ellen, P. S., Bearden, W. O. and Sharma, S. (1991), "Resistance to technological innovations: An examination of the role of self-efficacy and performance satisfaction", *Journal of the Academy of Marketing Science*, Vol. 19 No. 4, pp. 297-307.

Elving, W. J. L. (2013), "Scepticism and corporate social responsibility communications: The influence of fit and reputation", Journal of Marketing Communications, Vol. 19 No. 4, pp. 277–292.

Filieri, R. (2016), "What makes an online consumer review trustworthy?", *Annals of Tourism Research*, Vol. 58, pp. 46-64.

Filieri, R., McLeay, F., Tsui, B. and Lin, Z. (2018), "Consumer perceptions of information helpfulness and determinants of purchase intention in online consumer reviews of services", *Information and Management,* Vol. 55 No. 8, pp. 956-970.

Friedman, R. S. and Förster, J. (2002), "The influence of approach and avoidance motor actions on creative cognition", *Journal of Experimental Social Psychology*, Vol. 38 No. 1, pp. 41-55.

Fu, F. Q., Richards, K. A., Hughes, D. E. and Jones, E. (2010), "Motivating salespeople to sell new products: The relative influence of attitudes, subjective norms, and self-efficacy", *Journal of Marketing*, Vol. 74 No. 6, pp. 61-76.

Ford, G. T., Smith, D. B. and Swasy, J. L. (1990), "Consumer skepticism of advertising claims: Testing hypotheses from economics of information", *Journal of Consumer Research*, Vol. 16 No. 4, pp. 433-441.

Fornell, C. and Larcker, D. F. (1981), "Evaluating structural equation models with unobservable variables and measurement error", *Journal of Marketing Research*, Vol. 18 No. 1, pp. 39-50.

Förster, J., Higgins, E. T. and Idson, L. C. (1998), "Approach and avoidance strength during goal attainment: Regulatory focus and the "goal looms larger" effect", *Journal of Personality and Social Psychology*, Vol. *75 No.* 5, pp. 1115.

Förster, J. and Higgins, E. T. (2005), "How global versus local perception fits regulatory focus", *Psychological Science*, Vol. 16 No. 8, pp. 631-636.

Gammon, J. (2014), "Americans rely on online reviews to make purchase decisions but at the same time they do not trust that reviews are true and fair", https://today.yougov.com/topics/lifestyle/articles-reports/2014/11/24/americans-rely-online-reviews-despite-not-trusting/ Accessed 25 February 2020.

Gaughan, M. E. (2003), "Heart healthy eating self-efficacy: An effective tool for managing eating behavior change interventions for hypercholesterolemia", *Topics in Clinical Nutrition*, Vol. 18 No. 4, pp. 229-244.

Giacobbi, Jr, P. R., Hausenblas, H. A. and Penfield, R. D. (2005), "Further refinements in the measurement of exercise imagery: The exercise imagery inventory", *Measurement in Physical Education and Exercise Science*, Vol. 9 No. 4, pp. 251-266.

Goh, S. K. and Balaji, M. S. (2016), "Linking green skepticism to green purchase behavior", *Journal of Cleaner Production*, Vol. 131, pp. 629-638.

Gottschalk, S. A. and Mafael, A. (2017), "Cutting through the online review jungle—Investigating selective eWOM processing", *Journal of Interactive Marketing*, Vol. 37, pp. 89-104.

Hanel, P. H. and Vione, K. C. (2016), "Do student samples provide an accurate estimate of the general public?", *PloS one* Vol. 11 No. 12, pp. e0168354.

Hansen, F. (1976), "Psychological theories of consumer choice", *Journal of Consumer Research*, Vol. 3 No. 3, pp. 117-142.

Hayes, A.F. (2018), *Introduction to mediation, moderation and conditional process analysis (2nd Ed)*, New York, NY: Guildford Press.

Hernández-Ortega, B. (2018), "Don't believe strangers: Online consumer reviews and the role of social psychological distance", *Information and Management*, Vol. 55 No. 1, pp. 31-50.

Higgins, E. T. (1998), "Promotion and prevention: Regulatory focus as a motivational principle", In *Advances in Experimental Social Psychology,* Vol. *30*, pp. 1-46.

Higgins, E. T. and Spiegel, S. (2004), "Promotion and prevention strategies for self-regulation", *Handbook of self-regulation: Research, theory, and applications*, pp. 171-187.

Hill, T., Smith, N. D. and Mann, M. F. (1987), "Role of efficacy expectations in predicting the decision to use advanced technologies: The case of computers", *Journal of Applied Psychology*, Vol. 72 No. 2, pp. 307-313.

Hogarth, R. M. and Einhorn, H. J. (1992), "Order effects in belief updating: The belief-adjustment model", *Cognitive Psychology*, Vol. 24 No. 1, pp. 1-55.

Hung, K. and Petrick, J. F. (2012), "Testing the effects of congruity, travel constraints, and self-efficacy on travel intentions: An alternative decision-making model", *Tourism Management*, Vol. 33 No. 4, pp. 855-867.

Jiménez, F. R. and Mendoza, N. A. (2013), "Too popular to ignore: The influence of online reviews on purchase intentions of search and experience products", *Journal of Interactive Marketing*, Vol. 27 No. 3, pp. 226-235.

Jöreskog, K. G. and Sörbom, D. (1996), *LISREL 8: User's reference guide*. Scientific Software International, 6-7.

Kirmani, A. and Zhu, R. (2007), "Vigilant against Manipulation: The Effect of Regulatory Focus on the Use of Persuasion Knowledge", *Journal of Marketing Research,* Vol. 44 No. 4, pp. 688-701.

Koo, D.-M. (2015), "The strength of no tie relationship in an online recommendation: Focused on interactional effects of valence, tie strength, and type of service", *European Journal of Marketing*, Vol. 49 No. 7/8, pp. 1163-1183.

Lee, A. Y., Aaker, J. L. and Gardner, W. L. (2000), "The pleasures and pains of distinct self-construals: The role of interdependence in regulatory focus", *Journal of Personality and Social Psychology*, Vol. 78 No. 6, pp. 1122-1134.

Lee, J., Park, D. H. and Han, I. (2011), "The different effects of online consumer reviews on consumers' purchase intentions depending on trust in online shopping malls: An advertising perspective", *Internet Research*, Vol. 21 No. 2, pp. 187-206.

Lis, B. and Fischer, M. (2020), "Analyzing different types of negative online consumer reviews", *Journal of Product & Brand Management*, Vol. 29 No. 5, pp. 637-653.

Locke, E. A., Frederick, E., Lee, C. and Bobko, P. (1984), "Effect of self-efficacy, goals, and task strategies on task performance", *Journal of Applied Psychology*, Vol. 69 No. 2, pp. 241-251.

Lu, L. and Gilmour, R. (2007), "Developing a new measure of independent and interdependent views of the self", *Journal of Research in Personality*, Vol. 41 No. 1, pp. 249-257.

Marcus, B. H. and Owen, N. (1992), "Motivational readiness, self-efficacy and decision-making for exercise 1", *Journal of Applied Social Psychology*, Vol. 22 No. 1, pp. 3-16.

McAuley, E. (1992), "The role of efficacy cognitions in the prediction of exercise behavior in middle-aged adults", *Journal of Behavioral Medicine*, Vol. 15 No. 1, pp. 65-88.

McAuley, E. and Blissmer, B. (2000), "Self-efficacy determinants and consequences of physical activity", *Exercise and Sport Sciences Review*, Vol. 28 No. 2, pp. 85-88.

Mendini, M., Peter, P. C. and Gibbert, M. (2018), "The dual-process model of similarity in cause-related marketing: How taxonomic versus thematic partnerships reduce skepticism and increase purchase willingness", *Journal of Business Research*, Vol. 91, pp. 195-204.

Newman, K. P. and Trump, R. K. (2019), "Reducing skepticism about corporate social responsibility: Roles of gender and agentic-communal orientations", *Journal of Consumer Marketing*, Vol. 36 No. 1, pp. 189-196.

Ngarmwongnoi, C., Oliveira, J. S., AbedRabbo, M. and Mousavi, S. (2020), "The implications of eWOM adoption on the customer journey", *Journal of Consumer Marketing*, https://doi.org/10.1108/JCM-10-2019-3450.

Obermiller, C. and Spangenberg, E. R. (1998), "Development of a scale to measure consumer skepticism toward advertising", *Journal of Consumer Psychology*, Vol. 7 No. 2, pp. 159-186.

Obermiller, C., Spangenberg, E. and MacLachlan, D. L. (2005), "Ad skepticism: The consequences of disbelief", *Journal of Advertising*, Vol. 34 No. 3, pp. 7-17.

Ouschan, R., Sweeney, J. and Johnson, L. (2006), "Customer empowerment and relationship outcomes in healthcare consultations", *European Journal of Marketing*, Vol. 40 No. 9/10, pp. 1068-1086.

Ozanne, M., Liu, S. Q. and Mattila, A. S. (2019), "Are attractive reviewers more persuasive? Examining the role of physical attractiveness in online reviews", *Journal of Consumer Marketing*, Vol. 36 No. 6, pp. 728-739.

Park, J. K. and John, D. R. (2014), "I think I can, I think I can: Brand use, self-efficacy, and performance", *Journal of Marketing Research*, Vol. 51 No. 2, pp. 233-247.

Pham, M. T. and Avnet, T. (2004), "Ideals and oughts and the reliance on affect versus substance in persuasion", *Journal of Consumer Research*, Vol. 30 No. 4, pp. 503-518.

Phillips, J. M. and Gully, S. M. (1997), "Role of goal orientation, ability, need for achievement, and locus of control in the self-efficacy and goal--setting process", *Journal of Applied Psychology*, Vol. 82 No. 5, pp. 792-802.

Reimer, T. and Benkenstein, M. (2018), "Not just for the recommender: How eWOM incentives influence the recommendation audience", *Journal of Business Research*, Vol. 86, pp. 11-21.

Reimer, T. and Benkenstein, M. (2016), "When good WOM hurts and bad WOM gains: The effect of untrustworthy online reviews", *Journal of Business Research*, Vol. 69 No. 12, pp. 5993-6001.

Roy, R. and Naidoo, V. (2017), "The impact of regulatory focus and word of mouth valence on search and experience attribute evaluation", *European Journal of Marketing*, Vol. 51 No. 7/8, pp. 1353-1373.

Ruiz-Mafe, C. Chatzipanagiotou, K., and Curras-Perez, R. (2018), "The role of emotions and conflicting online reviews on consumers' purchase intentions", *Journal of Business Research*, Vol. 89, pp. 336-344.

Ryckman, R. M., Robbins, M. A., Thornton, B. and Cantrell, P. (1982), "Development and validation of a physical self-efficacy scale", *Journal of Personality and Social Psychology*, Vol. 42 No. 5, pp. 891-900.

Rynarzewska, A. I. (2019), "It's not fake, it's biased: insights into morality of incentivized reviewers", *Journal of Consumer Marketing*, Vol. 36 No. 3, pp. 401-409.

Schuster, L., Drennan, J. and N. Lings, I. (2013), "Consumer acceptance of m-wellbeing services: A social marketing perspective", *European Journal of Marketing*, Vol. 47 No. 9, pp. 1439-1457.

Sher, P. J. and Lee, S. H. (2009), "Consumer skepticism and online reviews: An elaboration likelihood model perspective", *Social Behavior and Personality: An International Journal*, Vol. 37 No. 1, pp. 137-143.

Skarmeas, D. and Leonidou, C. N. (2013), "When consumers doubt, watch out! The role of CSR skepticism", *Journal of Business Research*, Vol. 66 No. 10, pp.1831-1838.

Smith, A., and Anderson, M. (2016), "Online reviews", http://www.pewinternet.org/2016/12/19/online-reviews/ Accessed 22 February 2020

Soh, H., Reid, L. N. and King, K. W. (2009), "Measuring trust in advertising", *Journal of Advertising*, Vol. 38 No. 2, pp. 83-104.

Soopramanien, D. (2011), "Conflicting attitudes and scepticism towards online shopping: The role of experience", *International Journal of Consumer Studies*, Vol. 35 No. 3, pp. 338-347.

Sparks, B. A. and Browning, V. (2011), "The impact of online reviews on hotel booking intentions and perception of trust", *Tourism Management*, Vol. 32 No. 6, pp. 1310-1323.

Spiller, S. A., Fitzsimons, G. J., Lynch Jr, J. G. and McClelland, G. H. (2013), "Spotlights, floodlights, and the magic number zero: Simple effects tests in moderated regression", *Journal of marketing research*, Vol. 50 No. 2, pp. 277-288.

Srinivasan, S., Rutz, O. J. and Pauwels, K. (2016), "Paths to and off purchase: Quantifying the impact of traditional marketing and online consumer activity", *Journal of the Academy of Marketing Science*, Vol. 44 No. 4, pp. 440-453.

Strauman, T. J., Socolar, Y., Kwapil, L., Cornwell, J. F., Franks, B., Sehnert, S. and Higgins, E. T. (2015), "Microinterventions targeting regulatory focus and regulatory fit selectively reduce dysphoric and anxious mood", *Behaviour Research and Therapy*, Vol. 72, pp. 18-29.

Strauman, T. J. and Wilson, W. A. (2010), "Behavioral activation/inhibition and regulatory focus as distinct levels of analysis", *Handbook of Personality and Self-Regulation*, pp. 47-473.

Sylvia-Bobiak, S. and Caldwell, L. L. (2006), "Factors related to physically active leisure among college students", *Leisure Sciences*, Vol. 28 No. 1, pp. 73-89.

Tan, S. J. and Tan, K. L. (2007), "Antecedents and consequences of skepticism toward health claims: An empirical investigation of Singaporean consumers", *Journal of Marketing Communications*, Vol. 13 No. 1, pp. 59-82.

Vlachos, P. A. (2012), "Corporate social performance and consumer-retailer emotional attachment", *European Journal of Marketing*, Vol. 46 No. 11/12, pp. 1559-1580.

Vlachos, P. A., Koritos, C. D., Krepapa, A., Tasoulis, K. and Theodorakis, I. G. (2016), "Containing cause-related marketing skepticism: A comparison across donation frame types", *Corporate Reputation Review,* Vol. 19 No. 1, pp. 4-21.

Wang, C. C. and Chien, H. Y. (2012), "Believe or Skepticism? An Empirical Study onIndividuals' Attitude to Blog Product Review", *International Journal of Innovation, Management and Technology*, Vol. 3 No. 4, pp. 343-349.

Webb, D. J. and Mohr, L. A. (1998), "A typology of consumer responses to cause-related marketing: From skeptics to socially concerned", *Journal of Public Policy and Marketing*, Vol. 17 No. 2, pp. 226-238.

Xie, C., Bagozzi, R. P. and Troye, S. V. (2008), "Trying to prosume: Toward a theory of consumers as co-creators of value", *Journal of the Academy of Marketing Science*, Vol. 36 No. 1, pp. 109-122.

Youn, S. and Kim, H. (2008), "Antecedents of consumer attitudes toward cause-related marketing", *Journal of Advertising Research*, Vol. 48 No. 1, pp. 123-137.

Zhang, L. and Hanks, L. (2017), "Consumer skepticism towards CSR messages", *International Journal of Contemporary Hospitality Management,* Vol. 29 No. 8, pp. 2070-2084.

Zhang, X. J., Ko, M. and Carpenter, D. (2016), "Development of a scale to measure skepticism toward electronic word-of-mouth", *Computers in Human Behavior*, Vol. 56, pp. 198-208.

Zhu, F. and Zhang, X. (2010), "Impact of online consumer reviews on sales: The moderating role of product and consumer characteristics", *Journal of Marketing*, Vol. 74 No. 2, pp. 133-148.

Appendix

Scale Measures

Variable	Operationalization	Source
Skepticism	- We can hardly depend on getting the truth from most online reviews. - Online reviews are not generally truthful. - In general, online reviews don't reflect the true picture of a subject. - Online reviewers care more about getting you to buy things. - Most online reviews are intended to mislead. - People writing online reviews are always up to something. - People writing online product reviews are not necessarily the real customers. - People write online reviews pretending they are someone else. - Different reviews are often posted by the same person under different names.	Zhang et al. (2016)
Reliance on online review	- I am willing to rely on the information conveyed on online review. - I am willing to consider the information conveyed on online review in developing my perception about the item. - I am willing to either recommend or non-recommend the product or service to my friends or family members based on the kinds of reviews people write about the product or service.	Soh et al. (2009)
Purchase decision	- I will not hesitate to make purchase decision based on online reviews. - I expect to use online review in my future purchase decision. - I intend to use online review in my future purchase decision. - It is very likely that I will use online review in my future purchase decision.	Ayeh et al. (2013)
Review self-efficacy	- I am confident that I can easily detect fake reviews - I am confident that I know which review to believe - I am better than other people in identifying genuine reviews - I know the basics that can be used to identify fake reviews	
Regulatory focus	In general, I am focused on preventing negative events in my life.	Lockwood et al. (2002)

Variable	Operationalization	Source
	• I am anxious that I will fall short of my responsibilities and obligations. • I frequently imagine how I will achieve my hopes and aspirations. • I often think about the person I am afraid I might become in the future. • I often think about the person I would ideally like to be in the future. • I typically focus on the success I hope to achieve in the future. • I often worry that I will fail to accomplish my academic goals. • I often think about how I will achieve academic success. • I often imagine myself experiencing bad things that I fear might happen to me. • I frequently think about how I can prevent failures in my life. • I am more oriented toward preventing losses than I am toward achieving gains. • My major goal in school right now is to achieve my academic ambitions. • My major goal in school right now is to avoid becoming an academic failure. • I see myself as someone who is primarily striving to reach my "ideal self"—to fulfill my hopes, wishes, and aspirations. • I see myself as someone who is primarily striving to become the self I "ought" to be—to fulfill my duties, responsibilities, and obligations. • In general, I am focused on achieving positive outcomes in my life. • I often imagine myself experiencing good things that I hope will happen to me. • Overall, I am more oriented toward achieving success than preventing failure.	
Self- construal	• I believe that people should try hard to satisfy their interests. • I believe that people should fully realize their potential. • I believe that people should have their own ideals and try hard to achieve them. • I believe that people should fully live up to their capabilities in any circumstances. • I believe that people should face up to challenges in the environment. • I believe that once a goal is set, one should do one's best to achieve it. • I believe that a happy life is the result of one's own efforts. • I believe that people should pursue their own welfare. • I believe that people should express their feelings in interpersonal interactions. • I believe that people should maintain their independence in a group. • I believe that people should be self-resilient and self-reliant.	Lu, and Gilmour (2007)

Variable	Operationalization	Source
	• I believe that interpersonal communication should be direct.	
	• I believe that people should express their opinions in public.	
	• I believe that people should be unique and different from others.	
	• I believe that people should retain independence even from their family members.	
	• For myself, I believe that others should not influence my self-identity.	
	• I believe that people should be direct with others.	
	• I believe that family and friends should not influence my important life decisions.	
	• I believe that people should try to achieve their goals at any costs.	
	• I believe that people should stick to their opinions in any circumstances.	
	• I believe that people should be the same at home and in public.	
	• I believe that family is the source of our self.	
	• I believe that success of the group is more important than success of the individual.	
	• We should be concerned about other people's dignity in interpersonal interactions.	
	• Once you become a member of the group, you should try hard to adjust to the group's demands.	
	• I believe that people should find their place within a group.	
	• I believe that the group should come first when it is in conflict with the individual.	
	• I believe that it is important to maintain group harmony.	
	• We should sacrifice our personal interests for the benefit of the group.	
	• I believe that the family should be a life unit.	
	• I believe that the success and failure of my family is ultimately related to my self-identity.	
	• I believe that people should perform their social roles well.	
	• I believe that people should behave appropriately according to different circumstances.	
	• I believe that people close to me are important parts of my self.	
	• I believe that people should behave appropriately according to their different social status and roles.	
	• Belonging to a group is important to my self-identity, or sense of myself.	
	• Acting appropriately is an important principle for me.	
	• I believe that intimate relationships could reflect one's self-identity.	
	• In the interest of maintaining interpersonal harmony, communication should be indirect.	
	• I believe that people should consider the opinions and reactions of the others before making decisions.	
	• I have a strong identification with people close to me.	

Variable	Operationalization	Source
	• My self-identity is the result of my social status.	

Manipulation of Review Self-Efficacy

High Review Self-Efficacy

WOW! You have done well in the test. You have been able to correctly answer eight out of the ten questions. Your result is extremely rare. You are one of the few people who are able to correctly identify whether the review is genuine or fake. Your score positions you within the top 5% of people who can correctly identify the fake reviews.

Congratulations!!!

Low Review Self-Efficacy

Sorry! You have poorly in the test. You have been able to correctly answer two out of the ten questions. Your result shows that your performance is below average. Your score positions you in the bottom 10% of people in terms of their ability to identify the difference between a genuine review and a fake review.

Good luck next time!!!

Regulatory Focus Manipulation

- Promotion focus
  - o Think about your past hopes, aspirations, and dreams and list two of them
  - o Think about your current hopes, aspirations, and dreams and list two of them
- Prevention focus
  - o Think about your past duties, obligations, and responsibilities and list two of them
  - o Think about your current duties, obligations, and responsibilities and list two of them

ESSAY 2

NEGATIVE ONLINE REVIEWS, BRAND EQUITY, AND EMOTIONAL CONTAGION*

Introduction

Despite the growing body of literature on the effect of negative online reviews on brands (Chen and Xie, 2008; Mudambi and Schuff, 2010; Singh and Pandya, 1991; Steward *et al.*, 2018), brand managers are yet to know if negative online reviews that address specific aspects of service quality have a more negative effect on brand equity than others (i.e., differential effect). For example, does a negative review specific to a brand's lack of responsiveness have a larger effect than a negative review specific to a brand's reliability? Given the sheer volume of online service reviews consumers write every day (Racherla and Friske, 2012) and the significance of reviews in consumer decision making (Chen and Huang, 2013; Motyka *et al.*, 2018), having a clear understanding of the effect of negative online reviews on brand equity is critical in today's marketplace. Moreover, consumers value negative reviews more than positive reviews (Sen and Lerman, 2007) and have a larger—detrimental—effect on a brand (Ho-Dac *et al.*, 2013). Given the characteristics of services (Furrer *et al.*, 2000; Grönroos 1982; Vargo and Lusch, 2008) the scope to write reviews is wide; plenty of things may go wrong when providing a service to consumers. The SERVQUAL model offered by Parasuraman *et al.* (1988) provides evidence of the multidimensionality of service quality and insight into aspects of a service that could go wrong. The model postulates five dimensions of service quality: tangibility, assurance, empathy, reliability, and responsiveness. This study explores if negative online reviews specific to some dimensions of service quality affect an organization's brand equity more than others.

If different negative reviews have different levels of negative effect on brand equity, what

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explains this differential effect? When consumers look at negative reviews written by another consumer, the emotion of the reviewer might transfer to the reader. This process is known as emotional contagion. Kramer *et al.* (2014, p. 8788) explain how "emotional states can be transferred to others via emotional contagion, leading people to experience the same emotions without their awareness." This paper argues that the level of emotional contagion depends on the severity of the negative reviews specific to different service quality dimensions the consumer reads (Fox *et al.*, 2018), and that this differential level of emotional contagion leads to a differential effect on the perceived brand equity of the service brand. This study thus specifically analyzes the role of emotional contagion in the relationship between negative reviews related to various service quality dimensions and its effect on perceived brand equity. Past literature also establishes that company responses to negative reviews posted by consumers help the company improve its trustworthiness in the eyes of other consumers (Hill Cummings and Yule, 2020; Sparks *et al.*, 2016) and enhance readers' attitudes, patronage intentions, and intentions to spread positive word of mouth (Dens *et al.*, 2015). Thus, it is possible that a service provider's response will help reduce the damaging effect of a SERVQUAL specific negative review on the organization's perceived brand equity. Therefore, this study additionally explores whether a service provider's response to a SERVQUAL specific negative review helps mitigate its damaging effect.

The contribution of this study to the brand equity and emotional contagion literature is threefold. First, despite the large body of literature on brand equity dilution (Becker-Olsen and Hill, 2006; Dawar and Pillutla, 2000; Diamantopoulos *et al.*, 2005) and how some SERVQUAL dimensions are more impactful than others in diluting brand equity (Chowdhary and Prakash 2007; Esmaeilpour *et al.*, 2016), existing studies do not explain if negative reviews regarding

specific service quality components have a larger effect on brand equity than others. This study attempts to fill this gap. Second, it explores the underlying mechanism behind the differential effect of negative reviews on brand equity, specifically the mediating role of emotional contagion, which has also been overlooked in past studies. Third, brand managers' response strategies to consumer complaints is a well-studied topic, however past research mostly focuses on how to best manage the complaining customer (Berger *et al.*, 2010; Sparks and Browning, 2011) and not on how to mitigate the damaging impact customer complaints may have on potential consumers. Although the effect of service failure on observing consumers (Van Vaerenbergh *et al.*, 2013) and of the managerial response to online reviews on readers of the reviews (Dens *et al.*, 2015) has been analyzed, none of these studies investigate what response strategy is better suited to lessen the effect of negative reviews on brand equity. As potential consumers see both the negative reviews and a brand's response to those reviews (Sparks and Browning, 2011), the right response strategy may work as a buffer against the effect of those negative reviews on brand equity. This study thus attempts to answer what type of responses are better for brand managers to provide to mitigate the damaging effect of negative reviews on brand equity.

The following section discusses the literature related to online reviews, SERVQUAL dimensions, brand equity, emotional contagion, and company responses to online reviews, and presents the study's hypotheses. Then, the method, analysis, and results are presented. A discussion of the study's results, implications, and limitations conclude the paper.

Theoretical Background and Hypotheses

SERVQUAL Based Negative Reviews And Brand Equity

Online reviews are a powerful tool for consumers to vent their emotion and frustration to

an organization in times when a delivered service is below their expectations. When reviewing a product, where the product itself is what might have presented a crucial issue, consumers are usually interested in writing about their product-specific experience. Consumers can objectively assess a product using criteria such as durability or defects (Crosby, 1979) and write a review about it. However, consumer complaints regarding services can be over a wide variety of issues, given that the experience of a service encounter is truly multidimensional (Brown and Swartz, 1989). Thus, consumers' reviews of their service encounters are multidimensional and varied (Salehan and Kim, 2016).

Parasuraman *et al.* (1988) develop a 22-item instrument to measure consumer perceptions of a service encounter and categorize those experiences into five service quality specific dimensions: tangibility, assurance, empathy, reliability, and responsiveness. Tangibility consists of variables such as physical facilities, equipment, and appearance of personnel. Reliability is the ability to perform the promised service dependably and accurately. Responsiveness is the willingness to help customers and provide prompt service. Assurance is the knowledge and courtesy of employees and their ability to inspire trust and confidence. Finally, empathy is the caring, individualized attention the firm provides its customers.

Past research demonstrates that consumers' perceived service quality has an effect on brand equity—defined as the differential effect of brand knowledge on consumer response to the marketing of the brand (Keller, 1993)—of a service organization (Berry, 2000; Parasuraman and Grewal, 2000). Nevertheless, whether a negative review specific to any SERVQUAL dimension has a stronger effect on brand equity than any other does, or whether consumers differentially evaluate a brand when they view negative online reviews written by other consumers specific to any of the five SERVQUAL dimensions, remains unanswered.

Past studies investigate the effect of SERVQUAL on brand equity on direct face-to-face service encounters. For example, Roshnee Ramsaran-Fowdar (2008) and Crompton and Mackay (1989) find that some dimensions are more important than others. Moreover, Chowdhary and Prakash (2007, p. 495) argue, "empathy and responsiveness were found to be more important for labor-intensive industry while tangibles and reliability affected the assessment of quality dimensions in case of capital-intensive services." Furthermore, Esmaeilpour *et al.* (2016) find a statistically significant effect of the SERVQUAL dimensions on brand equity, and identify that tangibility is the most significant among all the five dimensions. Their findings, in the fast food industry—which can be considered as labor-intensive—differ from Chowdhary and Prakash's (2007) who argue that in a labor-intensive industry empathy and responsiveness are more critical than the other three dimensions. Likewise, Jamal and Anastasiadou (2009) find that reliability, tangibility, and empathy are positively related to customer satisfaction, which in turn is positively related to brand loyalty. Although brand loyalty or preference is a dimension of brand equity (Aaker, 1991; Baalbaki and Guzmán, 2016; Keller, 2001), Jamal and Anastasiadou's (2009) findings do not provide insights on the effect of reliability, tangibility, and empathy on brand equity. He and Li (2010) argue that empathy, not reliability, has a direct effect on brand equity, but that reliability has a significant effect on service quality and value perception. It is worth noting that He and Li's (2010) results stem from studying the telecommunications industry, which is capital-intensive.

The vast amount of past research on the topic given industry (credibility) or service (experience) type differences supports the notion that the different variables of service quality may have a varying level of influence on brand equity. However, how consumers react to a message written by another consumer about a bad experience that relates to one of the five

service quality dimensions remains unexplored. Is it possible that a negative review written by a dissatisfied consumer about a particular SERVQUAL dimension has a stronger or weaker effect on potential consumers than a negative review about other dimensions?

Online reviews significantly influence potential consumers attitudes toward a product or organization (Huang *et al.*, 2011; Lee and Cranage, 2014), and their purchase decisions (Langan *et al.*, 2017; Ho-Dac *et al.*, 2013; Park *et al.*, 2007). Given their growing influence on consumer behavior, researchers have studied the effect of online reviews on consumer attitudes and purchase intentions (Chevalier and Mayzlin, 2006; Sen and Lerman, 2007; Zhang *et al.*, 2013). Past findings show that online reviews are more influential than offline word of mouth given their increased accessibility (Chatterjee, 2001), user-generated social media brand communication has a positive influence on brand awareness, brand image, and brand loyalty (Schivinski and Dabrowski, 2015), and electronic word of mouth significantly influences brand equity (Yang *et al.*, 2015). Likewise, traditional media is more influential than social media in creating brand awareness; although in creating brand image social media is more powerful than traditional media (Coulter *et al.*, 2012). None of the studies, however, focus on the effect of negative online reviews on brand equity.

A negative online review is defined as a consumer's writing of negative information about a product or service that they have consumed or experienced (Lee and Song, 2010). Negative online reviews can significantly damage the image of a brand and reinforce negative attitudes about a company or a product (Park and Lee, 2009; Qiu and Popkowski, 2016). Berger *et al.* (2010), Park and Kim (2008), and Vermeulen and Seegers (2009) support the notion that negative reviews can significantly influence both the attitude and behavioral intention of a consumer's purchase decision. Even before online reviews existed, compared to positive

reviews, negative reviews have provided more diagnostic value to consumers; consumers look for and rely more on negative rather than positive reviews to make their purchase decisions (Herr *et al.*, 1991). Furthermore, negative online reviews have a significant detrimental effect on brand equity and brand evaluation regardless of a brand having weak or strong brand equity (Chiou *et al.*, 2013). The more severe the negative review is, the higher the detrimental effect on the brand equity (Chiou *et al.*, 2013).

Past research shows that a person's attitude toward a brand (Chiou *et al.*, 2013), the reliance on reviews (Herr *et al.*, 1991), and the image of a brand and attitudes toward a company or product (Park and Lee, 2009; Qiu and Popkowski, 2016) can be affected by simply looking at posted negative reviews. The Pew Research Center finds that 82% of American adults read online reviews before purchasing any item (Smith and Anderson, 2016). Another study by YouGov finds that 90% of respondents consider online reviews very important in their purchase decisions (Gammon, 2014). Consistent with these studies, this study argues that consumers' perception about a brand's equity will be affected by reading SERVQUAL specific negative reviews. However, despite the evidence that negative online reviews matter, the extent of the effect of SERVQUAL specific negative reviews on brand equity is unclear. Past research on SERVQUAL and brand equity only focuses on the positive effect of SERVQUAL dimensions on different brand equity components (Berry, 2000; Crompton and Mackay, 1989; Esmaeilpour *et al.*, 2016; Jamal and Anastasiadou; 2009; Parasuraman and Grewal, 2000; Roshnee Ramsaran-Fowdar, 2008).

Nevertheless, past research on the effect of SERVQUAL dimensions on customer satisfaction is abundant. Online reviews related to responsiveness and reliability are the most frequently mentioned service attributes resulting in customer satisfaction or dissatisfaction (Yang

et al., 2003). The frequency of content specific to reliability (8.5%) is significantly lower than content specific to responsiveness (30.7%) in consumer satisfaction reviews, while in consumer dissatisfaction reviews, content specific to reliability (8.6%) is lower than content specific to responsiveness (29.4%) (Yang *et al*., 2003). Furthermore, responsiveness (19.13%) and empathy (20.57%) are the two most predominant topics consumers discuss in online reviews, and content specific to responsiveness (89.03%) is the most frequent in negative reviews (Palese and Usai, 2018). Responsiveness is not only the most relevant topic, but it can dramatically affect rating distribution (Palese and Usai, 2018). Moreover, responsiveness and empathy are the two dimensions that have most weight on the effect of negative consumer reviews on consumer dissatisfaction (Xu *et al.*, 2017), while tangibility and empathy are the two dimensions that consumers mostly write about in their negative reviews about hotels (Berezina *et al*. 2016). In a recent study, Slack *et al*. (2020) highlight the positive effect of empathy on customer satisfaction, customer repurchase intention, and word-of-mouth, and its negative effect on customer complaining behavior and price sensitivity. The extensive evidence of the differential effect of SERVQUAL based negative reviews on customer satisfaction provides further support to this study's argument that negative online reviews could potentially have a differential effect on brand equity.

Service organizations' brand equity largely relies on building an emotional connection with the consumer and on how well and personalized employees provide a service (Berry, 2000), highlighting the importance of the empathy, responsiveness, and tangibility dimensions. Lack of employee empathy has a greater likelihood to lead a consumer to write a negative review and has a more damaging effect on brand equity (Min *et al.*, 2015). Tangibility specific negative experiences persuade consumers to write negative online reviews at a higher rate (Fine *et al.*,

2017), and tangibility and responsiveness have the strongest effect on consumer perceived

service quality (Olorunniwo and Hsu, 2006). Likewise, tangibility and responsiveness have a

stronger effect on consumer brand loyalty than the other three dimensions (Kayaman and Arasli,

2007). Based on the review of the existing literature, it appears that consumers predominantly

write negative reviews about service failures specific to the responsiveness, empathy, and

tangibility SERVQUAL dimensions, while the reliability and assurance dimensions are

overwhelmingly missing. This study thus posits that negative reviews related to empathy,

responsiveness, and tangibility can significantly damage the emotional connection with

consumers and thus damage brand equity.

> *Hypothesis 1- negative reviews related to the tangibility, responsiveness, and empathy SERVQUAL dimensions have a more detrimental effect on brand equity than negative reviews related to the assurance and reliability dimensions.*

Emotional Contagion as a Mediator between the SERVQUAL Dimensions and Brand Equity

Emotional contagion is "the tendency to automatically mimic and synchronize

expressions, vocalizations, postures, and movements with those of another person's and,

consequently, to converge emotionally" (Hatfield *et al.*, 1993, p. 96). Emotional contagion

happens when people imagine themselves in others' situations. We adopt the following

definition of emotional contagion: "a process in which a person or group influences the emotions

or behavior of another person or group through the conscious or unconscious induction of

emotion states and behavioral attitudes" (Schoenewolf, 1990, p. 50). This study posits that

negative reviews written by other consumers will emotionally affect people who read the reviews

and will make the reader emotionally converge with the reviewer.

Past studies provide evidence of the transfer of moods among people in a group (Barsade,

2002; Du *et al.*, 2011). For example, emotional contagion arises in service encounters as positive

employee emotions positively affect customers (Hennig-Thurau *et al.*, 2006; Pugh, 2001). When employees show positive emotion to the customers during the time of a service encounter, employee emotion affects the consumers positively and that emotional contagion leads to evaluating the service quality positively (Pugh, 2001). Furthermore, an authentic employee emotional labor display positively affects customers' emotional states and leads to positive evaluations of a service encounter (Hennig-Thurau *et al.*, 2006). Does the same emotional contagion arise when a person reads a negative online review?

Studies on emotional contagion arising from online social network sites provide evidence of the spreading of happiness and emotion to other people through people's online status (Coviello *et al.*, 2014; Ferrara and Yang, 2015; Villarroel Ordenes *et al.*, 2017). Similar to a status posted on a social network site, online reviews posted on sites such as Yelp or Amazon could have a similar effect. "Literature provides initial support for the presence of emotional contagion in OCR contexts and a negativity bias with respect to the language effects of OCR effects on reader emotions and behavioral response" (Fox *et al.*, 2018, p. 43). If negative online reviews generate the greatest level of arousal by spreading a negative mood or emotion (Fox *et al.*, 2018), it is possible that stronger negative emotion would result in stronger behavioral response and thus result in a more detrimental effect on brand equity. Furthermore, when consumers' emotional contagion takes place in the form of anger or disappointment, consumers negatively evaluate a service encounter (Hennig-Thurau *et al.*, 2006; Pugh, 2001). This study thus suggests that negative reviews (SERVQUAL based) have a differential effect on brand equity because reviews related to some dimensions generate more anger or negative mood than reviews related to some other dimensions.

Within a hotel service context, negative reviews relate to the empathy dimension that

triggers an increased emotional contagion (Umasuthan *et al.*, 2017), which may lead to reduced brand equity. Barger and Grandey (2006) further argue that service quality appraisal, in terms of responsiveness and empathy, has a direct relationship with emotional contagion prompted by the employee and customer smiling behaviors. Miller *et al.* (1988) find a statistically significant relationship among empathy, responsiveness, and emotional contagion, while Liang *et al.* (2011) find that social responsiveness enhances social emotions. Therefore, we posit that a perceived lack of empathy and lack of responsiveness trigger a higher level of emotional reaction than a lack of any other of the three service dimensions. This argument is also supported by Clark and Taraban (1991) and Harker and Keltner (2001) who state that empathy triggers higher levels of emotion on both employees and consumers. Moreover, Omdahl and O'Donnell (1999) find that lack of employee empathy and responsiveness emotionally affects service receivers. Given that tangibility specific reviews only discuss the physical facilities, emotional contagion may not happen in that scenario. Likewise, failure to provide the service dependently and accurately may be perceived as not intentional by employees, and thus reliability specific reviews may prompt weaker emotional contagion than those related to empathy and responsiveness. Lastly, negative assurance specific reviews may also be perceived as caused by lack of employee training and not because of a deliberate employee action, and hence result in weaker emotional contagion.

Therefore, based on the inherent characteristics of five SERVQUAL dimensions and the evidence provided by Lin and Liang (2011), Pugh (2001), Barger and Grandey (2006), Miller *et al.* (1988) and Liang *et al.* (2011), this study posits that responsiveness and empathy will have stronger emotional contagion than other three dimensions. Additionally, emotional contagion will play a mediating role in the relationship between negative reviews (SERVQUAL specific) and brand equity.

Hypothesis 2- negative reviews related to the responsiveness and empathy dimensions create higher levels of emotional contagion than negative reviews related to the assurance, tangibility, and reliability dimensions.

Hypothesis 3- emotional contagion mediates the relationship between negative review (SERVQUAL specific) and brand equity.

Company Response to Negative Reviews

What happens when a company responds to a negative review posted by a disappointed consumer? Will a company's response mitigate the damage created by the negative reviews? Organizations try to respond to negative reviews hoping to reduce their negative effect on other consumers (Grégoire *et al.*, 2018; Sparks and Bradley, 2017; Sparks *et al.*, 2016). Although different types of responses have been studied, it is not clear what kind of response is more effective (Sparks and Bradley, 2017; Zhang and Vásquez, 2014). Past research has identified that the presence—versus absence—of a response helps reduce the adverse inferences drawn by the potential consumers (Sparks *et al.*, 2016), that a specific response is more effective to mitigate negative reviews (Wei *et al.*, 2013), and that responses are varied (Sparks and Bradley, 2017; Zhang and Vásquez, 2014). Sparks and Bradley (2017) argue that the majority of company responses fall into two categories: accommodative or defensive. A defensive response is defined as when "the firm either denies that the mentioned problems are attached to the product or itself (justifications) or negates the accused responsibility (excuses)" (Li *et al.*, 2018, p. 282). An accommodative response is defined as when "firms confess and take full or substantial responsibility for negative events, acknowledge the existence of the mentioned problems, express remorse, and attempt to remedy the damage" (Li *et al.*, 2018, p. 282). In an accommodative response, brands accept that the problem occurred because of their mistakes and that they are ready to take the necessary steps to offset the damage done (Li *et al.*, 2018).

Does type of response affect a consumer's evaluation of a company? In general, accommodative responses lead to better company evaluations than defensive responses (Lee and Song, 2010). Moreover, a defensive response may be risky even in a low negative word of mouth consensus situation given that readers may interpret it as an excuse to avoid assuming responsibility by the service organization. Additionally, defensive responses may lack the rigor to earn the confidence of, or elicit positive feelings from, the readers, both critical for a service organization to develop strong brand equity (Kimpakorn and Tocquer, 2010; Lassar *et al.*, 1995). Moreover, accommodative responses are useful to address specific product/service failure reviews and defensive reviews are effective to address ordinary—not specific—negative reviews (Li *et al.*, 2018). In a recent study Hill Cummings and Yule (2020) propose that providers should tailor recovery responses to consumers' emotional states, and identify that an accommodative empathetic response should be given when the consumer is focused on the avoiding a negative outcome. Another logic behind using an accommodative response is that negative reviews related to service failure tend to be specific, and Li *et al.*, (2018) find that an accommodative response is a better option to address specific product/service failure situations. Moreover, Lee and Song (2010) find that an accommodative response results in a more positive evaluation of a company, while Lee and Cranage (2014) argue that an accommodative response is better in a negative word of mouth situation.

Negative service quality reviews mostly refer to how employees failed to provide the expected service, an employees' lack of empathy or attention, or how the service itself failed to deliver what the company promised. For a company to respond to those reviews by shifting the blame on the consumers in support of its employees or providing external reasons for the failure may create an inverse effect on the brand. This study thus posits that consumers will have a more

favorable attitude after seeing an accommodative rather than a defensive response, thus resulting in a lesser negative effect on brand equity.

Hypothesis 4- An accommodative response is more effective than a defensive response in quelling the effect of a SERVQUAL specific negative review on brand equity.

The proposed conceptual framework of this study is presented in Figure 2.1.

Figure 2.1: Conceptual framework
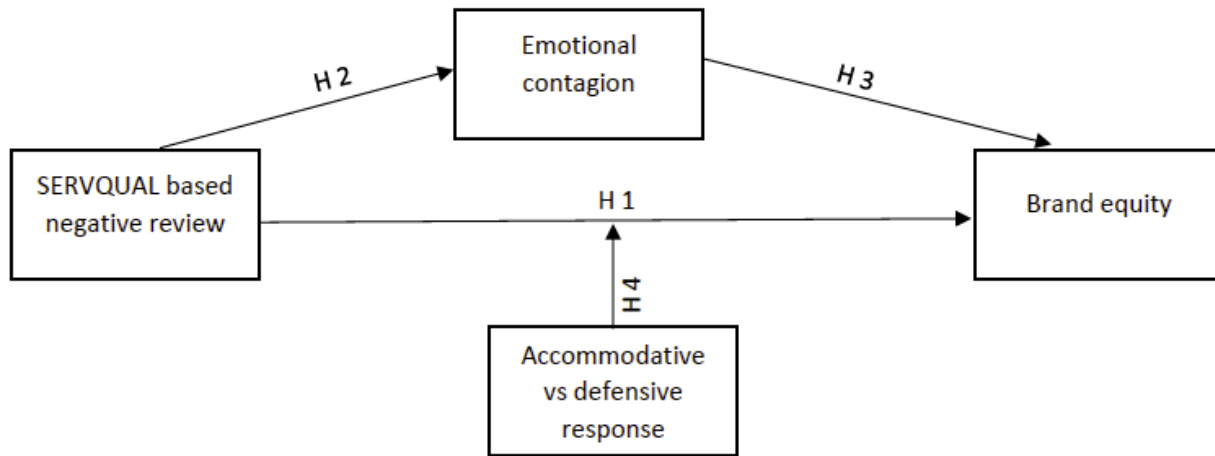
Methodology

The objectives of this study are to examine: 1) how negative consumer reviews (SERVQUAL specific) affect the brand equity of service organizations, 2) whether negative reviews trigger emotional contagion to others who are reading the negative reviews, and 3) what kind of company response helps mitigate the negative effect of negative online reviews. To test the proposed hypotheses, both field and experimental studies were conducted. Given the nature of the three experiments, a sample of student respondents was drawn for each from a research pool at a large university in the Southwestern United States in exchange for class credit with the objective of increasing the experiments' internal validity (Brinberg and McGrath, 1985; Hanel and Vione, 2016).

Pilot Study

A pilot study was conducted to ensure that reviews related to each particular

SERVQUAL dimension were seen accordingly. 49 participants from a large public university in

the U.S. were shown twenty online reviews related to the five service quality dimensions (four

reviews for each dimension). The definition of each SERVQUAL dimension was provided to the

respondents in order to make sure that the participants have adequate knowledge of each of the

dimension. After seeing a review, participants were asked which one of the service dimensions

the reviewer discussed in that review. Every dimension was correctly identified by at least 83%

of the respondents. These results suggest that the majority of the participants could identify the

correct SERVQUAL dimension that a particular review is about and thus were used in our three

experiments.

Study 1: Field Study

To understand whether consumers value some SERVQUAL dimensions more than

others, a text mining analysis of 10,000 consumer reviews collected from Datafiniti was

conducted. Datafiniti collects these reviews from different review sites. The selected reviews

were from the hotel industry in the U.S. between 2015 and 2018. SAS enterprise miner was used

to do the text mining analysis of the consumer reviews and a frequency-based text mining

approach was followed to conduct both descriptive and predictive text mining modeling. The

objective of the text mining analysis is not to statistically test the hypotheses but to provide

objective evidence that some dimensions (responsiveness, empathy, tangibility) have stronger

effect on brand equity.

Results

The result of the text analysis shows that terms such as staff, friendly, and good are

highly used in the reviews. The term staff is used in 1470 documents and is ranked as the 10th most used term. The term friendly is used in 845 documents, and is ranked 21st. The result of the text filter node shows that the term staff is highly connected to the term friendly, accommodating, and helpful. It is thus evident that consumers care about the friendliness of an employee and that they can be an example of the responsiveness or empathy dimensions. Figure 2.2 shows the terms that are highly associated with staff.

Figure 2.2: Terms that are associated with the word staff
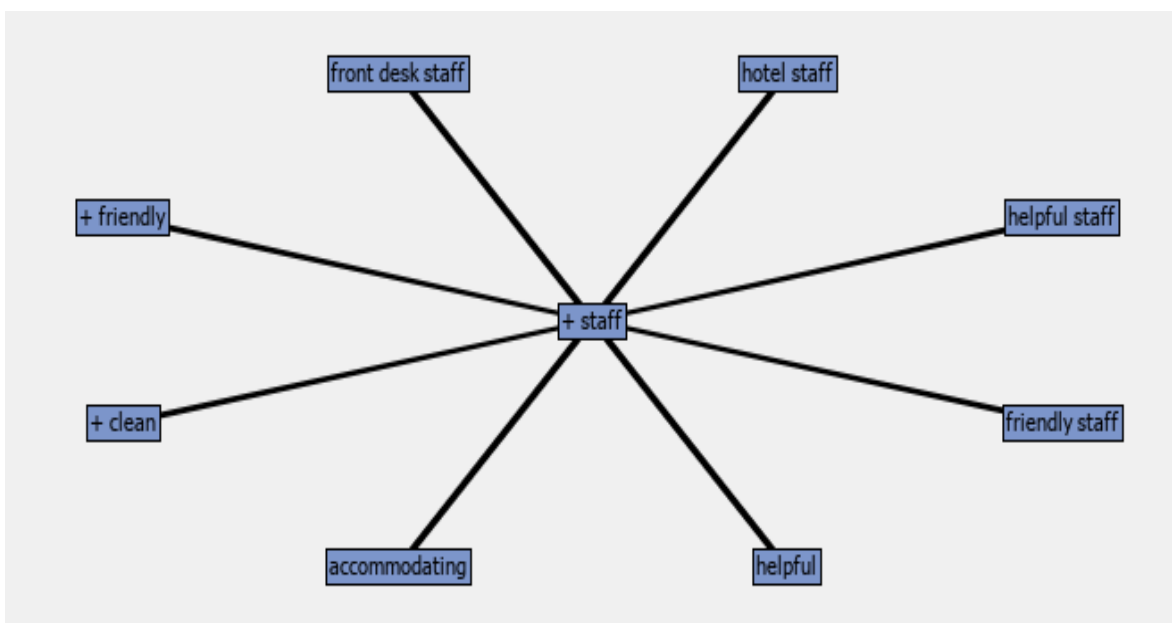
Furthermore, there is a relationship between staff and the intention to recommend the hotel to others—intention to recommend to others is a component of brand equity (Kim *et al.*, 2003; Vázquez *et al.*, 2002). Figure 2.3 shows the association between recommendation and staff.

The tangible aspect of a service was also found to be important in many consumer reviews. Consumers value a clean room, the term "clean" is mentioned in 1340 reviews and a total of 1530 times. The term "room" is mentioned in 2255 documents and is ranked as the number 1 term. Other tangibility dimension specific terms used are spacious (175 documents),

and amenity (119 documents). Not surprisingly, the term "clean" and "room" are clearly

connected.

Figure 2.3: Association between staff and recommendation
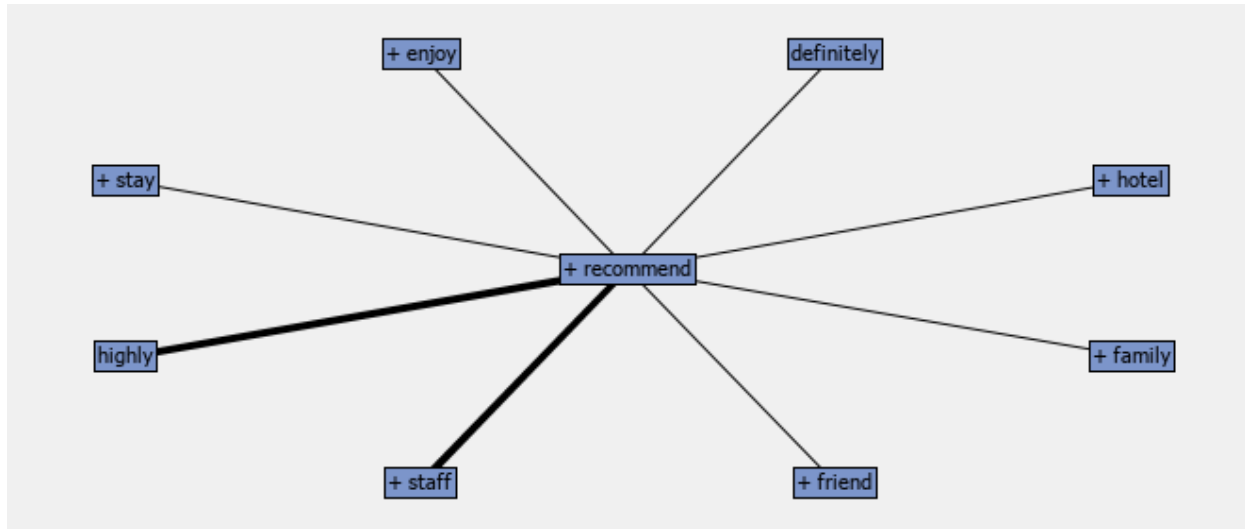
Next, text topic was run to understand how different terms are associated to each other.

This method develops a single term based on the associations among a group of words. The

results of this analysis show that the terms staff, pleasant, accommodating, and courteous group

into a single topic (these words are included in 1016 documents). Given that the word courteous

is part of the assurance dimension, it could be argued that the assurance dimension is equally

important. However, the word courteous was only found in 69 documents. Likewise, the word

knowledgeable, another component of the assurance dimension, was only found in 15

documents. Therefore, the consumers' use of words that are related to the assurance dimension

was considerably low compared to the words associated to the responsiveness and tangibility

dimensions. Table 2.1 shows some of the key word groupings.

The text topic results also provide evidence of the quantitative relationship between the

terms, more specifically the correlation that exists between terms. The results show that the word

staff is highly correlated (.954) with the grouping "staff, pleasant, accommodating, courteous,

definitely". The word enjoy is highly correlated (.872) with the term bathroom. Clean and clean room are highly correlated (.981), and serve as evidence of the importance a clean room has to consumers; the word clean showed up in 1340 documents, and ranked 6th.

Table 2.1: Key grouping words

Group	Number of documents
Staff, pleasant, accommodating, courteous, definitely	1016
Clean, Clean room, pool, room, area	1141
Friendly, Staff, Friendly staff, experience, super	811
Helpful, helpful staff, staff, wonderful people	539
Definitely, highly recommend, bathroom, look	355
Look old, property, bathroom, motel	398

Finally, a decision tree analysis was conducted to find out the nodes that influence consumers to give higher ratings. The results show that the name of the component where the first split occurs is "staff, pleasant, accommodating." Where the second split occurs is "first floor, bathroom, not dirty." The value of the importance of the grouping "first floor, bathroom, not dirty" is 1.00, while the second most important grouping is "staff, pleasant, accommodating" with a score of .99. This result supports the argument that the tangibility, responsiveness, and empathy dimensions have a stronger effect on brand equity—accommodating relates to the empathy dimension, bathroom and dirty relate to the tangibility dimension. When any one of these grouping variables are included in a consumer review, they are highly likely to give five stars. Finally, giving a five-star rating means that consumers find the quality of the service excellent (Guo *et al.*, 2017), want others to show that they recommend this brand (Duan *et al.*, 2008), and also are interested to exhibit their loyalty (Racherla and Friske, 2012). The terms quality, loyalty (Baalbaki and Guzmán, 2016; Kim *et al.*, 2003; Yoo and Donthu, 2001) and recommendation to others (Kim *et al.*, 2003) are important components of brand equity.

Analysis of Only Negative Reviews

Out of 10000 reviews, over 12% of the reviews are negative. The examination of these reviews reveal that the words related to the tangibility dimension are the most frequently used as part of their negative comments: room (ranked 1st), bed (ranked 8th), and bathroom (ranked 14th). The words staff, front desk staff, friendly, and helpful are also frequently used. Staff is mentioned 120 times (ranked 6th). When adding front desk employee to staff, their ranking is third. It is thus apparent that in addition to the tangibility dimension, consumers also used terms associated with the responsiveness or empathy dimensions. Furthermore, the concept linkage of the term "staff" shows that the term is connected to both "helpful" and "friendly." In terms of weight, the highly weighted terms are bad (weight .44), staff (weight .11), and noisy (weight .11). The text topic analysis further shows that a large number of terms that consumers mentioned in their reviews are related to the tangibility dimension. Table 2.2 provides evidence of the tangibility dimension specific terms used in the reviews.

Table 2.2: Frequently used tangibility dimension specific words

Group	Number of documents
Old, look, bed, worn	72
Bed, pillow, sheet, blanket, sleep	71
Carpet, dirty, floor, bug, wall	68
Loud, night, noise, hear, door	63
Smoke, smell, non-smoke, non-smoking room, burn	50

A cluster analysis further reveals that the terms that form clusters are highly related to the tangibility, responsiveness, and empathy dimensions. For example, the terms that form the first cluster consists of bed, old, carpet, clean, dirty, and bathroom, while those that form the second cluster are staff, bad, service, and customer. To provide more conclusive evidence, a regression analysis was conducted. Reviews that could be specifically attributed to a particular

SERVQUAL dimension were selected. 1018 negative reviews that could be specifically

attributed to one of the five SERVQUAL dimensions were identified. The review ratings served

as the dependent variable while the dimension specific reviews were the independent variables.

The results suggest that the overall model is statistically significant ($F (5, 1011) = 10.65$, $p <$

.001), which means that reviews specific to the responsiveness, empathy, or tangibility

dimensions are more likely to receive low review ratings compared to reviews specific to the

reliability and assurance dimensions. Regarding specific individual variables, empathy (mean

review rating 1.59, $p < .05$), responsiveness (mean review rating 1.57, $p < .05$), are statistically

significant at a 5% level and tangibility (mean review rating 1.66, $p = .07$) at a 10% level.

However, assurance (mean review rating 2.06, $p > .10$), and reliability (mean review rating 1.89,

$p > .10$) are not. These findings suggest that negative reviews specific to empathy or

responsiveness lead consumers to give poor review ratings. Whereas the effects of assurance and

reliability specific negative reviews on assigning poor ratings are not statistically significant.

Figure 2.4: Emotion exhibited in consumers' reviews
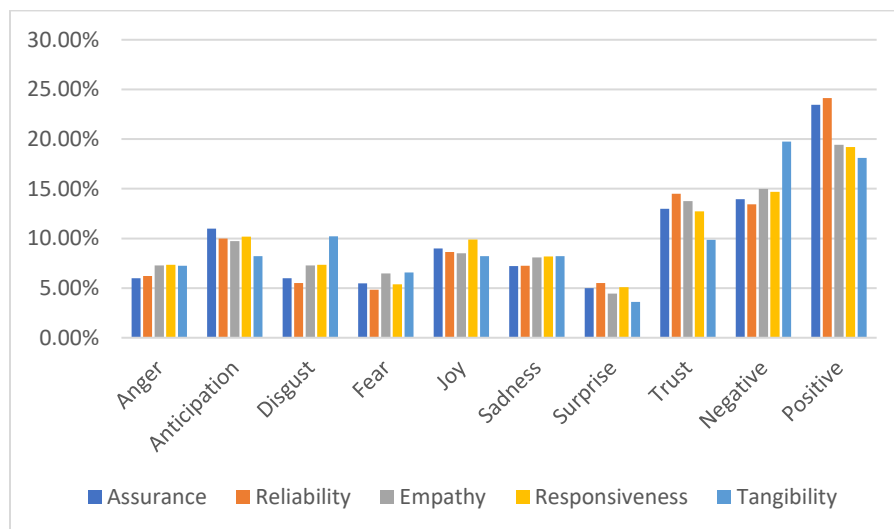
Furthermore, the results of a decision tree analysis suggest two decision tree nodes: one

group consists of empathy, responsiveness, and empathy specific reviews (mean review rating

1.63), while another node consists of reliability and assurance specific reviews (mean review rating 1.96). Finally, a sentiment analysis using R was conducted to examine the emotional component of the reviews categorized in each of the five dimensions. The sentiment analysis captures ten kinds of emotions and its results show that negative sentiments such as anger, disgust, sadness, and negativity are much higher in responsiveness, empathy, and tangibility specific reviews than compared to the other two dimensions (see figure 2.4).

Summary of the Findings

Overall, the text mining analysis of the 10,000 reviews signals that consumers' online reviews are significantly concentrated on the tangibility, responsiveness, and empathy dimensions. The rank order, text topic, decision tree, and cluster analyses provide some keywords of consumer reviews specific to those three dimensions. More specifically, the decision tree analysis shows that tangibility and responsiveness are the two most important reasons for receiving 4.5 (and above) star reviews. The regression analysis further reveals that SERVQUAL dimensions have a statistically significant effect on consumers' review ratings. However, an objective testing of the hypotheses is not possible with only a text mining analysis. Pearl and Mackenzie (2018) in their book mention that sometimes big data-based analysis may not be enough to find a solution to a causal model and thus need a carefully crafted causal model. Therefore a series of experimental studies to test the proposed hypotheses were conducted.

Study 2: Experimental Study

Method

One hundred forty-five undergraduate students (57.2% male, median age between 18 and 22) from a large public university in the U.S. participated in this study for extra credit. Participants were randomly assigned to one of the five SERVQUAL dimensions—

responsiveness, assurance, empathy, tangibility, and reliability. In each condition, participants saw a Yelp review of a restaurant written by other customers where the reviewer discusses a negative experience about a specific SERVQUAL dimension (see Appendix). The name and picture of the reviewer were blurred to avoid any potential effect on participants' responses. A fictitious restaurant name was used to avoid any effect familiarity with the restaurant could have. After reading the reviews, participants responded brand equity related questions adapted from Lassar *et al.* (1995) (Cronbach alfa = .95; CR = .95, AVE = .67) (see Appendix). The scale items were well-suited for the experimental manipulation developed for each of the five conditions, and an acceptable instrument tool to measure customer-based brand equity. Following, participants' trust, understandability, readability, and attitude towards the review, as well as familiarity with the restaurant, were measured (one scale item) to identify the existence of any alternative explanation.

Results

Manipulation Check

Participants answered the question "what kind of service quality is discussed in the review?" and the definition of each service quality dimension was shown to them. Overall, 91% of the respondents could correctly identify the type of service quality dimension that was discussed in the review.

*Effect on Brand Equity*

Structural equation modeling (SEM) (Anderson and Gerbing, 1988; Bagozzi and Yi, 1988) was used to examine the effect of SERVQUAL dimension on brand equity. Based on Bagozzi and Yi (1988), the global fit indices indicate a good model fit ($\chi 2 = 59.17$, df = 41, p value = 0.03; RMSEA = 0.05; GFI = 0.96; AGFI = 0.91; NFI = 0.96; NNFI = 0.98; CFI = 0.99;

and SRMR = 0.06). The results suggest that SERVQUAL dimension is a statistically significant predictor ($p < .05$) of all brand equity components with a negative effect: performance (t- statistic = -10.38, estimates = -.70), social image (t- statistic = -10.64, estimates = -.95), value (t- statistic = -8.30, estimates = -.70), trustworthiness (t- statistic = -9.85, estimates = -1.00), attachment (t- statistic = -9.71, estimates = -.95).

A one-way ANOVA reveals a statistically significant main effect of negative reviews (SERVQUAL dimension) on brand equity ($F (4, 140) = 33.20$, $p < .001$, η^2 .49). This result suggests that reviews related to the SERVQUAL dimension have a differential effect on brand equity. The result further shows that the mean brand equity values of each SERVQUAL dimensions are: reliability (5.17), assurance (3.99), empathy (3.00), responsiveness (3.10), and tangibility (2.92). These mean values show that negative reviews related to empathy, responsiveness, and tangibility dimensions have a more detrimental effect on brand equity (as lower mean value suggests higher negative perception about the brand equity) than reviews related to the other two dimensions. The result of a pairwise comparison provides further support to hypothesis 1. The mean differences between the responsiveness and reliability dimensions and between the responsiveness and assurance dimensions are statistically significant ($p < .001$). Whereas the mean differences between the responsiveness and empathy dimensions ($p > .69$) and between the responsiveness and tangibility dimensions ($p > .44$) are not. Furthermore, the mean differences between the empathy and reliability dimensions and between the empathy and assurance dimensions are statistically significant ($p < .001$); whereas the mean difference between the empathy and tangibility dimensions is not ($p > .72$). Finally, the mean differences between the tangibility dimension and both the reliability and assurance dimensions are statistically significant ($p < .001$). Post hoc test using Tukey also showed a similar result. Figure

2.5 shows the mean brand equity value for each dimension.

Figure 2.5: Mean brand equity value of the five SERVQUAL dimensions
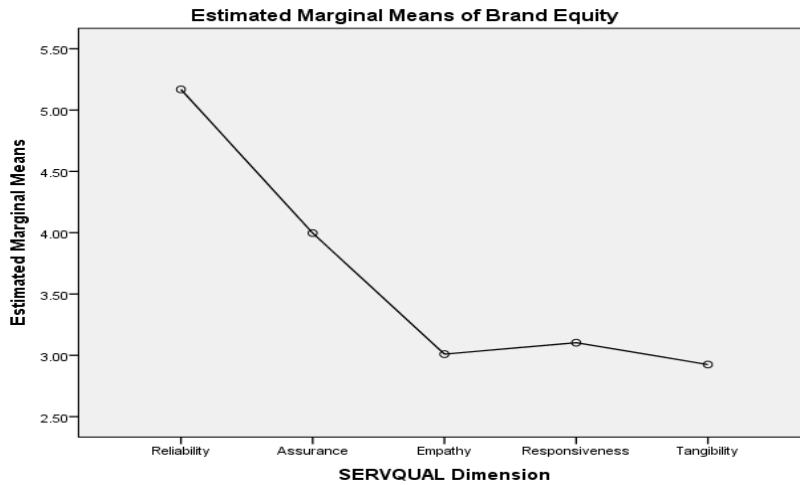
In sum, the findings show that participants who saw a negative review related to either the empathy, tangibility, or responsiveness dimensions have a lower perceived brand equity of the restaurant compared to those participants who saw a negative review related to either the reliability or assurance dimensions.

Alternative Explanation

Other factors such as trust on the review may have affected how participants of each condition responded. However, the effect of the SERVQUAL dimensions on trust on the review is not statistically significant ($F (4, 140) = 2.28$, $p > .05$). Multiple comparison results show that the mean value of the trust on the review on any of the dimensions is not significantly different from others. Likewise, the mean difference of the values of consumers usually reading online reviews are almost same in all five conditions and not statistically significant ($F (4, 140) = .41$, $p > .10$). Similar non-significant results were found for participants' usage of online reviews before selecting a restaurant ($F (4, 140) = .46$, $p > .10$), writing online reviews ($F (4, 140) = 1.74$, $p > .10$), the readability of the reviews ($F (4, 14) = .43$, $p > .10$), the understandability of the reviews

(F (4, 140) = 1.20, p > .10), and the familiarity with the restaurant (F (4, 140) = 1.64, p > .10).

All of these non-significant results rule out the possibility of alternative explanations.

Summary of the Findings

The SEM results suggest that SERVQUAL specific negative reviews affect brand equity. More importantly, the ANOVA analysis provides evidence that negative reviews specific to the tangibility, responsiveness, and empathy dimensions have a larger negative effect on brand equity than reviews specific to the other two dimensions; providing support to hypothesis one. However, the underlying reasons behind this differential effect are not revealed by this study. Study 3 sets to reveal these reasons and test the proposed hypotheses in a different context— hotel reviews instead of restaurant reviews.

Study 3: Experimental Study

Method

One hundred twenty-five undergraduate students (57.6% female, median age between 18 and 22) from a large public university in the U.S. participated in this study for extra credit. First, five different reviews specific to each SERVQUAL dimension were selected. A setting similar to the one found in Yelp was used to provide review authenticity. Similar to Study 2, reviewer's names and faces were blurred (see appendix). Then, participants were randomly assigned to read reviews one of the five SERVQUAL dimensions—responsiveness, assurance, empathy, reliability, tangibility. Participants' emotional state was measured before (time 1) and after (time 2) the exposure to the reviews, following Barsade's (2002) procedure. The scale to measure emotional contagion was borrowed from Barsade (2002) (Cronbach alfa = .93, CR = .95, AVE = .65 at time 1, and Cronbach alfa = .95, CR = .95, AVE = .68 at time 2) and the items are included in Appendix D. The mean difference of the emotional contagion before and after the exposure to

review of each respondent was used to examine the effect of the negative reviews and the effect of emotional contagion on brand equity. Brand equity was measured using Lassar *et al.* (1995) scale (Cronbach alfa = .96, CR = .96, AVE = .71). Finally, understandability, readability, participants' trust, and attitude towards the review, as well as familiarity with the restaurant, were measured to identify the existence of any alternative explanation.

Results

Manipulation Check

Participants were asked the type of service quality that was discussed in the review and 84% of the respondents identified it correctly.

Effect on Emotional Contagion

Structural equation modeling (SEM) (Anderson and Gerbing, 1988; Bagozzi and Yi, 1988) was conducted to examine the effect of SERVQUAL dimension on emotional contagion. Based on Bagozzi and Yi (1988), the global fit indices indicate a good model fit ($\chi2$ = 36.54, df = 26, p value = 0.08; RMSEA = 0.05; GFI = 0.95; AGFI = 0.88; NFI = 0.98; NNFI = 0.99; CFI = 0.99; and SRMR = 0.04). The results suggest that SERVQUAL dimension is a statistically significant predictor of emotional contagion (t- statistic = -2.40, estimates = -.20, p < .05).

A one-way ANOVA reveals that the effect of SERVQUAL specific negative reviews on emotional contagion is statistically significant (F (4, 120) = 3.81, p < .01, η^2 .11). The mean value of emotional contagion is higher when the negative review is related to the responsiveness (M = 1.00, SD = 1.25) and empathy dimensions (M = 1.00, SD = 1.23), and lower when related to assurance (M = .30, SD = .95), reliability (M = .11 SD = .95), and tangibility (M = .42, SD = .87) dimensions. Given that the participants' emotional state was collected two times, once before and again after reading the reviews, the data was further analyzed using repeated measure

ANOVA. The results suggest that both time ($F_{(1, 120)} = 36.13$, $p < .01$) and the interaction effect of time and SEVQUAL dimension ($F_{(4, 120)} = 3.81$, $p < .01$) are statistically significant predictors of emotional contagion. The mean difference between the emotional state at time 1 and time 2 is also statistically significant (MDIF = .57, $p < .01$). Figure 2.6 shows the emotional state of participants before and after reading the reviews.

Figure 2.6: Emotion before and after reading the reviews
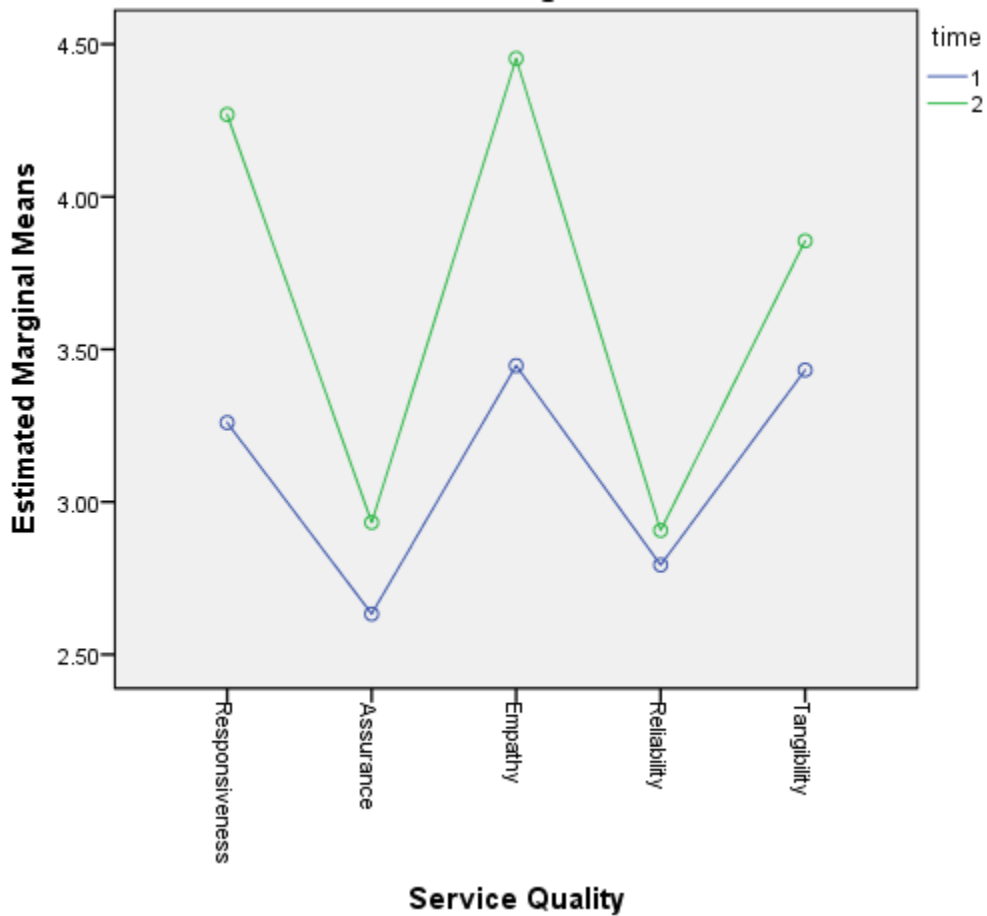
Furthermore, a contrast analysis also suggests that the mean differences of emotional contagion between the responsiveness and assurance conditions ($M_{DIF} = .70$), the responsiveness and reliability conditions ($M_{DIF} = .89$), and the responsiveness and tangibility conditions ($M_{DIF} = .58$) are significant at a 5% level. The same is applicable for the empathy condition as the mean differences between empathy and assurance, between empathy and reliability, and between

empathy and tangibility dimensions are statistically significant at 5%. These results support

hypothesis 2, that negative reviews specific to the responsiveness and empathy dimensions result

in higher levels of emotional contagion than negative reviews related to the assurance, reliability,

and tangibility dimensions.

Effect on Brand Equity

The same SEM analysis suggests both SERVQUAL and emotional contagion affect

brand equity. The results suggest that SERVQUAL dimension is a statistically significant

predictor ($p < .05$) of all but one (performance) brand equity components with a negative effect:

social image (t- statistic = -4.75, estimates = -.42), value (t- statistic = -2.06, estimates = -.28),

trustworthiness (t- statistic = -3.50, estimates = -.34), attachment (t- statistic = -3.66, estimates =

-.3305). Likewise, emotional contagion is also a statistically significant predictor ($p < .05$) of all

brand equity components with a negative effect: performance (t- statistic = -8.82, estimates = -

.91), social image (t- statistic = -16.09, estimates = -.1.09), value (t- statistic = -9.09, estimates =

-.89), trustworthiness (t- statistic = -16.76, estimates = -1.06), attachment (t- statistic = -14.33,

estimates = -1.03). Thus, SERVQUAL specific negative reviews result in emotional contagion

and that emotional contagion then affects all of a brand's equity components. This is further

explained with a mediation analysis presented in the following section.

An ANOVA analysis suggests that the effect of SERVQUAL specific negative reviews

on brand equity is also statistically significant ($F (4, 120) = 4.08$, $p < .01$, η^2 .12). The mean

brand equity values of the responsiveness (M =2.19, SD =1.75), empathy (M =2.32, SD =.87),

and tangibility (M = 2.20, SD =.79) dimensions are lower than those of the assurance (M = 3.21,

SD =1.26) and reliability (M = 3.33, SD =1.98) dimensions. A contrast analysis suggests that the

mean differences between the responsiveness and assurance conditions (M_{DIF}= 1.01) and

between the responsiveness and reliability conditions (M_{DIF} = 1.14) are significant at a 5% level. The same is true for the empathy and tangibility conditions in their comparisons to the assurance and reliability conditions. These statistically significant results suggest that negative reviews related to the responsiveness, empathy, and tangibility dimensions result in an increased negative effect on brand equity compared to negative reviews related to the assurance and reliability dimensions. These findings further support hypothesis one.

Emotional Contagion as a Mediator

To test whether emotional contagion mediates the relationship between SERVQUAL specific negative reviews and brand equity, a bootstrapped mediation analysis was conducted using the PROCESS SPSS macro (Hayes, 2018, model 4, 5000 bootstrap samples). In the Hayes model, SERVQUAL dimensions are used as multicategorical independent variable and responsiveness was used as the base category. The results suggest that both the effect of the SERVQUAL specific negative reviews on emotional contagion (F (4,120) = 3.81, p < .01) and the effect of emotional contagion on brand equity (b = -.25, SE = .12, p = .04 95% CI [-.49, -.02]) are statistically significant. More importantly, the indirect path of the responsiveness vs assurance is .17 and the CI is [.01, .41]. The indirect path of the responsiveness vs empathy is .00 and the CI [-.17, .20] is not significant as we hypothesized that both responsiveness and empathy will result in higher emotional contagion. The indirect path of responsiveness vs reliability (.23, CI [.03, .49]) and the responsiveness vs tangibility (.15, CI [.01, .39]) are both positive and statistically significant which only suggest that responsiveness results in higher emotional contagion than both the reliability and tangibility. The statistically significant indirect path suggests that emotional contagion partially mediates the relationship between SERVQUAL specific negative reviews and brand equity, supporting hypothesis 3.

Evidence of Emotional Contagion

To strengthen the argument that emotional states transfer from the review writer to the review reader, a sub-study with 133 new participants was conducted. Five different scenarios were developed based on the original reviews that participants saw in the main study. For example, participants assigned to the responsiveness condition were asked to imagine being in a scenario created based on the responsiveness specific negative reviews that participants of the main study saw. Participants were randomly assigned to one of the five scenarios, asked to write a review, and then their emotional state was measured.

The results show that the emotional state of the review reader and the review writer is almost identical in all five conditions. For the responsive condition, the mean emotional state value of review writer (M = 5.05, SD = 2.08) is similar to review reader (M = 4.85, SD = 1.62) and not statistically significant (MDIF = .20), $p > .10$. The same is true for the assurance (Writer: M = 3.59, SD = 1.68; Reader: M = 3.13, SD = 1.78; MDIF = .46), $p > .10$), empathy (Writer: M = 4.49, SD = 2.16; Reader: M = 4.45, SD = 2.04; MDIF = .04), $p > .10$), tangibility (Writer: M = 4.24, SD = 1.78; Reader: M = 4.10, SD = 2.11; MDIF = .14), $p > .10$) and reliability conditions (Writer: M = 3.57, SD = 1.57; Reader: M = 3.10, SD = 1.91; MDIF = .47), $p > .10$). These statistically insignificant mean differences suggest that the emotional state is similar for both groups and further prove the existence of emotional contagion.

Alternative Explanation

Similar to the previous study, participants' trust of the review, familiarity with the restaurant, usage of online reviews, writing of online reviews, and readability of the reviews was measured. The mean differences were not statistically significant for any of the variables, ruling out alternative explanations.

Summary of the Findings

Study 3 provides further support for the first hypothesis that negative reviews specific to tangibility, responsiveness, and empathy have a larger negative effect on brand equity than the other two dimensions. Furthermore, this study reveals that the emotion the reviewer transmits to the reader is the underlying reason behind the differential effect of negative reviews on brand equity. Specifically, reviews related to the responsiveness and empathy dimensions generate a higher level of emotional contagion than the other three dimensions, resulting in a larger negative effect on brand equity. However, the question of how managers can better respond to reduce the effect of negative reviews remains unanswered. Both an accommodative and defensive strategy are examined in past studies that show that the effectiveness either one of these two responses depends on the nature of the revi*ews* (Li et al., 2018)*.* Study 4 sets to reveal whether an accommodative or defensive response strategy is more effective when the brand is dealing with SERVQUAL specific negative reviews.

<div align="center">Study 4: Experimental Study</div>

Method

Three hundred fifty people (45.5% female, median age between 29 and 34) recruited through Amazon MTurk participated in this study. The same study design developed for the first two experimental studies was followed. Five different types of consumer reviews about a fictitious restaurant, specific to each SERVQUAL dimension—assurance, empathy, reliability, responsiveness, and empathy—were created. The restaurant manager's responses—either accommodative or defensive—were then added. In total, ten conditions (see appendix) were created and participants were randomly assigned to each. After viewing the reviews, participants answered questions related to brand equity adopted form Lassar *et al.* (1995) (Cronbach alfa =

.96, CR = .97, AVE = .72). Following, participants' trust, understandability, readability, and attitude towards the review, as well as familiarity with the restaurant, were measured to identify the existence of any alternative explanation.

Results

Manipulation Check

Participants in this study were asked to identify the type of SERVQUAL dimension that was discussed in that review. 88% of the respondents were able to correctly identify the type of dimension discussed in the review. Then participants were asked to identify the type of response that managers provided. 92% of the respondents could accurately identify whether the restaurant manager's response was defensive or accommodative.

Effect on Brand Equity

As in the two previous studies, structural equation modeling (SEM) (Anderson and Gerbing, 1988; Bagozzi and Yi, 1988) was first used to examine the effect of SERVQUAL dimension on brand equity. Based on Bagozzi and Yi (1988), the global fit indices indicate a good model fit ($\chi2 = 75.07$, df = 31, p value = 0.0; RMSEA = 0.06; GFI = 0.96; AGFI = 0.92; NFI = 0.98; NNFI = 0.98; CFI = 0.99; and SRMR = 0.02). The results suggest that SERVQUAL dimension is a statistically significant predictor ($p < .05$) of all brand equity components, with a negative effect: performance (t- statistic = -9.37, estimates = -.75), social image (t- statistic = -27.37, estimates = -.97), value (t- statistic = -13.51, estimates = -.77), trustworthiness (t- statistic = -28.10, estimates = -.97), attachment (t- statistic = -27.95, estimates = -.98).

A 5 (service quality specific review—assurance, empathy, reliability, responsiveness and tangibility) × 2 (management response—defensive vs. accommodative) ANOVA revealed a significant main effect of SERVQUAL specific negative reviews on brand equity ($F(4, 340) =$

8.61, $p < .001$, η^2 .09), of management response ($F(1, 340) = 35.74$, $p < .001$, η^2 .10), and an interaction effect of service quality review and management response ($F(4, 340) = 2.82$, $p = .025$, η^2 .03) (see figure 2.7).

Figure 2.7: Defensive vs. accommodative
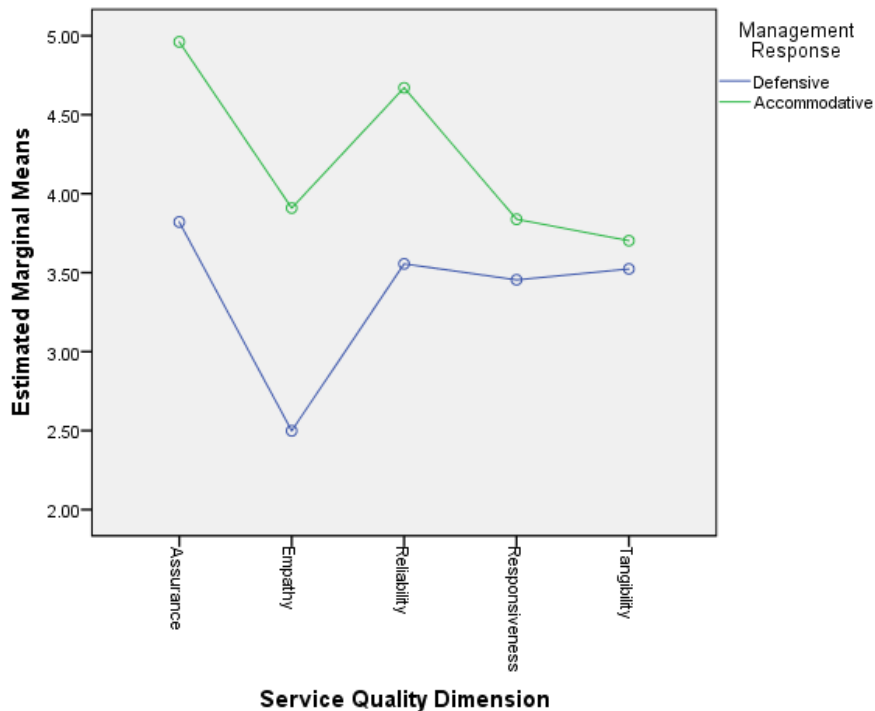
The results show that participants' perception of brand equity is lower when assigned to either the empathy ($M = 3.20$, $SD = 1.50$), responsiveness ($M = 3.64$, $SD = 1.27$), or tangibility conditions ($M = 3.61$, $SD = 1.44$). Whereas the participants' perception of brand equity was higher when assigned to either assurance ($M = 4.39$, $SD = 1.49$) or reliability ($M = 4.11$, $SD = 1.29$) dimensions. A contrast analysis indicates that the mean difference between the assurance and tangibility conditions (M_{dif} .78) and between the reliability and tangibility conditions (M_{dif} .50) are statistically significant. However, the mean differences between the empathy and tangibility conditions (M_{dif} .41) and between the responsiveness and tangibility condition (M_{dif} .03) are not. A post hoc analysis also reveals that the mean difference between the empathy and

assurance dimensions (M_{dif} 1.19) and between the empathy and reliability dimensions (M_{dif} .90) are statistically significant. The same is true for the responsiveness (tangibility) dimension in its difference with both the assurance and reliability dimensions. Therefore, these results prove that negative reviews related to the empathy, responsiveness, and tangibility dimensions cause a more detrimental effect on brand equity than negative reviews related to the assurance and reliability dimensions, providing further support to hypothesis 1.

Regarding the type of management response, a defensive response resulted in lower brand equity value (M = 3.37) than an accommodative response (M = 4.22). A contrast analysis indicates that these mean differences are statistically significant (M_{Dif} = .85, F = 35.74, p < .01), supporting hypothesis 4. Therefore, an accommodative response is more helpful than a defensive response in quelling the effect of negative reviews on brand equity.

Moderation analysis

A moderation analysis was conducted using the PROCESS SPSS macro (Hayes, 2018, model 1, 5000 bootstrap samples) to test the moderating effect of management response on the relationship between a negative review and brand equity (hypothesis 4). This result suggests that the overall model is statistically significant (F (3, 346) = 15.33; p <.001). More specifically, the effect of negative online reviews on brand equity (β = .33, t = 2.02, p < .05) and the effect of the management response on brand equity (β = 1.73, t = 5.02, p < .01) are statistically significant. Given that the interaction effect of negative reviews and the management response on brand equity is statistically significant (F (1, 346) = 8.05; p <.01), it can be argued that management response moderates the effect of the negative review on brand equity. More specifically, an accommodative response results in more positive effect on brand equity than a defensive response across all brand equity dimensions.

Similar to the previous study, participants' trust of the review, familiarity with the restaurant, usage of online reviews, writing of online reviews, and readability of the reviews was measured. The mean differences were not statistically significant for any of the variables, ruling out alternative explanations.

Summary of the Findings

Study 4 provides further evidence that reliability and assurance have a lesser negative effect on brand equity than the other three dimensions. It also reveals that an accommodative rather than a defensive managerial response is more effective in quelling the effect of a negative online review on brand equity.

General Discussion and Conclusions

Theoretical Implications

The findings of the four studies provide evidence that negative reviews that relate to the tangibility, empathy, or responsiveness SERVQUAL dimensions have a more negative effect on brand equity than negative reviews related to the other two dimensions. These findings provide a significant theoretical contribution to SERVQUAL specific research. After the introduction of the SERVQUAL model (Parasuraman *et al.*, 1988) over 30 years ago, a significant number of studies on the topic have been done. Scholars have not only studied the general effect of SERVQUAL on brand equity (Amoako *et al.* 2016; He and Li 2010; Kao and Lin 2016) but also looked at the comparative effect of SERVQUAL dimensions on brand equity (Esmaeilpour *et al.* 2016; Jamal and Anastasiadou 2009; Kayaman and Arasli 2007). However, this study's novelty lies in providing evidence that the relative weight of each SERVQUAL dimension on brand equity is far different in an online environment than in a face to face environment.

Esmaeilpour *et al.* (2016), in their study, argue that tangibility is the most important dimension affecting brand equity, whereas Jones and Shandiz (2015) argue that empathy and responsiveness are the two most important factors. However, this study shows that the differences among responsiveness, tangibility, and empathy are not significant in an online review context. Thus, SERVQUAL dimensions can be further grouped into two subgroups. The group consisting of responsiveness, empathy, and tangibility has the most negative effect on brand equity. While the effects of the other group, consisting of reliability and assurance, are less severe.

This study thus contributes to the service quality related literature by providing evidence that not all negative online reviews related to different SERVQUAL dimensions equally affect brand equity. Thus, the relationship between SERVQUAL specific negative reviews and brand equity is not static, as tangibility, responsiveness, and empathy specific negative reviews seem to affect brand equity more than assurance and reliability specific negative reviews. Past research on service failure in an online review context (Li *et al.*, 2018; Rose and Blodgett, 2016; Sparks *et al.*, 2016) does not address the multidimensionality of a service failure. This research fills that gap.

Moreover, research on the comparative effect of SERVQUAL on brand equity (Esmaeilpour *et al.*, 2016; Jamal and Anastasiadou, 2009; Kayaman and Arasli, 2007) misses the question of why some dimensions are more important than others. This study finds that emotional contagion is more prevalent in some SERVQUAL situations contributing to the differential effect of each SERVQUAL dimension on brand equity. Nevertheless, responsiveness and empathy trigger higher emotional contagion than the other three SERVQUAL dimensions. Thus, this study's unique contribution is identifying that tangibility has a comparatively higher

negative effect on brand equity despite the fact that its effect on emotional contagion is lower than the effect of the responsiveness and empathy dimensions. This means that tangibility belongs to the responsiveness and empathy group when measuring their effect on brand equity, whereas regarding its effect on emotional contagion it does not. The study further contributes to the literature by establishing that emotional contagion happens even when a potential consumer reads other consumers' reviews. Although the intensity of this contagion depends on what kind of service quality specific negative reviews potential consumers read. Therefore, this study makes an additional literary contribution by identifying that emotional contagion is the underlying reason behind the stronger negative effect of some SERVQUAL dimensions on brand equity.

Finally, research on managerial response to consumer complaints tends to recommend an accommodative response as these are perceived as less risky and more considerate to consumers (Lee and Cranage, 2014; Lee and Song, 2010; Li *et al.,* 2018). In general terms, the findings also indicate that an accommodative response is better than a defensive response. However, an accommodative response is significantly more effective in addressing assurance, empathy, and reliability specific negative reviews but not tangibility and responsiveness specific negative reviews. These findings thus further contribute to the managerial response literature.

Managerial Implications

The findings of this study provide clear evidence to practitioners regarding how brands need to be more worried about negative online reviews that focus on tangibility, responsiveness, or empathy specific consumer concerns. This study's findings help marketers by providing insights and evidence of what kinds of reviews are more detrimental to brand equity. Brands must thus be more vigilant of reviews related the tangibility, responsiveness and empathy

SERVQUAL dimensions. Brands thus need to take preemptive measures and invest more resources to avoid service failure in these three specific areas. As not all dimensions equally affect brand equity, it is strongly suggested that brand managers allocate resources accordingly to ensure corrective measures based on our findings.

Furthermore, as the text mining analysis of thousands of reviews shows, what persuades consumers to provide 5-star reviews and make recommendations to others about a service brand is a friendly treatment by employees and clean physical facilities. For as simple as these findings might seem, this paper provides proof to brand managers of how in addition to the effect of online reviews on product attitude (Lee and Cranage, 2014), purchase intention, and trust on the brand (Sparks and Browning, 2011), negative reviews on specific SERVQUAL dimensions can significantly damage their brand equity albeit at the differential level.

Finally, past studies regarding effective managerial responses to negative reviews focus on product failure, negative word of mouth about the service failure, or ordinary reviews. However, an effective response strategy to service quality specific reviews largely remained *unexplored.* The few studies that investigate effective managerial response to service failure specific reviews (Li et al., 2018; Rose and Blodgett, 2016; Sparks et al., 2016) merely present a service failure scenario for experimental manipulation to identify an effective response strategy and do not provide scenarios that have different types of service quality failures. However, an effective response strategy depends on the nature of the service failure consumers experience. Because service failure is multidimensional, we investigated whether accommodative vs. defensive responses are more effective when consumers experience different specific types of service failure. This study finds that accommodative responses are more effective in quelling the effect on brand equity of SERVQUAL specific negative reviews irrespective of the type of

service quality specific situation. From a managerial perspective, this indicates that when brands need to respond to any one of these five SERVQUAL specific negative reviews, the brand's response should be accommodative in nature. An accommodative response means the brand needs to apologize for the mistake, accept their fault, and explain what is going to be done to offset the bad experience the consumer went through.

Limitations and Future Research

This study has some general and some specific limitations. Overall, the study only looked at the negative effect of online reviews on brand equity, not the positive effect; whether positive reviews will have a similar kind of differential effect on brand equity remains unclear and a topic for future research. Furthermore, although this study explored the different effect of accommodative versus defensive responses, many responses to consumer online complaints are automated. Future research could explore the differential effect of highly customized versus automated responses. Specific to each study, although the findings of the text mining analysis provide some key insights to support the research hypothesis, the study fails to provide concrete evidence to support them. Another limitation of the text mining study is that it only discusses the reviews written by the reviewers and not of the readers who read those reviews. Moreover, in the experimental studies only reviews specific to a particular dimension were selected. However, consumer reviews might be related to multiple dimensions. This was not addressed in this study to avoid any further complexity. Additionally, it must be acknowledged that the effort made to increase authenticity in the review scenarios—using a Yelp setting—could have potentially had some influence in some respondents given their prior associations of the website.

All of the studies in this paper were within a hotel and restaurant industry context, which sets a boundary condition; similar results may not be found in other service industries such as

health care, financial services, or legal services. Future research in different service contexts could provide further insights on the differential effects of negative online reviews specific to each SERVQUAL dimension on brand equity.

References

Aaker, D. A. (1991), *Managing Brand Equity*, Free Press, New York, NY.

Anderson, J. C. and Gerbing, D. W. (1988), "Structural equation modeling in practice: A review and recommended two-step approach", *Psychological bulletin*, Vol. 103 No. 3, pp. 411-423.

Alexandris, K., Douka, S., Papadopoulos, P. and Kaltsatou, A. (2008), "Testing the role of service quality on the development of brand associations and brand loyalty", *Managing Service Quality: An International Journal*, Vol. 18 No. 3, pp. 239-254.

Amoako, G. K., Dzogbenuku, R. K. and Doe, J. K. (2016), "How service experience leads to brand loyalty: Perspective from the telecom sector in Ghana", *IUP Journal of Brand Management*, Vol. 13 No. 2, pp. 33.

Arora, R. and Stoner, C. (1996), "The effect of perceived service quality and name familiarity on the service selection decision", *Journal of Services Marketing*, Vol. 10 No. 1, pp. 22-34.

Baalbaki, S. and Guzmán, F. (2016), "A consumer-perceived consumer-based brand equity scale", *Journal of Brand Management*, Vol. 23 No.3, pp. 229-251.

Bagozzi, R. P. and Yi, Y. (1988), "On the evaluation of structural equation models", *Journal of the academy of marketing science*, Vol. 16 No. 1, pp. 74-94.

Barger, P. B. and Grandey, A. A. (2006), "Service with a smile and encounter satisfaction: Emotional contagion and appraisal mechanisms", *Academy of Management Journal*, Vol 49 No. 6, pp. 1229-1238.

Barsade, S. G. (2002), "The ripple effect: Emotional contagion and its influence on group behavior", *Administrative Science Quarterly*, Vol. 47 No. 4, pp. 644-675.

Becker-Olsen, K. L. and Hill, R. P. (2006), "The impact of sponsor fit on brand equity: The case of nonprofit service providers", *Journal of Service Research*, Vol. 9 No. 1, pp. 73-83.

Beerli, A., Martin, J. D. and Quintana, A. (2004), "A model of customer loyalty in the retail banking market", *European Journal of Marketing*, Vol. 38 No. 1/2, pp. 253-275.

Berezina, K., Bilgihan, A., Cobanoglu, C. and Okumus, F. (2016), "Understanding satisfied and dissatisfied hotel customers: text mining of online hotel reviews", *Journal of Hospitality Marketing & Management*, Vol. 25 No. 1, pp. 1-24.

Berger, J., Sorensen, A. T. and Rasmussen, S. J. (2010), "Positive effects of negative publicity: When negative reviews increase sales", *Marketing Science*, Vol. 29 No. 5, pp. 815-827.

Berry, L. L. (2000), "Cultivating service brand equity", *Journal of the Academy of Marketing Science*, Vol. 28 No. 1, pp. 128-137.

Brinberg, D. and McGrath J. E. (1985), *Validity and Research Process*, Sage Publications, Beverly Hills, CA.

Brown, S. W. and Swartz, T. A. (1989), "A gap analysis of professional service quality", *Journal of Marketing*, Vol. 53 No. 2, pp. 92-98.

Browning, V., So, K. K. F. and Sparks, B. (2013), "The influence of online reviews on consumers' attributions of service quality and control for service standards in hotels", *Journal of Travel & Tourism Marketing*, Vol. 30 No. 1-2, pp. 23-40.

Caceres, R. C. and Paparoidamis, N. G. (2007), "Service quality, relationship satisfaction, trust, commitment and business-to-business loyalty", *European Journal of Marketing*, Vol. 41 No. 7/8, pp. 836-867.

Chatterjee, P. (2001), "Online reviews: do consumers use them?", in *ACR 2001 Proceedings*, M. C. Gilly, J. Myers-Levy, eds. Association for Consumer Research, pp. 129-134.

Chen, H. N. and Huang, C. Y. (2013), "An investigation into online reviewers' behavior", *European Journal of Marketing*, Vol. 47 No. 10, pp. 1758-1773.

Chen, Y. and Xie, J. (2008), "Online consumer review: Word-of-mouth as a new element of marketing communication mix", *Management Science*, Vol. 54 No. 3, pp. 477-491.

Chenet, P., Dagger, T. S. and O'Sullivan, D. (2010), "Service quality, trust, commitment and service differentiation in business relationships", *Journal of Services Marketing*, Vol. 24 No. 5, pp. 336-346.

Chevalier, J. A. and Mayzlin, D. (2006), "The effect of word of mouth on sales: Online book reviews", *Journal of Marketing Research*, Vol. 43 No. 3, pp. 345-354.

Chiou, J. S., Chi-Fen Hsu, A. and Hsieh, C. H. (2013), "How negative online information affects consumers' brand evaluation: The moderating effects of brand attachment and source credibility", *Online Information Review*, Vol. 37 No. 6, pp. 910-926.

Chowdhary, N. and Prakash, M. (2007), "Prioritizing service quality dimensions", *Managing Service Quality: An International Journal*, Vol. 17 No. 5, pp. 493-509.

Clark, M. S. and Taraban, C. (1991), "Reactions to and willingness to express emotion in communal and exchange relationships", *Journal of Experimental Social Psychology*, Vol. 27 No. 4, pp. 324-336.

Coulter, K. S., Bruhn, M., Schoenmueller, V. and Schäfer, D. B. (2012), "Are social media replacing traditional media in terms of brand equity creation?", *Management Research Review*, Vol. 35 No. 9, pp. 770-790.

Coviello, L., Fowler, J. H. and Franceschetti, M. (2014), "Words on the web: noninvasive detection of emotional contagion in online social networks", *Proceedings of the IEEE*, Vol. 102 No. 12, pp. 1911-1921.

Coviello, L., Sohn, Y., Kramer, A. D., Marlow, C., Franceschetti, M., Christakis, N. A. and Fowler, J. H. (2014), "Detecting emotional contagion in massive social networks", *PloS One*, Vol. 9 No. 3, e90315.

Crompton, J. L. and Mackay, K. J. (1989), "Users' perceptions of the relative importance of service quality dimensions in selected public recreation programs", *Leisure sciences*, Vol. 11 No. 4, pp. 367-375.

Crosby, P. B. (1979), *Quality is free: The art of making quality certain* (Vol. 94), New York: McGraw-hill.

Dawar, N. and Pillutla, M. M. (2000), "Impact of product-harm crises on brand equity: The moderating role of consumer expectations", *Journal of Marketing Research*, Vol. 37 No. 2, pp. 215-226.

Da Silva, R. V. and Alwi, S. F. S. (2008), "Online brand attributes and online corporate brand images", *European Journal of Marketing*, Vol. 42 No. 9/10, pp. 1039-1058.

Dagger, T. S. and Sweeney, J. C. (2007), "Service quality attribute weights: how do novice and longer-term customers construct service quality perceptions?", *Journal of Service Research*, Vol. 10 No. 1, pp. 22-42.

Dens, N., De Pelsmacker, P. and Purnawirawan, N. (2015), "We (b) care" How review set balance moderates the appropriate response strategy to negative online reviews", *Journal of Service Management*, Vol. 26 No. 3, pp. 486-515.

Diamantopoulos, A., Smith, G. and Grime, I. (2005), "The impact of brand extensions on brand personality: experimental evidence", *European Journal of Marketing*, Vol. 39 No. 1/2, pp. 129-149.

Du, J., Fan, X. and Feng, T. (2011), "Multiple emotional contagions in service encounters", *Journal of the Academy of Marketing Science*, Vol. 39 No. 3, pp. 449-466.

Duan, W., Gu, B. and Whinston, A. B. (2008), "Do online reviews matter?—An empirical investigation of panel data", *Decision Support Systems*, Vol. 45 No. 4, pp. 1007-1016.

Eisingerich, A. B. and Bell, S. J. (2008), "Perceived service quality and customer trust: does enhancing customers' service knowledge matter?", *Journal of Service Research*, Vol. 10 No. 3, pp. 256-268.

Esmaeilpour, M., Mohamadi, Z. and Rajabi, A. (2016), "Effect of dimensions of service quality on the brand equity in the fast food industry", *Studies in Business and Economics*, Vol. 11 No. 3, pp. 30-46.

Ferrara, E. and Yang, Z. (2015), "Measuring emotional contagion in social media", *PloS One*, Vol. 10 No. 11, e0142390.

Fine, M. B., Gironda, J. and Petrescu, M. (2017), "Prosumer motivations for electronic word-of-mouth communication behaviors", *Journal of Hospitality and Tourism Technology*, Vol 8 No. 2, pp. 280-295.

Fox, A. K., Deitz, G. D., Royne, M. B. and Fox, J. D. (2018), "The face of contagion: consumer response to service failure depiction in online reviews", *European Journal of Marketing*, Vol. 52 No. 1/2, pp. 39-65.

Furrer, O., Liu, B. S. C. and Sudharshan, D. (2000), "The relationships between culture and service quality perceptions: Basis for cross-cultural market segmentation and resource allocation", *Journal of Service Research*, Vol. 2 No. 4, pp. 355-371.

Gammon, J. (2014). Americans rely on online reviews to make purchase decisions but at the same time they do not trust that reviews are true and fair. https://today.yougov.com/topics/lifestyle/articles-reports/2014/11/24/americans-rely-online-reviews-despite-not-trusting/ Accessed 25 March 2020.

Grégoire, Y., Ghadami, F., Laporte, S., Sénécal, S. and Larocque, D. (2018), "How can firms stop customer revenge? The effects of direct and indirect revenge on post-complaint responses", *Journal of the Academy of Marketing Science*, Vol. 46 No. 6, pp. 1052-1071.

Grönroos, C. (1982), "An applied service marketing theory", *European journal of marketing*, Vol. 16 No. 7, pp. 30-41.

Guo, Y., Barnes, S. J. and Jia, Q. (2017), "Mining meaning from online ratings and reviews: Tourist satisfaction analysis using latent dirichlet allocation", *Tourism Management*, Vol. 59, pp. 467-483.

Hanel, P. H. and Vione, K. C. (2016), "Do student samples provide an accurate estimate of the general public?", *PloS one* Vol. 11 No. 12, pp. e0168354.

Harker, L. and Keltner, D. (2001), "Expressions of positive emotion in women's college yearbook pictures and their relationship to personality and life outcomes across adulthood", *Journal of Personality and Social Psychology*, Vol. 80 No. 1, pp. 112.

Hatfield, E., Cacioppo, J. T. and Rapson, R. L. (1993), "Emotional contagion", *Current Directions in Psychological Science*, Vol. 2 No. 3, pp. 96-100.

Hayes, A. F. (2017), *Introduction to mediation, moderation, and conditional process analysis: A regression-based approach*, Guilford Publications.

He, H. and Li, Y. (2010), "Key service drivers for high-tech service brand equity: The mediating role of overall service quality and perceived value'" *Journal of Marketing Management*, Vol. 27 No. 1-2, pp. 77-99.

Hennig-Thurau, T., Groth, M., Paul, M. and Gremler, D. D. (2006), "Are all smiles created equal? How emotional contagion and emotional labor affect service relationships", *Journal of Marketing*, Vol. 70 No. 3, pp. 58-73.

Herr, P. M., Kardes, F. R. and Kim, J. (1991), "Effects of word-of-mouth and product-attribute information on persuasion: An accessibility-diagnosticity perspective", *Journal of Consumer Research*, Vol. 17 No. 4, pp. 454-462.

Hill Cummings, K. and Yule, J.A. (2020), "Tailoring service recovery messages to consumers' affective states", *European Journal of Marketing*, Vol. 54 No. 7, pp. 1675-1702.

Ho-Dac, N. N., Carson, S. J. and Moore, W. L. (2013), "The effects of positive and negative online customer reviews: do brand strength and category maturity matter?", *Journal of Marketing*, Vol. 77 No. 6, pp. 37-53.

Huang, M., Cai, F., Tsang, A. S. and Zhou, N. (2011), "Making your online voice loud: the critical role of WOM information", *European Journal of Marketing*, Vol. 45 No. 7/8, pp. 1277-1297.

Jamal, A. and Anastasiadou, K. (2009), "Investigating the effects of service quality dimensions and expertise on loyalty", *European Journal of Marketing*, Vol. 43 No. 3/4, pp. 398-420.

Jones, J. L. and Shandiz, M. (2015), "Service quality expectations: Exploring the importance of SERVQUAL dimensions from different nonprofit constituent groups'" *Journal of Nonprofit & Public Sector Marketing*, Vol. 27 No. 1, pp. 48-69.

Kao, T. W. D. and Lin, W. T. (2016), "The relationship between perceived e-service quality and brand equity: A simultaneous equations system approach", *Computers in Human Behavior*, Vol. *57*, 208-218.

Kayaman, R. and Arasli, H. (2007), "Customer based brand equity: evidence from the hotel industry", *Managing Service Quality: An International Journal*, Vol 17 No. 1, pp. 92-109.

Keller, K. L. (2001), *Building customer-based brand equity: A blueprint for creating strong brands*, Cambridge, MA: Marketing Science Institute.

Keller, K. L. (1993), "Conceptualizing, measuring, and managing customer-based brand equity", *Journal of Marketing*, Vol. 57 No. 1, pp. 1-22.

Kim, H. B., Gon Kim, W. and An, J. A. (2003), "The effect of consumer-based brand equity on firms' financial performance", *Journal of Consumer Marketing*, Vol. 20 No. 4, pp. 335-351.

Kimpakorn, N. and Tocquer, G. (2010), "Service brand equity and employee brand commitment", *Journal of Services Marketing*, Vol. 24 No. 5, pp. 378-388.

Kramer, A. D., Guillory, J. E. and Hancock, J. T. (2014), "Experimental evidence of massive-scale emotional contagion through social networks", *Proceedings of the National Academy of Sciences*, pp. 8788-8790.

Kurniawan, P. and Sidharta, I. (2016), "SERVQUAL on brand image and relationship equity", *International Review of Management and Marketing*, Vol. 6 No. 4, pp. 866-871.

Langan, R., Besharat, A. and Varki, S. (2017), "The effect of review valence and variance on product evaluations: An examination of intrinsic and extrinsic cues", *International Journal of Research in Marketing*, Vol. 34 No. 2, pp. 414-429.

Lassar, W., Mittal, B. and Sharma, A. (1995), "Measuring customer-based brand equity", *Journal of Consumer Marketing*, Vol. 12 No. 4, pp. 11-19.

Lee, C. H. Cranage, D. A. (2014), "Toward understanding consumer processing of negative online word-of-mouth communication: the roles of opinion consensus and organizational response strategies", *Journal of Hospitality & Tourism Research*, Vol. 38 No. 3, pp. 330-360.

Lee, Y. L. and Song, S. (2010), "An empirical investigation of electronic word-of-mouth: Informational motive and corporate response strategy", *Computers in Human Behavior*, Vol. 26 No. 5, pp. 1073-1080.

Li, C., Cui, G. and Peng, L. (2018), "Tailoring management response to negative reviews: The effectiveness of accommodative versus defensive responses", *Computers in Human Behavior*, Vol. 84, pp. 272-284.

Liang, R. D., Chang, C. S. and Wang, T. S. (2011), "The effect of service responsiveness and social emotions on service outcomes: An empirical investigation of service firms", *African Journal of Business Management*, Vol. 5 No. 8, pp. 3155-3167.

Lin, J. S. C. and Liang, H. Y. (2011), "The influence of service environments on customer emotion and service outcomes", *Managing Service Quality: An International Journal*, Vol. 21 No. 4, pp. 350-372.

Malai, V. and Speece, M. (2005), "Cultural impact on the relationship among perceived service quality, brand name value, and customer loyalty", *Journal of International Consumer Marketing*, Vol. 17 No. 4, pp. 7-39.

Miller, K. I., Stiff, J. B. and Ellis, B. H. (1988), "Communication and empathy as precursors to burnout among human service workers", *Communications Monographs*, Vol 55 No. 3, pp. 250-265.

Min, H., Lim, Y. and Magnini, V. P. (2015), "Factors affecting customer satisfaction in responses to negative online hotel reviews: The impact of empathy, paraphrasing, and speed", *Cornell Hospitality Quarterly*, Vol. 56 No. 2, pp. 223-231.

Motyka, S., Grewal, D., Aguirre, E., Mahr, D., De Ruyter, K. and Wetzels, M. (2018), "The emotional review–reward effect: how do reviews increase impulsivity?", *Journal of the Academy of Marketing Science*, Vol. 46 No. 6, pp. 1032-1051.

Mudambi, S. M. and Schuff, D. (2010), "What makes a helpful review? A study of customer reviews on Amazon.com", *MIS Quarterly*, Vol. 34 No. 1, pp. 185-200.

Olorunniwo, F. and Hsu, M. K. (2006), "A typology analysis of service quality, customer satisfaction and behavioral intentions in mass services", *Managing Service Quality: An International Journal*, Vol. 16 No. 2, pp. 106-123.

Omdahl, B. L. and O'Donnell, C. (1999), "Emotional contagion, empathic concern and communicative responsiveness as variables affecting nurses' stress and occupational commitment", *Journal of Advanced Nursing*, Vol. 29 No. 6, pp. 1351-1359.

O'Neill, M., Palmer, A. and Charters, S. (2002), "Wine production as a service experience–the effects of service quality on wine sales"' *Journal of Services Marketing*, Vol. 16 No. 4, pp. 342-362.

Palese, B. and Usai, A. (2018), "The relative importance of service quality dimensions in e-commerce experiences", *International Journal of Information Management*, Vol. 40, pp. 132-140.

Parasuraman, A. and Grewal, D. (2000), "Serving customers and consumers effectively in the twenty-first century: A conceptual framework and overview", *Journal of the Academy of Marketing Science*, Vol. 28 No. 1, pp. 9-16.

Parasuraman, A., Zeithaml, V. A. and Berry, L. L. (1988), "Servqual: A multiple-item scale for measuring consumer perc", *Journal of retailing*, Vol. 64 No. 1, pp. 12.

Park, C. and Lee, T. M. (2009), "Information direction, website reputation and eWOM effect: A moderating role of product type", *Journal of Business Research*, Vol. 62 No. 1, pp. 61-67.

Park, D. H. and Kim, S. (2008), "The effects of consumer knowledge on message processing of electronic word-of-mouth via online consumer reviews", *Electronic Commerce Research and Applications*, Vol. 7 No. 4, pp. 399-410.

Park, D. H., Lee, J. and Han, I. (2007), "The effect of on-line consumer reviews on consumer purchasing intention: The moderating role of involvement", *International Journal of Electronic Commerce*, Vol. 11 No. 4, pp. 125-148.

Pearl, J. and Mackenzie, D. (2018), *The book of why: the new science of cause and effect*. Basic Books.

Pugh, S. D. (2001), "Service with a smile: Emotional contagion in the service encounter", *Academy of Management Journal*, Vol. 44 No. 5, pp. 1018-1027.

Qiu, C. and Popkowski Leszczyc, P. (2016), "Send-for-review decisions, brand equity, and pricing", *European Journal of Marketing*, Vol. 50 No. 1/2, pp. 145-165.

Racherla, P. and Friske, W. (2012), "Perceived 'usefulness' of online consumer reviews: An exploratory investigation across three services categories", *Electronic Commerce Research and Applications*, Vol. 11 No. 6, pp. 548-559.

Rauyruen, P., Miller, K. E. and Groth, M. (2009), "B2B services: linking service loyalty and brand equity", *Journal of Services Marketing*, Vol. 23 No. 3, pp. 175-186.

Rose, M. and Blodgett, J. G. (2016), "Should hotels respond to negative online reviews?", *Cornell Hospitality Quarterly*, Vol 57 No. 4, pp. 396-410.

Roshnee Ramsaran-Fowdar, R. (2008), "The relative importance of service dimensions in a healthcare setting", *International Journal of Health Care Quality Assurance*, Vol. 21 No. 1, pp. 104-124.

Salehan, M. and Kim, D. J. (2016), "Predicting the performance of online consumer reviews: A sentiment mining approach to big data analytics", *Decision Support Systems*, Vol. 81, pp. 30-40.

Schivinski, B. and Dabrowski, D. (2015), "The impact of brand communication on brand equity through Facebook", *Journal of Research in Interactive Marketing*, Vol. 9 No. 1, pp. 31-53.

Schoenewolf, G. (1990), "Emotional contagion: Behavioral induction in individuals and groups", *Modern Psychoanalysis*, Vol. 15 No. 1, pp. 49-61.

Sen, S. and Lerman, D. (2007), "Why are you telling me this? An examination into negative consumer reviews on the web", *Journal of Interactive Marketing*, Vol. 21 No. 4, pp. 76-94.

Setó-Pamies, D. (2012), "Customer loyalty to service providers: examining the role of service quality, customer satisfaction and trust"' *Total Quality Management & Business Excellence*, Vol. 23 No. 11-12, pp. 1257-1271.

Singh, J. and Pandya, S. (1991), "Exploring the effects of consumers' dissatisfaction level on complaint behaviours", *European Journal of Marketing*, Vol. 25 No. 9, pp. 7-21.

Slack, N., Singh, G. and Sharma, S. (2020), "The effect of supermarket service quality dimensions and customer satisfaction on customer loyalty and disloyalty dimensions", *International Journal of Quality and Service Sciences*, Vol. 12 No. 3, pp. 297-318.

Smith, A. and Anderson, M. (2016). Online reviews. http://www.pewinternet.org/2016/12/19/online-reviews/ Accessed 22 March 2020

Sparks, B. A. and Bradley, G. L. (2017), "A "Triple A" typology of responding to negative consumer-generated online reviews", *Journal of Hospitality & Tourism Research*, Vol. 41 No. 6, pp. 719-745.

Sparks, B. A. and Browning, V. (2011), "The impact of online reviews on hotel booking intentions and perception of trust", *Tourism Management*, Vol. 32 No. 6, pp. 1310-1323.

Sparks, B. A., So, K. K. F. and Bradley, G. L. (2016), "Responding to negative online reviews: The effects of hotel responses on customer inferences of trust and concern", *Tourism Management*, Vol. 53, pp. 74-85.

Steward, M. D., Narus, J. A. and Roehm, M. L. (2018), "An exploratory study of business-to-business online customer reviews: External online professional communities and internal vendor scorecards", *Journal of the Academy of Marketing Science*, Vol. 46 No. 2, pp. 173-189.

Sultan, P. and Wong, H. Y. (2019), "How service quality affects university brand performance, university brand image and behavioural intention: The mediating effects of satisfaction and trust and moderating roles of gender and study mode", *Journal of Brand Management*, Vol. 26 No. 3, pp. 332-347.

Umasuthan, H., Park, O. J. and Ryu, J. H. (2017), "Influence of empathy on hotel guests' emotional service experience", *Journal of Services Marketing*, Vol. 31 No. 6, pp. 618-635.

Van Vaerenbergh, Y.,Vermeir, I. and Larivière, B. (2013), "Service recovery's impact on customers next-in-line", *Managing Service Quality*, Vol. 23 No. 6, pp. 495-512.

Vargo, S. L. and Lusch, R. F. (2008), "Service-dominant logic: continuing the evolution", *Journal of the Academy of marketing Science*, Vol. 36 No. 1, pp. 1-10.

Vázquez, R., Del Rio, A. B. and Iglesias, V. (2002), "Consumer-based brand equity: development and validation of a measurement instrument", *Journal of Marketing Management*, Vol. 18 No. 1-2, pp. 27-48.

Vermeulen, I. E. and Seegers, D. (2009), "Tried and tested: The impact of online hotel reviews on consumer consideration", *Tourism Management*, Vol. 30 No. 1, pp. 123-127.

Villarroel Ordenes, F., Ludwig, S., De Ruyter, K., Grewal, D. and Wetzels, M. (2017), "Unveiling what is written in the stars: Analyzing explicit, implicit, and discourse patterns of sentiment in social media", *Journal of Consumer Research*, Vol. *43 No.* 6, pp. 875-894.

Wei, W., Miao, L. and Huang, Z. J. (2013), "Customer engagement behaviors and hotel responses", *International Journal of Hospitality Management*, Vol. 33, pp. 316-330.

White, R. C., Joseph-Mathews, S. and Voorhees, C. M. (2013), "The effects of service on multichannel retailers' brand equity", *Journal of Services Marketing*, Vol 27 No. 4, pp. 259-270.

Wong, A. and Sohal, A. (2003), "Service quality and customer loyalty perspectives on two levels of retail relationships", *Journal of Services Marketing*, Vol. 17 No. 5, pp. 495-513.

Xu, X., Wang, X., Li, Y. and Haghighi, M. (2017), "Business intelligence in online customer textual reviews: Understanding consumer perceptions and influential factors", *International Journal of Information Management*, Vol. 37 No. 6, pp. 673-683.

Yang, Y., Liu, X. and Li, J. (2015), "How customer experience affects the customer-based brand equity for tourism destinations", *Journal of Travel & Tourism Marketing*, Vol. 32 No. 1, pp. 97-113.

Yang, Z., Peterson, R. T. and Cai, S. (2003), "Services quality dimensions of Internet retailing: an exploratory analysis", *Journal of Services Marketing*, Vol. 17 No. 7, pp. 685-700.

Yoo, B. and Donthu, N. (2001), "Developing and validating a multidimensional consumer-based brand equity scale", *Journal of Business Research*, Vol. 52 No. 1, pp. 1-14.

Zhang, L., Ma, B. and Cartwright, D. K. (2013), "The impact of online user reviews on cameras sales", *European Journal of Marketing*, Vol. 47 No. 7, pp. 1115-1128.

Zhang, Y. and Vásquez, C. (2014), "Hotels′ responses to online reviews: Managing consumer dissatisfaction", *Discourse, Context & Media*, Vol. 6, pp. 54-64.

Appendix

Study 2: Review Manipulation

Responsiveness Dimension

Reliability Dimension

Assurance Dimension

Tangibility Dimension

Empathy Dimension

Study 3: Review Manipulation

Review Related to Responsiveness Dimension

Review Related to Assurance Dimension

Review Related to Empathy Dimension

> No hospitality at this hotel. Never will I stay here again! I requested a bottle of water one evening and the front desk woman said only if I was a honors member otherwise I would have to purchase it. I told her that yes I am a diamond member. She looked up my room and because I booked thru Expedia it didn't show up. I said I would call her with my diamond number when I got back to my room. She very grudgingly gave me a bottle of water. Even if I wasn't a diamond member why would they be so cheap to a customer that was staying for 10 nights!!
> I had to work an early shift one day so I asked if housekeeping could clean my room before I got back at noon. Well they didn't clean it and when I called down they replied, the previous shift staff may have forgotten that but no apology.
> At checkout the clerk never even asked me how my stay was. Also she wouldn't give me a receipt because of booking with Expedia.
> They are not caring and are not interested to provide more attention to their customers.

Review Related to Reliability Dimension

> Not happy at all!!!!! Showed up at 3:30 to check in and was told that room is not ready and will not be ready for at least an hour. I understand that the hotel may have been sold out the night before but then call in more help. There is NO reason to have to wait an hour for our room when we get here this late. When you try and talk to someone all they say is go sit and wait we will call you. How about offer me a drink or something maybe free parking since you all are inconveniencing me. The lobby seems nice but really cannot enjoy it since people are all over with luggage everywhere because no one's rooms are ready. VERY UNHAPPY ABOUT THIS!!!!!!
> Not reliable and can not depend on whether they will be able provide the required service accurately

Review Related to Tangibility Dimension

> This hotel is not as fancy as it looks. Compared to the website and pictures on Instagram the actual hotel doesn't even come close. This hotel could use a makeover starting with adding more elevators. They only have two and they are very slow. The amenities were lacking and the old outdated vending machines didn't work. There's very few things to do or places to eat in that area.
> I didn't like my room. The bathroom had mold on the ceiling and the furniture was dusty. I also wish the little cafe/coffee shop on the second floor stayed open longer, I believe it closed at 4pm. The hotel felt and looked like it was struggling.

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Study 4: Review Manipulation

Condition 1
Review Type: assurance
Company response: Defensive

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___ K.
Westside, Houston, TX
👥 1 friend
⭐ 51 reviews
📷 1 photo

⭐☆☆☆☆ 02/09/2019

Honestly not as "wow" as I expected. People have talked this place up a LOT so I thought it was going to be great. Unfortunately, my experience was poor. I was greeted by an employee who was not courteous when I was asking him a question second time as I could not understand his answer first time. When the manager was taking my order, it was taking too long to him to put the order into his tab. He was struggling to remove some toppings from a sandwich and after failing to remove from the order, he was asking his cook to avoid those toppings from my sandwich.

Liz B. and 1 other voted for this review

👍 Useful 2   😄 Funny   😎 Cool

___ of Mash'D- Fort Worth
Business Manager

2/11/2019 -Thanks for sharing your comment and we appreciate your feedback. We extend our sincerest apologies for the problem that you had to face during your dine- in time in our restaurant. Although we have a good reputation for our excellent service and nice facilities, we continue working hard to improve our service quality. We are sorry that we have failed to meet your expectations and you had to face a bad service from our end. However, we request another chance from you so that we can undo our past failure and we are ready to offer you an exclusive discount for your next visit. We want to hear more from you. If you want to share more about the problems you faced, you can email or call us at the office hour.
Email : ___
Phone: ___

95

K.
Westside, Houston, TX
1 friend
51 reviews
1 photo

⭐ 02/09/2019

Honestly not as "wow" as I expected. People have talked this place up a LOT so I thought it was going to be great. Unfortunately, my experience was shocking. After entering into the restaurant, I waved at the employee and the waiter dropped off our glasses with ice, that sat melted for a good 20 minutes because yes - that's how long it took to get our sangria. Seems a little ridiculous but we overlook it and hope that's the only slow thing.   Well we were wrong, the waiter pretty much left us to either waive him down or another waiter down if we needed something. The employees seem not to bother coming to us after trying to get their attentions. Overall, disappointed with the lack of attention of the employees and may not go again to that restaurant.

Liz B. and 1 other voted for this review

Useful 2   Funny   Cool

of Mash'D- Fort Worth
Business Manager

2/11/2019 -Thanks for sharing your comment and we appreciate your feedback. However, your experience with our restaurant really surprises us as we rarely had a complain like this before. As we did not receive this kind of complain before, we need to look at the matter carefully to identify what really happened. We want to investigate more before acknowledging that we had a service quality problem at that time. It may be a small issue.If you want to share more about the problems you faced, you can email or call us at the office hour.
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Liz B. and 1 other voted for this review

👍 Useful 2 | 😄 Funny | 😎 Cool

___ of Mash'D- Fort Worth
Business Manager

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Email : ___
Phone: ___

97

Condition 5
Review Type: Reliability
Company response: Defensive

Condition 6
Review Type: Reliability
Company response: Accommodative

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▉K.
Westside, Houston, TX
👥 1 friend
⭐ 51 reviews
📷 1 photo

⭐☆☆☆☆ 02/09/2019

Honestly not as "wow" as I expected. People have talked this place up a LOT so I thought it was going to be great. But with my dismay, I had to wait longer than what they told me. Some food was missing, and I told them to put extra cheese on my burger, but the cheese was missing from my burger. The restaurant needs to be more careful about this mistake and should be more accurate in their food delivery.
Probably I will give the restaurant another try.

Liz B. and 1 other voted for this review

| 👍 Useful 2 | 😄 Funny | 😎 Cool |

▉ of Mash'D- Fort Worth
Business Manager

2/11/2019 -Thanks for sharing your comment and we appreciate your feedback. We extend our sincerest apologies for the problem that you had to face during your dine- in time in our restaurant. Although we have a good reputation for our excellent service and nice facilities, we continue working hard to improve our service quality. We are sorry that we have failed to meet your expectations and you had to face a bad service from our end. However, we request another chance from you so that we can undo our past failure and we are ready to offer you an exclusive discount for your next visit. We want to hear more from you. If you want to share more about the problems you faced, you can email or call us at the office hour.
Email : ▉
Phone: ▉

99

Condition 7
Review Type: Responsiveness
Company response: Defensive

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Westside, Houston, TX
👥 1 friend
⭐ 51 reviews
📷 1 photo

⭐☆☆☆☆ 02/09/2019

Honestly not as "wow" as I expected. People have talked this place up a LOT so I thought it was going to be great. Unfortunately, our experience was poor. It was a carry out order and I ordered over the phone. When I came to the restaurant and asked about my order, the staff replied that it is not ready yet. I was waiting quietly but nobody was telling me when the order will be ready. After sometime, I asked one employee but he replied that he does not know and even did not ask the manager about when it will be ready. The employees were not helpful, and the restaurant was not prompt in their service delivery.

Liz B. and 1 other voted for this review

👍 Useful 2 | 😄 Funny | 😎 Cool

■■■■■■■■■■■■ of Mash'D- Fort Worth
Business Manager

2/11/2019 -Thanks for sharing your comment and we appreciate your feedback. However, your experience with our restaurant really surprises us as we rarely had a complain like this before. As we did not receive this kind of complain before, we need to look at the matter carefully to identify what really happened. We want to investigate more before acknowledging that we had a service quality problem at that time. It may be a small issue.If you want to share more about the problems you faced, you can email or call us at the office hour.
Email : ■■■■■■■■■■■■■■
Phone: ■■■■■■■■■■■■

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███ K.
Westside, Houston, TX
👥 1 friend
⭐ 51 reviews
📷 1 photo

⭐☆☆☆☆ 02/09/2019

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Liz B. and 1 other voted for this review

👍 Useful 2   😊 Funny   😎 Cool

███████████████ of Mash'D- Fort Worth
Business Manager

2/11/2019 -Thanks for sharing your comment and we appreciate your feedback. We extend our sincerest apologies for the problem that you had to face during your dine- in time in our restaurant. Although we have a good reputation for our excellent service and nice facilities, we continue working hard to improve our service quality. We are sorry that we have failed to meet your expectations and you had to face a bad service from our end. However, we request another chance from you so that we can undo our past failure and we are ready to offer you an exclusive discount for your next visit. We want to hear more from you. If you want to share more about the problems you faced, you can email or call us at the office hour.
Email : ███████████████████
Phone: ███████████████████

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👥 1 friend
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📷 1 photo

⭐☆☆☆☆ 02/09/2019

Honestly not as "wow" as I expected. People have talked this place up a LOT so I thought it was going to be great. But with my dismay, I found that the place lacks good seating environment. There are several Zagat stickers in the front window and I cannot fathom what they are for. The dining room (the only room in the restaurant besides the bathroom and the kitchen) of 4 tables is cramped and loud with less than a dozen patrons. It was maybe 5 feet deep and 10 feet across. There were many flies and at least one bee crawling on the inside of the window we were seated next to. There were only 2 staff that served as hostess, waitress and cashier.

Liz B. and 1 other voted for this review

👍 Useful 2   😄 Funny   😎 Cool

■ of Mash'D- Fort Worth
Business Manager

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Email : ■
Phone: ■

Condition 10
Review Type: Tangibility
Company response: Accommodative

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⭐☆☆☆☆ 02/09/2019

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Liz B. and 1 other voted for this review

👍 Useful 2   😄 Funny   😎 Cool

███████████████ of Mash'D- Fort Worth
Business Manager

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Email : ████████████████████
Phone: ████████████████████

103

Measurement Scale

Variable		Operationalization	Source
Brand Equity	Performance	• From this brand, I can expect superior performance • During use, this brand is highly unlikely to be defective • This brand is made so as to work trouble free • This brand will work very well	Lassar et al. (1995)
	Social Image	• This brand fits my personality • I would be proud to own this brand • This brand will be well regarded by my friends • In its status and style, this brand matches my personality	
	Value	• This brand is well priced • Considering what I would pay for this brand, I will get much more than my money's worth. • I consider this brand to be a bargain because of the benefits I receive	
	Trustworthiness	• I consider the company and people who stand behind this • brand to be very trustworthy • In regard to consumer interests, this company seems to be very caring • I believe that this company does not take advantage of consumers	
	Attachment	• After watching this brand, I am very likely to grow frond of it • For this brand, I have positive personal feelings • With time, I will develop a warm feeling toward this brand	
Emotional Contagion		To what extent do you feel this way right now, that is at the present moment Pleasant Happy Optimistic Warm Unhappy Pessimistic Gloomy Lethargic Depressed Sad	Barsade (2002)

ESSAY 3

BRAND EQUITY, ONLINE REVIEWS, AND MESSAGE TRUST: THE MODERATING

ROLE OF PERSUASION KNOWLEDGE*

Introduction

Brands spend billions of dollars and make an all-out effort to ensure that they reside in

the hearts and minds of consumers. Branding efforts of organizations revolve around the

objective to ensure that brands have a strong influence on their potential buyers. It is well known

that brands that have higher brand equity command higher brand loyalty (Aurier and Gilles,

2012; Oliver, 1999; Pappu and Quester, 2016), can charge a price premium (Steenkamp *et al*.,

2010), and get increased shelf-space from retailers (Ailawadi and Harlam, 2004). The broad

array of benefits that brands with stronger brand equity enjoy is evident in past research

(Broniarczyk and Alba, 1994; Buchanan *et al*., 1999; Catalán *et al*., 2019; Cowan and Guzmán,

2018; Glynn *et al*., 2012; Leone *et al*., 2006; Muniz *et al*., 2019; Pappu and Christodoulides,

2017). However, little research attention has been given to the influence that brand equity has on

persuading consumers to write online reviews. The large array of benefits that a brand with

strong equity enjoys may lead to think that brands with a stronger equity can be more effective in

influencing consumers to write reviews for them. However, a request from a brand with stronger

brand equity may just trigger skepticism among consumers about the brand's motive (Cromie

and Ewing, 2009; Mantovani *et al.,* 2017). In fact, Cromie and Ewing (2009) argue that stronger

brands sometimes create resentment, as consumers feel these brands are too powerful. This paper

thus investigates how the request to write an online review from brands with stronger versus

weaker brand equity is seen by consumers.

Online sales of physical goods in the U.S. during 2018 were $501 billion, and are projected to be over $740 billion by the year 2023 (Clement, 2019). In today's marketplace, online reviews play a significant role in shaping consumer online purchase decisions (Mudambi and Schuff, 2010; Senecal and Nantel, 2004; Zhang *et al*., 2014). As a growing number of consumers are expected to make online purchases in future years, managing online reviews has become a key brand management concern. In fact, 7 out of 10 reviews that are found on review sites are written by consumers after they receive a request from brands to write reviews for them (Bassig, 2016). Considering the growth of online expenditure, consumer reliance on online reviews in making purchase decisions, and the number of online reviews written by consumers after receiving a request from a brand, understanding the influence that brand equity has on online reviews is timely and relevant for firms.

The objective of this study is threefold. First, to investigate if consumers are more (less) likely to write reviews when the request comes from a brand that has higher (lower) brand equity. Second, to explore the effect of brand equity on consumers' trust on a message that they receive from a brand. Third, to investigate how message trust and persuasion knowledge influence the relationship between a brand's request to write online reviews and the likelihood of consumers to write reviews. To address these objectives, three experimental studies are conducted.

This paper makes the following contributions. First, it advances the theoretical understanding of brand equity (Morgan *et al*., 2002; Yin *et al*., 2008; Hoeffler and Keller, 2003; Veloutsou and Guzmán, 2017) by exploring how a brand's equity influences consumers to write reviews. Given the increased reliance on online reviews by consumers to make purchase

decisions (Chatterjee, 2001; Mudambi and Schuff, 2010; Sparks and Browning, 2011), it is critical for brands to have a better understanding of the effectiveness of their branding efforts (Childs and Kim, 2019). Second, because consumers are generally skeptical about brand messages (Skarmeas and Leonidou, 2013), it explores if their level of skepticism varies depending on the message coming from a brand that has higher or lower brand equity. Given the continuous efforts of companies to build strong brands, it is important to understand the potential effects not controllable marketing factors—such as online reviews—have on the consumer perceptions of a brand (Keller, 2020; Shen and Sengupta, 2018; Villarroel Ordenes *et al.*, 2019). Third, it explores whether consumer persuasion knowledge leads to different responses to brand messages coming from a brand with stronger or weaker brand equity. Given the high level of exposure consumers have to communication messages (Seo *et al.*, 2019), it is critical to understand how brands can be more effective in their communication strategies (Alvarado-Karste and Guzmán, 2020). The following section presents the theoretical background behind the proposed research questions and the development of the hypotheses. Next, the method is explained. Finally, the results, findings, and research implications are discussed.

Theoretical Background and Hypotheses

Brand Equity and Online Reviews

"All of the best global brands make customers a priority, but the most successful make IT the priority. Whether it is engineering solutions tied directly to a strong customer understanding, anticipating what customers want with forward-thinking design, or just obsessively working to delight users at every opportunity. Powerful brands have mastered creating experiences through technology that reinforces the value of the brand itself." (Interbrand best global brands 2017, 2018). Each year Interbrand, Forbes, Brandz, and Brand Finance develop a list of the world's

most powerful brands. The valuation of brands' equity varies significantly across rankings and their rank also varies as a result of each rankings' methodology. While Forbes focuses only on financial performance to calculate brand value, Brandz and Interbrand consider both the financial and consumer value perspectives. Furthermore, although few studies analyze both the financial and consumer-based brand equity perspectives (Baalbaki and Guzmán, 2016a; Nguyen *et al*., 2015), academicians mostly rely on the consumer perspective to measure brand equity (Keller, 1993; Bei and Cheng, 2013; Girard *et al*., 2017; Napoli *et al*., 2014; Baalbaki and Guzmán, 2016b). The objective of this study is not to debate which perspective is better, but to explore how the equity of a brand persuades consumers to write online reviews.

Brands develop strategies focused on how to best serve their consumers. Brands spend hundreds of millions of dollars to become an integral part of peoples' lives (Hatch and Schultz, 2001; Keller and Lehmann, 2006). Developing substantial brand equity requires perseverance, dedication, and intellect to understand and fulfill consumer expectations. Although brand managers can develop strong brand equity if they show how they are different and ensure brand consistency over time, the strategy implementation can prove to be complicated (Kay, 2006). Although the road to building a brand with strong equity is not easy and presents challenges and risks, brand managers and key stakeholders always pursue this goal given that the benefits that a brand with strong equity enjoys surpass any of the risks (Aaker, 2012). A strong brand with significant equity provides a firm higher customer loyalty, less vulnerability to competitive marketing actions and marketing crises, large margins, more favorable customer responses to price increases and decreases, more significant trade or intermediary cooperation and support, increased marketing communication effectiveness, and better licensing and brand extension opportunities (Keller, 2001; Espinosa *et al.,* 2018). Moreover, strong brands also enjoy higher

levels of brand recognition and brand recall, two important building blocks of consumer-based brand equity (Ahn and Ferle, 2008; Krishnan *et al.*, 2013). Thus, past research emphasizes the importance of having brand names that help generate easy brand recall and recognition (Lerman and Garbarino, 2002).

Past research also investigates how a brand's experiential benefits (brand experience) and transformational benefits (self- esteem and self- expression) impact the strength of consumer brand relationships (Trudeau and Shobeiri, 2016). How a brand with strong equity has a higher possibility of developing a successful brand extension (Chun *et al*., 2015; Childs *et al.,* 2018). How developing a brand orientation leads to powerful brands (Urde, 1999). How branding used as the central driver of the entire marketing strategy leads to increased company performance (Ho and Merrilees, 2008). However, past research does not provide conclusive evidence about if and how brand equity influences consumers to write a review for a brand.

Online reviews are a significant factor in the formation of consumer attitudes toward a brand and have a significant influence on consumer purchase decisions (Karakaya and Barnes, 2010; Li and Hitt, 2008, Lis and Fischer, 2020). In general, online presence and social media activity is beneficial to a brand's equity (Lim *et al*., 2020). Lee *et al*. (2008) study the effect of negative online reviews on brand attitude and find that negative reviews generate conformity among consumers. Furthermore, negative online product reviews have considerable detrimental effects on consumer-based brand equity (Bambauer-Sachse and Mangold, 2011). Ho-Dac *et al*. (2013) study the moderating effect of brand equity in the relationship between online customer reviews and sales, and conclude that positive (negative) online reviews increase (decrease) the sales of brands with weak equity, but not of brands with strong equity. Floyd *et al*.'s (2014) meta-analysis concludes that the valence of an online review is more influential than the volume

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of online reviews. Other studies highlight the importance of online reviews in influencing consumer decisions in different industries: travel (Gretzel and Yoo, 2008), movies (Duan *et al*., 2008), and the gaming industry (Zhu and Zhang, 2010).

Additionally, numerous studies have explored what motivates consumers to write reviews (Dixit *et al*., 2017; Hennig-Thurau *et al*., 2004), the impact of online review on sales (Vermeulen and Seegers 2009; Sparks and Browning, 2011), and the relationship between brand equity and online reviews (McGriff, 2012; Bambauer-Sachse and Mangold, 2011; Ho-Dac *et al*., 2013). Bambauer-Sachse and Mangold (2011) and Beneke *et al*., (2016) find that negative word of mouth is detrimental to brand equity, but do not provide insights into whether branding efforts encourage consumers to write positive reviews and thus create positive eWOM. Moreover, Cheung and Lee (2012) find that reputation, sense of belonging, and the enjoyment of helping other consumers motivate people to write online reviews.

As a brand with stronger brand equity enjoys higher customer loyalty and increased emotional attachment (Keller, 2001), it can be argued that consumers will more likely respond positively to a review request from a strong brand. However, less strong brands not necessarily lack loyalty, as they can be seen as underdogs, which can also lead to high levels of brand loyalty and consumer purchase intention (Paharia *et al*., 2010). Nevertheless, invoking a similar level of persuasion capability as brands with high brand equity may not be possible for underdog (weaker) brands. Moreover, Christodoulides *et al.* (2006) argue that brands that have stronger brand equity enjoy higher levels of emotional connection with consumers, and thus consumers become more loyal to those brands when making online transactions with them. Ramaswamy and Ozcan (2016) also provide evidence of consumers' increased intention to engage with stronger brands in their online co-creation initiatives. As requesting consumers to write online

reviews could be an example of a brand's co-creation initiative, consumers might be more likely to respond to those initiatives if the request comes from a stronger brand. Therefore, this study hypothesizes that brands with stronger equity may have more leverage in requesting consumers to write a review.

> *Hypothesis 1- brand equity affects consumer intention to write a review when a consumer receives a message requesting to write a review for a brand.*

If brand equity affects a consumer's intention to write a review when requested by a brand, it is imperative to understand the underlying reasons behind consumers' differential responses. One potential underlying reason could be how trustworthy the message requesting the review is perceived by consumers. Strong brands command higher consumer trust (Berry, 2000), and thus messages from a brand with stronger brand equity may be perceived as more trustworthy. In the following section the mediating role of message trustworthiness on the intention to write an online review is therefore discussed.

Message Trustworthiness

Consumers receive hundreds of messages from organizations every day. Whether consumers will act on to those messages depends on how trustworthy those messages are. If consumers perceive a message as trustworthy, then that message may motivate consumers to act the way brands expect. Perceived truthfulness or trustworthiness of a message determines the way consumers will react to the message; trustworthiness of a message equals credibility of the source (MacKenzie and Lutz, 1989). Source credibility is a term commonly used to imply a communicator's positive characteristics that affect the receivers' acceptance of a message (Ohanian, 1990). Wu and Wang (2011) study the influence of message credibility on brand attitude and find that reliability is an essential component of message credibility. Reliability

reflects the amount of trust and acceptance that the receiver of the message has toward the sender.

Is a message from a stronger brand perceived as more trustworthy? Sweeney *et al*. (2014) study the relationship between WOM and brand equity and find that if a brand has higher equity, consumers trust on a WOM message is higher if the message is positive and lower if the message is negative. Although the study does not directly answer the question of the relationship between message trust and brand equity, it suggests that consumers perceive positive WOM to be more trustworthy when the message relates to a stronger brand. Marshall and WoonBong (2003) further argue that a message from a strong brand is considered as more trustworthy, versus a message from a weaker brand, regardless of whether the message is transmitted through the internet or print media.

Although the effect of trust on consumer willingness to write reviews has not been studied before, Sichtmann (2007) studies the influence of trust on purchase intention, and concludes that if consumers trust a brand then their purchase intention will be higher. Furthermore, Grewal *et al*. (1994) show that consumers' perception of product performance risk is lower when the message of a brand is considered trustworthy. Because a message of a brand with stronger brand equity is considered more trustworthy (Marshall and WoonBong, 2003) and brand equity has a stronger effect on trust of a WOM message (Sweeney *et al*., 2014), it is thus argued that a message from a brand with stronger equity that requests consumers to write a review for the brand will be considered more trustworthy. Formally stated:

> *Hypothesis 2- Messages requesting to write an online review from a brand that has higher brand equity are considered more trustworthy.*

Furthermore, although it may seem obvious that the higher the equity of a brand, the higher the possibility that consumers will positively respond to the request of a brand to write a

review, given consumers' natural skepticism toward a companies' messages, this study posits that trust toward a company's message mediates the relationship between brand equity and online reviews. Thus, considering the more positive responses that consumers exhibit toward a trustworthy message and messages from a stronger brand, this study hypothesizes:

> *Hypothesis 3- Trust on the message mediates the relationship between brand equity and online reviews.*

By sending a message to consumers, brands are openly trying to persuade consumers to write reviews for them. In other words, consumers are conscious of the company's intention. Therefore, persuasion knowledge, which can be either positive or negative depending on the source of the message (Isaac and Grayson, 2017), is another key aspect of this study. Not investigating consumers' likely response to brands' persuasion attempts may result in incomplete findings. Thus persuasion knowledge is discussed in the following section.

Persuasion Knowledge

Friestad and Wright (1994) define persuasion knowledge as the personal knowledge consumers develop and use whenever they believe they are targets of persuasion. What kind of persuasion knowledge do consumers develop and use when they view that they are trying to be persuaded to write an online review? Burtch *et al.* (2018) argue that consumers resist to persuasion when a company offers a financial incentive as a motivational tool but are less skeptical when social norms are used as a motivational factor. However, past research is divided in terms of the effect of persuasion knowledge on brand building efforts. Wei *et al*. (2008) argue that the activation of persuasion knowledge leads to a negative brand evaluation, whereas Boerman *et al*. (2012) suggest that sponsorship disclosure leads to higher persuasion knowledge that leads to less favorable brand attitudes. Campbell and Kirmani (2000) argue that consumers rely on persuasion knowledge when they are skeptical about the motive of an agent. Thus,

persuasion knowledge may generate skepticism about the intention of a brand, which may discourage consumers from writing a review.

Conversely, Isaac and Grayson (2017, p. 895) argue that persuasion knowledge can sometimes lead to greater credibility rather than greater skepticism: "when a persuasive agent uses a credible tactic, persuasion knowledge access can lead consumers to evaluate the agent and its offering more (rather than less) favorably". Persuasion knowledge explains how consumers use marketers' advertising and selling attempts to refine their product attitudes and attitudes toward the marketers themselves (Friestad and Wright, 1994). Furthermore, if consumers trust a brand, then persuasion knowledge will lead consumers to evaluate that brand more positively (Martin and Strong, 2016). Therefore, if as previously posited a message from a brand with higher equity requesting consumers to write a review may be perceived as more trustworthy, likewise the activation of persuasion knowledge may result in a consumer's more favorable response to the message of a brand with stronger equity and a less favorable response to the message of a brand with weaker brand equity. This study thus hypothesizes:

> *Hypothesis 4- if the message comes from a brand that has high (low) brand equity, then the activation of persuasion knowledge will strengthen (weaken) consumers' intentions to write reviews.*

Methodology

The objective of this paper is to examine whether there is any relationship between brand equity and online reviews. It also examines if messages from brands with stronger equity are perceived as more trustworthy, and how differently consumers respond to a request to write an online review when the request comes from a brand with stronger versus weaker brand equity. The moderating role of persuasion knowledge and the mediating role of message trust are also tested. A pre-test and three experimental studies were conducted to test the research hypotheses.

Given the experimental nature of these studies, student samples were used with the objective of increasing their internal validity (Brinberg and McGrath, 1985; Hanel and Vione, 2016). Figure 3.1 illustrates the proposed conceptual framework.

Figure 3.1: Conceptual framework
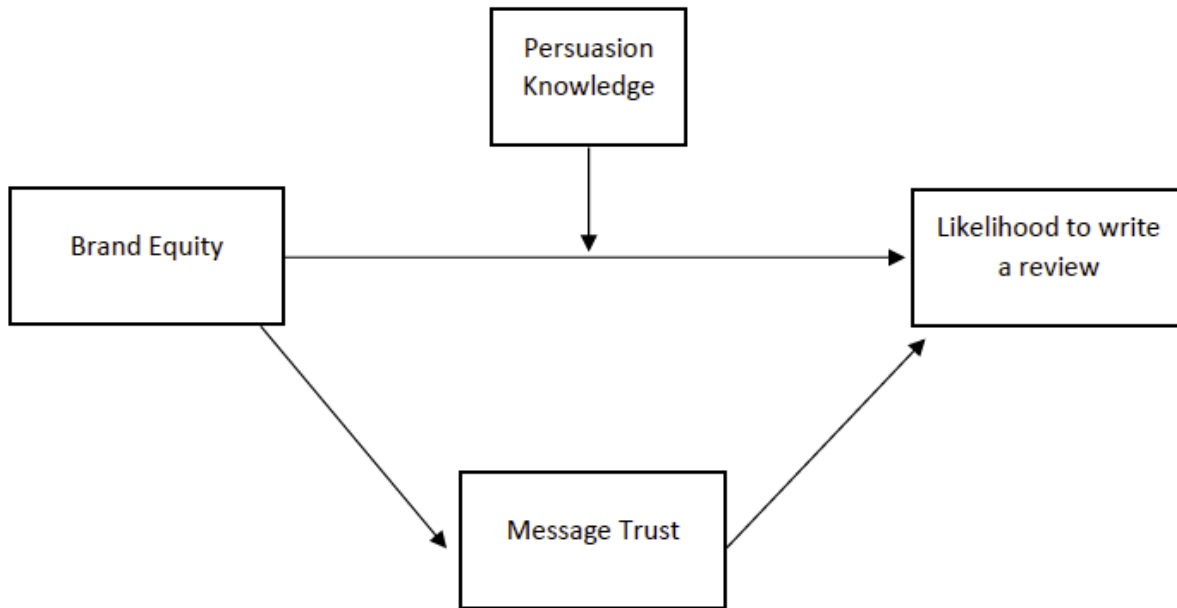
Pre-Test

      Ninety-four participants (58 male) ages 18-29 participated in the pre-test. They were asked to rate brands from different product categories (coffee, cellphones, and athletic shoes) in terms of how strong they believed they are (1 weaker - 7 stronger). For the coffee category, Starbucks is considered stronger than Dunkin. The mean value of the perceived brand strength of Starbucks is 6.41 whereas the mean value of the perceived brand strength of Dunkin is 4.27 on a 7 point scale. For the athletic shoes category, Nike is stronger than Adidas. The mean value of the perceived brand strength of Nike is 6.52 whereas the mean value of the perceived brand strength of Adidas is 5.52 on a 7 point scale. For the cellphone category, Apple is stronger than Huawei. The mean value of the perceived brand strength of Apple is 6.57 whereas the mean

value of the perceived brand strength of Huawei is 2.78 on a 7 point scale. A paired sample t-test suggests that the mean difference of all the three pairs (Starbucks vs. Dunkin, Nike vs. Adidas, Apple vs. Huawei) is statistically significant (p = .000).

Study 1

The objective of this study was to examine whether consumers' intention to write a review depends on the brand equity of the brand, and to test whether trust in the message mediates the relationship between brand equity and the intention to write online reviews. 106 participants (57% male), selected from a large public university located in the south central U.S, were randomly assigned to one of two conditions (Starbucks or Dunkin). First participants were asked questions about brand equity of their assigned brands. The brand equity of each brand was measured using Yoo and Donthu's (2001) scale (Cronbach alfa of .84). Following, participants read a message from the brand that they were assigned to:

> *Dear Customer*
>
> *Positive reviews from awesome customers like you help other consumers know about the quality of the coffee we are offering. Sharing your experience about Starbucks (Dunkin) coffee may help another person know more about Starbucks (Dunkin). Your review will help other consumers make better-informed decisions. Please take 60 seconds to go to our website and share your happy experiences!*
>
> *Thank you in advance for helping other consumers!*

After reading the message, participants' level of trust on the message was measured using Soh *et al*. (2009) scale (Cronbach alfa of .95). Finally, participants were asked about their intention to write an online review.

Results

A one-way ANOVA reveals that the difference in the mean values of the perceived brand equity (BE) of Starbucks and Dunkin is statistically significant (Starbucks BE = 5.22 versus

Dunkin BE = 4.11) (F= 52.93, df= 1, p = < .001). A linear regression analysis shows that brand equity is a statistically significant predictor of participants' intention to write online reviews (F= 84.01, df= 1, p = <.001, R^2 = .45, β= .69) supporting Hypothesis 1. As brand equity consists of three constructs—loyalty, quality, and awareness—the individual effect of these constructs on intention to write reviews was examined. The results suggest that loyalty, rather than quality and awareness, is a statistically significant predictor of participants' intention to write online reviews (β= .36, p = <.01). The linear regression analysis also suggests that brand equity is a statistically significant predictor of participants' trust on the message (F= 70.20, df= 1, p = <.001, R^2 = .40, β= .64), supporting hypothesis 2. Furthermore, a one-way ANOVA was run with participants who were assigned to Starbucks or Dunkin as a fixed factor condition and message trust and intention to write online reviews as dependent variables. The results reveal that the one-factor condition is a statistically significant predictor of intention to write an online review (F= 11.34, df= 1, p = <.001) and trust on the message (F= 9.02, df= 1, p = <.01). Participants assigned to the Starbucks condition were more likely to write a review for the brand than participants assigned to the Dunkin condition (M $_{Starbucks}$= 3.66 vs. M $_{Dunkin}$= 2.91). A contrast analysis confirmed that participants assigned to the Starbucks condition were more likely to write a review than participants assigned to the Dunkin condition (t (104) = -3.37, p = .001). The results also suggest that participants assigned to the Starbucks condition were more likely to trust the message from Starbucks than participants assigned to the Dunkin condition were to trust the message from Dunkin (M $_{Starbucks}$= 4.94 vs. M $_{Dunkin}$= 4.30). A contrast analysis confirms this finding (t (104) = 3.004, p = .01). As participants were randomly assigned to the brands, other variables such as brand coolness or brand love can be ruled out as a confounding variable (Larsen *et al.*, 2001).

Trust as a Mediator

As previously mentioned, participants were asked about how much they trusted the message that they read from their respective brands, under the assumption that participants who have higher trust in the message are more likely to write a review for the brand. In order to test this hypothesis, we conducted a mediation analysis using the PROCESS SPSS macro (Hayes, 2018, model 4, 5000 bootstrap samples). The results suggest that the effect of brand equity on trust on the message is statistically significant ($\beta = .76$, $t = 8.38$, $p = < .01$), thus supporting Hypothesis 2, and that the effect of message trust (mediator variable) on the intention to write a review is also statistically significant ($\beta = .60$, $t = 7.50$, $p = < .01$). The direct effect of brand equity on intention to write reviews is also statistically significant ($\beta = .39$, $t = 4.00$, $p = < .01$). However, a bootstrap analysis confirms an indirect effect of .46 with 95% bias-corrected CI (.33, .59). Thus, the statistically significant indirect effect supports Hypothesis 3, that trust on the message mediates the relationship between brand equity and the intention to write to reviews.

The results are presented in figure 3.2.

Figure 3.2: The mediating role of message trust
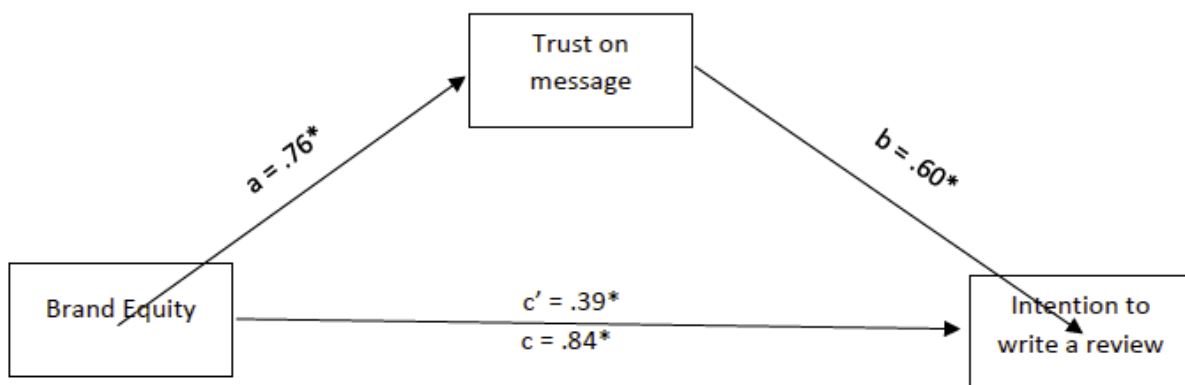
Note: * indicates p<.01

Study 2

The objective of the second study was to find further support to the argument that brand

equity affects consumer intention to write online reviews, and to test the moderating role of

persuasion knowledge. 146 participants (55.2% male), selected from a large public university

located in the south central U.S, were randomly assigned to one of four conditions resulting in a

2 (Brand: Nike vs. Adidas) × 2 (Persuasion Knowledge: present vs. absent) between subject

design. In addition to the results of the pretest, Nike and Adidas were selected based on the

Brand Finance and Interbrand brand equity rankings—Brand Finance: Nike ranks 40th versus

Adidas ranks 103rd (Brand Finance Global 500 2018., 2018); Interbrand: Nike ranks 18th versus

Adidas ranks 55th (Interbrand best global brands 2017, 2018), as a source of external validation.

Both rankings suggest that Nike's brand equity is higher than Adidas'.

Participants were asked brand equity related questions adopted from Lassar *et al*. (1995)

brand equity scale (Cronbach alfa of .94). A different scale to measure brand equity was used—

Yoo and Donthu's (2001) in Study 1—to see whether another brand equity scale generates a

similar kind of result. Past research supports the use of multiple constructs (Morewedge *et al*.,

2018; Sinha and Bagchi, 2019). Following, participants read a message from their respective

brands where Nike (Adidas) requested them to write a review for the brand:

> *Dear Customer*
>
> *Positive reviews from awesome customers like you help other consumers know about the quality of the product we are offering. Sharing your experience about a Nike (Adidas) product may help another person know more about Nike (Adidas). Your review will help other consumers make better-informed decisions. Please take 60 seconds to go to our website and share your happy experiences!*
>
> *Thank you in advance for helping other consumers!*

After reading this brand message, half of the participants saw the following persuasion

knowledge message: "write down anything that comes to your mind about the motives of the

company behind the message to write a review for the company, the intention of the company to

request you to write a review, or the benefits for the company behind the request." This manipulation item was borrowed from Campbell and Kirmani (2000) and its intention was to make consumers think about the motives behind the company's request to write a review for the brand. After the persuasion knowledge manipulation, participants' intention to write online reviews was measured. Finally, participants' attitude towards online reviews was measured to rule out alternative explanations, following Park *et al.*'s (2007) scale (Cronbach alpha of .71). The following manipulation check for persuasion knowledge was included—while I read the message where Nike (Adidas) requested me to write a review, I thought it was pretty obvious that Nike (Adidas) was trying to persuade me to write a review for them. Given that this study's objective was to analyze the effect of persuasion knowledge on consumers' intention to write reviews, the persuasion awareness question was considered pertinent to confirm that the persuasion knowledge manipulation actually worked.

Results

The manipulation check confirmed that participants are aware of the persuasion of the brand. The mean value of the awareness of the persuasion of participants of the Nike condition is 5.47, and of the Adidas condition is 5.81, with a not statistically significant mean difference (F = 1.88, df = 1, p > .15). The ANOVA result suggests that the difference in the mean values of the perceived brand equity of Nike and Adidas is statistically significant (Nike BE = 5.11 versus Adidas BE = 4.68) (F= 9.63, df= 1, p = < .01). A linear regression analysis shows that brand equity is a statistically significant predictor of participants' intention to write online reviews (F= 26.49, df= 1, p = <.001, R^2 = .16, β= .67), again supporting Hypothesis 1. We further analyzed the effect of each individual component of brand equity (performance, image, value, trustworthiness, and attachment) on intention to write reviews. The results suggests that

trustworthiness (β= .24, p = <.05) and attachment (β= .25, p = .05) have statistically significant

effects on consumer intention to write reviews. Furthermore, a two-way ANOVA shows a

significant main effect of the brand (F (1, 142) = 66.85, p < .001) on the intention to write

reviews. The result of the two-way ANOVA reveals that the main effect of persuasion

knowledge is not statistically significant (F (1, 142) = .010, p > .10), however there is a

statistically significant interaction effect (F (1, 142) = 9.26, p < .01) that supports Hypothesis 4—

persuasion knowledge will moderate the relationship between the brand request and intention to

write a review. The result of the pairwise comparison shows that the mean difference of

participants' intention to write a review of Nike and Adidas is statistically significant (p < .001).

Participants assigned to the Nike condition were more likely to write a review than those

assigned to the Adidas condition (M $_{Nike}$ = 4.69 vs. M $_{Adidas}$ = 3.11). A contrast analysis confirms

that participants assigned to the Nike condition were more likely to write a review than

participants assigned to the Adidas condition (t (144) = 7.979, p = .001). But the presence or

absence of persuasion knowledge (M $_{PK}$ = 3.89, M $_{NPK}$ = 3.91) does not result in statistically

significant mean difference of participants' intention to write online reviews (t (144) = .173, p =

.86).

However, participants assigned to the Nike condition that viewed the persuasion

knowledge message were more likely to write a review for the brand (M = 4.97) than those that

did not view the message (M = 4.41), further supporting hypothesis 4. A pairwise comparison

test shows that the mean difference of the intention to write review between presence and

absence of persuasion knowledge in the Nike condition is statistically significant (F (1, 142) =

4.33, p < .05). Likewise, participants in the Adidas brand condition that viewed the persuasion

knowledge message were less likely to write a review (M = 2.81) than participants that did not

view the message (M = 3.42). Again, the mean difference in the Adidas condition is also

statistically significant (F (1, 142) = 4.95, p < .05), also supporting hypothesis 4. Evidence of the

interaction effect can be viewed in Figure 3.3.

Figure 3.3: The interaction effect of brands and persuasion knowledge

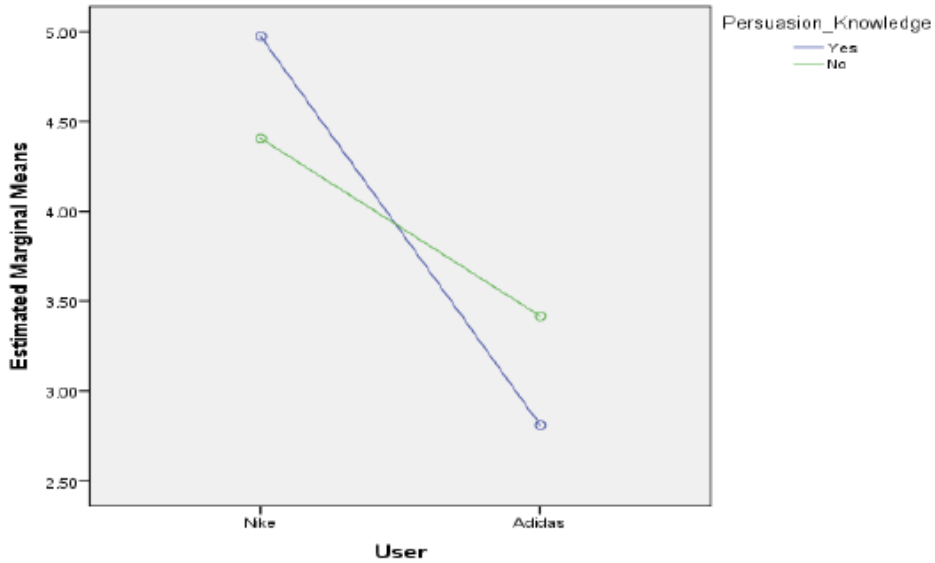**Figure 3.4: The sentiment analysis**
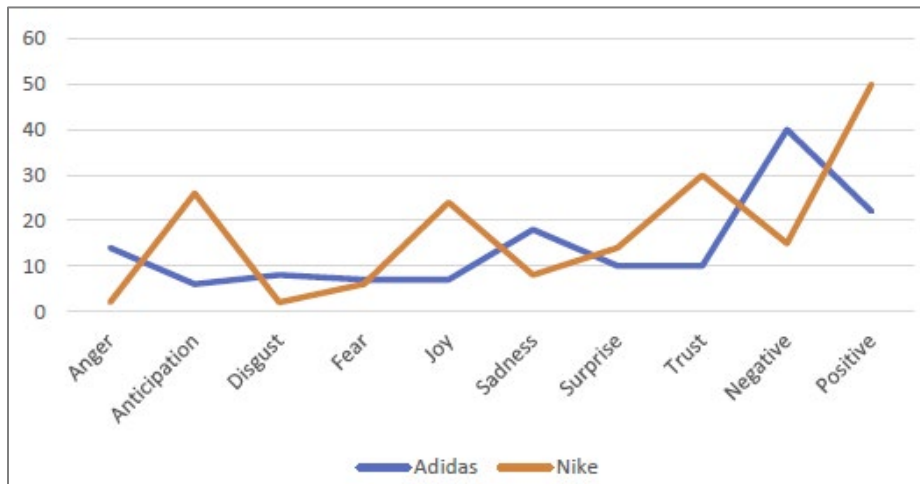
Moreover, a sentiment analysis was conducted using R to examine how participants

responded to the question of "brand's likely motive behind requesting consumers to write

reviews." The sentiment analysis results further strengthen our argument that the activation of

persuasion knowledge works more favorably for Nike than Adidas. The textual analysis showed

that participants who were assigned to Adidas brand expressed more anger, disgust, sadness, and negativity than those of Nike brand. Figure 3.4 provides more details.

The Moderating Role of Persuasion Knowledge

We conducted a moderation analysis using the PROCESS SPSS macro (Hayes, 2018, model 1, 5000 bootstrap samples) to test the hypothesis that access to persuasion knowledge moderates the relationship between brand equity and the intention to write online reviews (hypothesis 4). The results show that the overall model is statistically significant with [$R^2 = .35$ ($F_{(3,142)} = 25.59$; $p < .001$)]. Both the brand and persuasion knowledge conditions are statistically significant ($p < .01$). In other words, consumer intention to write online reviews is affected by brand equity and persuasion knowledge. More importantly, the interaction effect of persuasion knowledge and the brand is statistically significant ($F_{(1,142)} = 9.26$; $p < .01$) where the change in R^2 is .04. This statistically significant further supports Hypothesis 4, that persuasion knowledge moderates the relationship between brand equity and consumer intention to write online reviews.

Alternative Explanation

Given that it may be possible that participants who have a more positive attitude towards online reviews may be more likely to write an online review (Ayeh *et al.*, 2013), consumer attitude towards online review was measured. However, a linear regression shows that attitude towards online reviews is not a statistically significant predictor of the intention to write online reviews ($F = 2.05$, $df = 1$, $p > .15$). A one-way ANOVA also reveals that the mean values of the attitude towards online reviews of the participants in both the Nike and Adidas conditions are not statistically different (M_{Nike} 4.55 vs. M_{Adidas} 4.77). Thus, attitude towards online reviews is not an alternative explanation for this study.

Study 3

The objective of the third study is to increase the generalizability of the findings by using brands from a different product category (mobile phones). 136 participants (42.8% male), selected from a large public university located in the south central U.S., were randomly assigned to one of four conditions resulting in a 2 (Brand: Apple vs. Huawei) × 2 (Persuasion Knowledge: present vs. absent) between subject design. In addition to the result of the pretest, Apple and Huawei were selected based on the Forbes and Interbrand brand equity rankings—Forbes: Apple ranks 1st versus Huawei 79th (Badenhausen, 2018); Interbrand: Apple ranks 1st versus Huawei ranks 70th (Interbrand best global brands 2017, 2018), as a source of external validation. Both rankings suggest that Apple's brand equity is higher than Huawei's.

Participants were asked brand equity related questions adopted from Baalbaki and Guzmán (2016b) consumer perceived brand equity scale (Cronbach alfa of .96). Following, participants read a message from their respective brands where Apple (Huawei) requested them to write a review for the brand:

Dear Customer

Positive reviews from awesome customers like you help other consumers know about the different features of the phone that you are using. Sharing your experience about your Apple (Huawei) phone may help another person know more about the phone. Your review will help other consumers make better-informed decisions. Please take 60 seconds to go to our website and share your happy experiences!

Thank you in advance for helping other consumers!

After reading this brand message, participants' trust in the message was measured using Ohanian's (1990) scale (Cronbach alfa of .92). Next, half of the participants saw the following persuasion knowledge message adapted from Isaac and Grayson (2017): "please think about why Apple (Huawei) took this particular approach to ask you to write an online review. Think about

the considerations that might have led Apple (Huawei) to write this kind of message. Keep in mind that some companies use your review to communicate information truthfully. Other companies use you to trick or mislead customers." Finally, after the persuasion knowledge manipulation, participants' intention to write online reviews was measured.

Results

The ANOVA result reveals that the difference in means values of the perceived brand equity of Apple and Huawei is statistically significant (Apple BE = 5.36 versus Huawei BE = 3.84) (F= 134; df= 1; p <.001). A regression analysis shows that brand equity is a statistically significant predictor of participants' intention to write online reviews (F= 86.48; df= 1; p <.001, R^2 = .39, β = .63), supporting Hypothesis 1. Furthermore, the results for each individual component of brand equity (quality, preference, sustainability, social influence) suggest that preference affects participants' intention to write reviews (p <.05, β = .22). The regression analysis also suggests that brand equity is a statistically significant predictor of trust on the message (F= 70.36; df= 1; p <.001, R^2 = .34, β = .59), supporting Hypothesis 2. Furthermore, ANOVA was run with participants who are assigned to Apple or Huawei as a fixed factor condition and the intention to write online reviews as a dependent variable. The result reveals that brand is a statistically significant predictor of intention to write an online review (F (1,134) = 103, p < .001). Participants assigned to the Apple condition were more likely to write a review for the brand than participants assigned to the Huawei condition brand are more likely to write a review for Apple than participants who are assigned to the Huawei brand (M Apple = 4.73 versus M Huawei = 2.5), further supporting hypothesis 1. An ANOVA analysis also provides evidence of the effect of brand (Apple vs. Huawei) on trust on the message (F (1,134) = 35.35, p < .001). Participants assigned to Apple were more likely to trust the message than the

participants assigned to Huawei (M Apple = 5.12 versus M Huawei = 4.20), further supporting hypothesis 2.

Trust as a Mediator

We conducted a mediation analysis using the PROCESS SPSS macro (Hayes, 2018, model 4, 5000 bootstrap samples). The results suggest that the effect of brand equity is statistically significant (β = .56, t = 8.39, p < .01), thus supporting Hypothesis 2, and that the effect of message trust (mediator variable) on the intention to write a review is also statistically significant (β = .29, t = 2.21, p < .05). The direct effect of brand equity on intention to write reviews is also statistically significant (β = .80, t = 6.34, p < .01), which rules out full mediation. However, a bootstrap analysis confirms an indirect effect of .16 with 95% bias-corrected CI (.0049, .3506), suggesting partial mediation in support of Hypothesis 3—trust on the message partially mediates the relationship between brand equity and the intention to write reviews. The results are presented in figure 3.5.

Figure 3.5: The mediating role of message trust
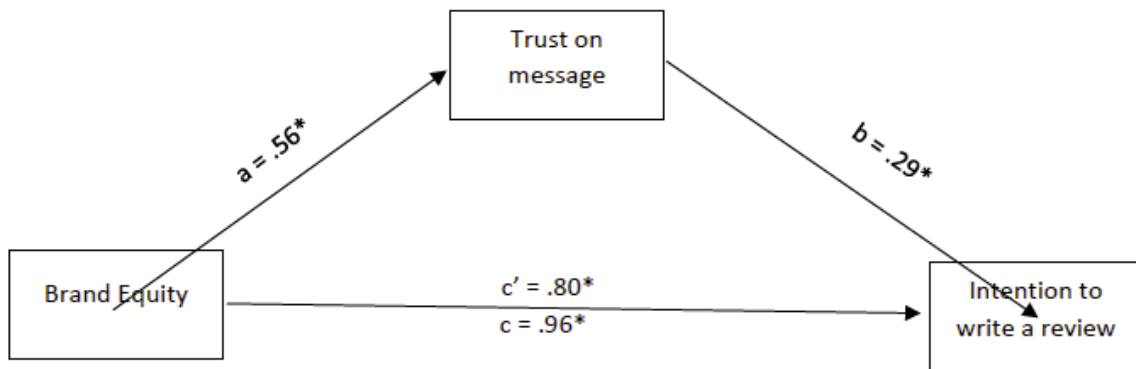
Note: * indicates p<.01,

Brand, Persuasion Knowledge, and Intention to Write an Online Review

A two-way ANOVA shows a significant main effect of the brand (F (1, 132) = 113, p < .001) on the intention to write reviews. Although the main effect of persuasion knowledge is not

statistically significant (F (1, 132) = .92, p > .10), there is a statistically significant interaction effect of the brand and the persuasion knowledge (F (1, 132) = 13.26, p < .001). The statistically significant interaction effect supports Hypothesis 4—persuasion knowledge has a positive effect when it is related to a stronger brand but has a negative effect when it is related to a weaker brand.

Participants assigned to the Apple condition were more likely to write a review than those assigned to the Huawei condition (M $_{Apple}$ = 4.73 vs. M $_{Huawei}$ = 2.56). The result of the pairwise comparison shows that the mean difference of participants' intention to write a review of Apple and Huawei is statistically significant (p < .001). A contrast analysis confirms that participants assigned to the Apple condition were more likely to write a review than participants assigned to the Huawei condition (t (134) = 10.17, p = .001). But the presence or absence of persuasion knowledge does not result in statistically significant mean difference of participants' intention to write online reviews (t (134) = .468, p = .64).

Furthermore, participants in the Apple brand condition that viewed the persuasion knowledge message were more likely to write a review for the brand (M = 5.00) than those that did not view the message (M = 4.45) and the mean difference is statistically significant ((F (1, 132) = 3.59, p < .10). On the other hand, participants in the Huawei brand condition that viewed the persuasion knowledge message were less likely to write a review (M = 2.09) than participants that did not view the message (M = 3.03) and the mean difference is statistically significant (F (1, 132) = 10.61, p < .001). More importantly, the mean difference between Apple and Huawei brand users in terms of their intention to write review in persuasion knowledge present condition is 1.91 (F (1, 132) = 102, p < .001). In case of no persuasion knowledge condition, the mean

difference is 1.42 (F (1, 132) = 24.53, p < .001). Evidence of the interaction effect can be viewed in Figure 3.6.

Figure 3.6: The interaction effect of brand and persuasion knowledge
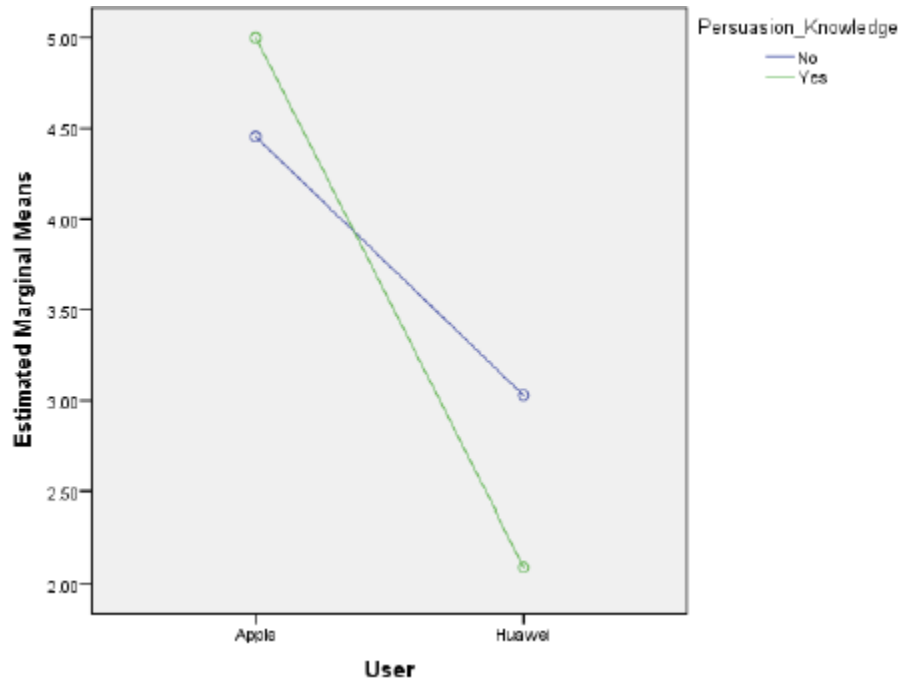
The Moderating Role of Persuasion Knowledge

We conducted a moderation analysis using the PROCESS SPSS macro (Hayes, 2018, model 1, 5000 bootstrap samples) to test the hypothesis that access to persuasion knowledge moderates the relationship between brand equity and the intention to write online reviews (hypothesis 4). The results show that the overall model is statistically significant (F (3,132) = 42.34; p <.001). Although persuasion knowledge is not statistically significant (β = .54, t = 1.89, p >.05), the interaction effect of persuasion knowledge and the brand is statistically significant (F (1,132) = 13.27; p < .01). Thus, it can be concluded that the persuasion knowledge moderates the relationship between the brand and the intention to write an online review.

Dual Role of Persuasion Knowledge (Mediated Moderation)

Finally, the complete model was tested using the PROCESS SPSS macro (Hayes, 2018, model 15, 5000 bootstrap samples). The previous analysis showed that persuasion knowledge moderates the relationship between brand and online reviews, but whether persuasion knowledge moderates the relationship between message trust and online reviews was also tested. The findings of this analysis show that the interaction effect of brand and persuasion knowledge on the intention to write a review is statistically significant ($F_{(1,130)} = 7.98$; $p < .01$), but the interaction effects of message trust and persuasion knowledge on the intention to write a review are not ($F_{(1, 130)} = .08$; $p > .10$). This finding rules out the possibility of mediated moderation.

Figure 3.7: Mediated moderation analysis
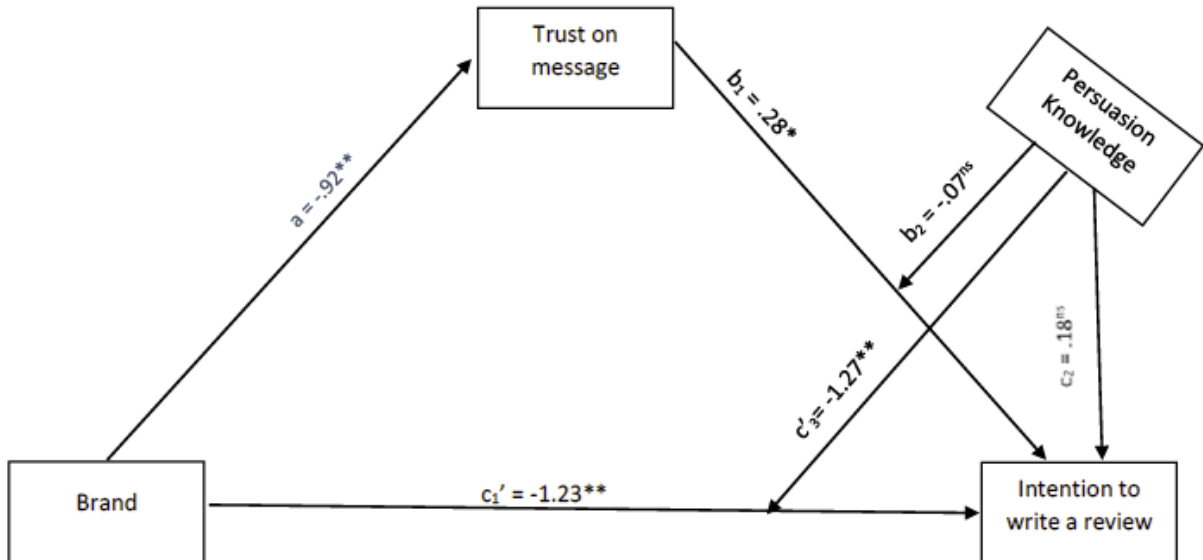
Note: ** indicates $p < .01$, * indicates $p < .10$ and ns indicates not significant

Summary of Findings

Overall, the three studies show that participants are more likely to write an online review for a brand when the request comes from a brand with stronger equity, given that consumers place more trust on messages coming from brands they see as stronger. Although six different

brands were selected for three studies based on a pretest and the Interbrand, Brand Finance, and Forbes rankings, the consumer perception of brand equity of these brands was also measured in each study. These consumer responses validated the external rankings. Through regression analysis, evidence was provided that there is a positive relationship between brand equity and the intention to write online reviews. The regression results indicate that the stronger a brand is in the eyes of consumers—higher perceived brand equity—, the more likely consumers will write reviews for a brand. The results of a two-way ANOVA show the existence of the main effect of brand and also an interaction effect of brand and persuasion knowledge. A moderation analysis also supports the argument that accesses to persuasion knowledge moderates the relationship between brands and online reviews. Access to persuasion knowledge leads participants to respond more positively to a request for reviews when participants perceive that the brand is stronger.

Discussion

With the growth of online sales and with brands recognizing the value of online customer reviews, the need for positive online reviews is ever growing. Brand equity can increase with a stream of positive online reviews and brands with strong equity enjoy a whole array of benefits. The results of all the three studies clearly suggest that brands that have higher brand equity are more likely to persuade consumers to write reviews for them. The results also indicate that consumers' trust in a message is high when a message comes from a brand with stronger equity and that higher trust leads to a more positive response to a request to write a review for a brand. In other words, the capacity of a brand with stronger equity to persuade consumers to write an online review may lead to more positive online reviews, which will lead to higher levels of brand

equity, generating a virtuous cycle for the brand; proving the increasing importance of positive online reviews for a brand.

The message used in the manipulation only mentions that the requested reviews will help other consumers. It does not mention the likely benefit for the brand. Furthermore, the potential trust implications for neither the low equity nor high equity brand were mentioned or manipulated. Thus, this study fails to provide specific recommendations to brands with weaker equity about what strategies they could adopt to ensure that consumers respond to their review request. Furthermore, the study findings also indicate that consumers' level of trust on the message of a brand with weaker equity is lower. A possible reason behind this finding could be that the manipulation message only discussed the benefits of reviews to other consumers and not for the brands. Thus, the message might have not been enough to generate a higher level of trust for the brands with weaker equity. A potential solution could be for brands with weaker equity to also include in their message the benefits it will enjoy from consumers writing reviews for them. Explaining the two-way benefit may arguably result in stronger trust and may be a more effective way in persuading consumers to write reviews for a brand with weaker equity.

Theoretical and Managerial Implications

This study makes several theoretical contributions. First, it contributes to the existing branding literature by providing evidence that the higher a brand's equity, the higher the chance that consumers will positively respond to the request to write an online review. Past literature had not studied the persuasion capability of brands to encourage consumers to write online reviews. Second, it contributes to the existing literature on brand and message trust as it provides evidence that consumers have higher trust in a message that comes from a brand that has higher brand equity. This study provides evidence of a positive linear relationship between brand equity

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and message trust. Third, it extends the persuasion knowledge theory in the field of brand equity. Based on Isaac and Grayson's (2017) finding that access to persuasion knowledge leads to more credibility, this study tests and finds support to the assumption that access to persuasion knowledge moderates the relationship between brand equity and consumer intention to write online reviews. The findings also indicate that access to persuasion knowledge has more persuasion strength when the message comes from a brand that has higher brand equity.

The study also makes several managerial contributions. Given that consumers are more likely to write reviews for brands they consider have higher brand equity, the importance of building a strong brand is reinforced and serves as a reminder for firms to focus on their branding efforts. When looking for online reviews, brand managers should not hesitate to email consumers making a specific request to write reviews for their brand. The findings of this study provide evidence that consumers will positively respond to the request. However, brands also need to remember that the likelihood of receiving positive reviews depend on how trustworthy the message is perceived to be. Therefore, brands need to establish trust in consumer minds by crafting a message that is genuine and discloses the brand's objective.

Limitations and Future Research

Although the study provides evidence that brand equity and intention to write online reviews are positively correlated, and trust on the message is an essential mediator in this relationship, this study did not address other issues that future research could explore. First, participants of all these three studies are located only in the U.S. The brands analyzed are global brands, and their relative brand equity may vary in different countries. For example, while Apple is a dominant brand in the U.S., in Asia, Huawei may be perceived as a stronger brand. Thus, future studies could focus on testing these relationships in different countries. Second, customer

satisfaction may be a significant issue in the relationship between brand equity and online reviews. Even if the message comes from a brand that has higher brand equity, if a customer is not satisfied with the brand, then the customer may not write a review or may write a negative one. Future studies should address the influence of customer satisfaction on the intention to write online reviews. Third, because real brands were used in the experimental studies, there is a possibility of other confounding factors such as brand love, brand coolness, or brand nostalgia may influence consumer intention to write reviews; although random assignment of subjects is most likely to minimize that concern (Larsen *et al*., 2001). Fourth, the study only focused on how to influence getting reviews from consumers. However, it is not certain that consumers will write a positive review. Getting negative reviews would thus be an unwanted outcome for the brands which may result in a more serious matter for weaker brands. Future research could focus on exploring the effects of negative reviews. Regardless of these limitations this study explores, and makes some initial contributions to, a new and growing phenomenon that merits future research and is of value to academics and managers alike: the growing importance of online reviews and their influence on a brand's perceived equity and consumers' purchase intentions.

References

Aaker, D.A. (2009), *Managing Brand Equity*, Simon and Schuster, New York, NY.

Aaker, D.A. (2012), *Building Strong Brands*, Simon and Schuster, New York, NY.

Ahn, J. and Ferle, C.L. (2008), "Enhancing recall and recognition for brand names and body copy: A mixed-language approach", *Journal of Advertising*, Vol. 37 No. 3, pp. 107-117.

Ailawadi, K.L. and Harlam, B. (2004), "An empirical analysis of the determinants of retail margins: The role of store-brand share", *Journal of Marketing*, Vol. 68 No. 1, pp. 147-165.

Ailawadi, K.L., Neslin, S.A. and Gedenk, K. (2001), "Pursuing the value-conscious consumer: Store brands versus national brand promotions", *Journal of Marketing*, Vol. 65 No. 1, pp. 71-89.

Alvarado-Karste, J.D. and Guzmán, F. (2020), "The effect of cognitive style and social influence on consumer-based brand equity," *Journal of Product & Brand Management*, https://doi.org/10.1108/JPBM-06-2019-2419.

Aurier, P., and Gilles Séré, D.L. (2012), "Impacts of perceived brand relationship orientation on attitudinal loyalty", *European Journal of Marketing,* Vol. 46 No. 11, pp. 1602-1627.

Ayeh, J.K., Au, N. and Law, R. (2013), "Do we believe in TripAdvisor?" Examining credibility perceptions and online travelers' attitude toward using user-generated content", *Journal of Travel Research*, Vol. 52 No. 4, pp. 437-452.

Baalbaki, S. and Guzmán, F. (2016a), "Consumer-based brand equity", in *Routledge Companion to Contemporary Brand Management*, ed. Francesca Dall'Olmo Riley, Jaywant Singha, and Charles Blankson, UK: Routledge, pp. 32-47.

Baalbaki, S. and Guzmán, F. (2016b), "A consumer-perceived consumer-based brand equity scale", *Journal of Brand Management*, Vol. 23 No. 3, pp. 229-251.

Badenhausen, K. (2018), "The world's most valuable brand", available at: https://www.forbes.com/sites/kurtbadenhausen/2018/05/23/the-worlds-most-valuable-brands-2018/#1f39126b610c (accessed 24 January 2020).

Baldinger, A.L. and Rubinson, J. (1996), "Brand loyalty: The link between attitude and behavior", *Journal of Advertising Research*, Vol. 36 No. 6, pp. 22-35.

Bambauer-Sachse, S. and Mangold, S. (2011), "Brand equity dilution through negative online word-of-mouth communication", *Journal of Retailing and Consumer Services*, Vol. 18 No. 1, pp. 38-45.

Bassig, M. (2016), "Understanding the impact of verified reviews vs. unprompted reviews", available at: https://www.reviewtrackers.com/verified-reviews-unprompted-reviews/(accessed 24 January 2020).

Bei, L. and Cheng, T. (2013), "Brand power index – using principal component analysis", *Applied Economics*, Vol. 45 No. 20, pp. 2954-2960.

Beneke, J., de Sousa, S., Mbuyu, M. and Wickham, B. (2016), "The effect of negative online customer reviews on brand equity and purchase intention of consumer electronics in South Africa", *The International Review of Retail, Distribution and Consumer Research*, Vol. 26 No. 2, pp. 171-201.

Berry, L. L. (2000), "Cultivating service brand equity", *Journal of the Academy of Marketing Science*, Vol. 28 No. 1, pp. 128-137.

Bloemer, J. M. and Kasper, H. D. (1995), "The complex relationship between consumer satisfaction and brand loyalty", *Journal of Economic Psychology*, Vol. 16 No. 2, pp. 311-329.

Boerman, S.C., Van Reijmersdal, E.A. and Neijens, P.C. (2012), "Sponsorship disclosure: Effects of duration on persuasion knowledge and brand responses", *Journal of Communication*, Vol. 62 No. 6, pp. 1047-1064.

Brand Finance Global 500 2018 (2018), available at: http://brandfinance.com/images/upload/bf_global2018_500_website_locked_final_spread_03042018.pdf (accessed January 2 2018).

Brinberg, D. and McGrath J.E. (1985), *Validity and Research Process*, Sage Publications, Beverly Hills, CA.

Broniarczyk, S.M. and Alba, J.W. (1994), "The importance of the brand in brand extension", *Journal of Marketing Research*, Vol. 31 No. 2, pp. 214-228.

Buchanan, L., Simmons, C.J. and Bickart, B.A. (1999), "Brand equity dilution: Retailer display and context brand effects", *Journal of Marketing Research,* Vol. 36 No. 3, pp. 345-355.

Burtch, G., Hong, Y., Bapna, R. and Griskevicius, V. (2018), "Stimulating online reviews by combining financial incentives and social norms", *Management Science*, Vol. 64 No. 5, pp. 2065-2082.

Burton, S., Lichtenstein, D.R., Netemeyer, R.G. and Garretson, J.A. (1998), "A scale for measuring attitude toward private label products and an examination of its psychological and behavioral correlates", *Journal of the Academy of Marketing Science,* Vol. 26 No. 4, pp. 293-306.

Campbell, M. C. and Kirmani, A. (2000), "Consumers' use of persuasion knowledge: The effects of accessibility and cognitive capacity on perceptions of an influence agent", *Journal of Consumer Research*, Vol. 27 No. 1, 69-83.

Catalán, S., Martínez, E. and Wallace, E. (2019), "Analysing mobile advergaming effectiveness: The role of flow, game repetition and brand familiarity", *Journal of Product & Brand Management,* Vol. 28 No. 4, pp. 502-514.

Chatterjee, P. (2001), "Online reviews: Do consumers use them?", *ACR 2001 Proceedings*, M.C. Gilly, J. Myers-Levy, eds., pp. 129-134.

Chaudhuri, A. and Holbrook, M.B. (2001), "The chain of effects from brand trust and brand affect to brand performance: The role of brand loyalty", *Journal of Marketing*, Vol. 65 No. 2, pp. 81-93.

Cheung, C.M. and Lee, M.K. (2012), "What drives consumers to spread electronic word of mouth in online consumer-opinion platforms", *Decision Support Systems*, Vol. 53 No. 1, pp. 218-225.

Childs, M., Jin, B. and Tullar, W.L. (2018), "Vertical versus horizontal line extensions: A comparison of dilution effects", *Journal of Product & Brand Management,* Vol. 27 No. 6, pp. 670-683.

Childs, M. and Kim, S. (2019), "Exploring conspicuous compassion as a brand management strategy", *Journal of Product & Brand Management,* Vol. 28 No. 4, pp. 540-554.

Chiou, J-S., Hsu, A.C-F. and Hsieh, C-H. (2013), "How negative online information affects consumers' brand evaluation", *Online Information Review,* Vol. 37 No. 6, pp. 910-926.

Christodoulides, G., De Chernatony, L., Furrer, O., Shiu, E. and Abimbola, T. (2006), "Conceptualising and measuring the equity of online brands", *Journal of Marketing Management*, Vol. 22 No. 7-8, pp. 799-825.

Chun, H.H., Park, C.W., Eisingerich, A.B. and MacInnis, D.J. (2015), "Strategic benefits of low fit brand extensions: When and why?", *Journal of Consumer Psychology*, Vol. 25 No. 4, pp. 577-595.

Clement, J. (2019), "United States: Retail e-commerce sales 2017-2023", available at: https://www.statista.com/statistics/272391/us-retail-e-commerce-sales-forecast/ (accessed 24 January 2020).

Colliander, J. and Anders, H.W. (2013), "Trash talk rebuffed: Consumers' defense of companies criticized in online communities", *European Journal of Marketing,* Vol. 47 No. 10, pp. 1733-1757.

Cowan, K. and Guzman, F. (2018), "How CSR reputation, sustainability signals, and country-of-origin sustainability reputation contribute to corporate brand performance: An exploratory study", *Journal of Business Research*, https://doi.org/10.1016/j.jbusres.2018.11.017

Cromie, J.G. and Ewing, M.T. (2009), "The rejection of brand hegemony", *Journal of Business Research*, Vol. 62 No. 2, pp. 218-230.

Farquhar, P.H. (1989), "Managing brand equity", *Marketing Research*, Vol. 1 No. 3, pp. 24-33.

Dixit, S., Badgaiyan, A.J. and Khare, A. (2017), "An integrated model for predicting consumer's intention to write online reviews", *Journal of Retailing and Consumer Services*, Vol. 46, pp. 112-120.

Duan, W., Gu, B. and Whinston, A.B. (2008), "Do online reviews matter? —An empirical investigation of panel data", *Decision Support Systems*, Vol. 45 No. 4, pp. 1007-1016.

Espinosa, J.A., Ortinau, D.J., Krey, N. and Monahan, L. (2018), "I'll have the usual: How restaurant brand image, loyalty, and satisfaction keep customers coming back", *Journal of Product & Brand Management,* Vol. 27 No. 6, pp. 599-614.

Eelen, J., Özturan, P. and Verlegh, P. W. (2017), "The differential impact of brand loyalty on traditional and online word of mouth: The moderating roles of self-brand connection and the desire to help the brand", *International Journal of Research in Marketing*, Vol. 34 No. 4, pp. 872-891.

Floyd, K., Freling, R., Alhoqail, S., Cho, H.Y. and Freling, T. (2014), "How online product reviews affect retail sales: A meta-analysis", *Journal of Retailing*, Vol. 90 No. 2, pp. 217-232.

Foreh, M.R. and Grier, S. (2003), "When is honesty the best policy? The effect of stated company intent on consumer skepticism", *Journal of Consumer Psychology*, Vol. 13 No. 3, pp. 349-356.

Friestad, M. and Wright, P. (1994), "The persuasion knowledge model: How people cope with persuasion attempts", *Journal of Consumer Research*, Vol. 21 No. 1, pp. 1-31.

Girard, T., Trapp, P., Pinar, M., Gulsoy, T. and Boyt, T.E. (2017), "Consumer-based brand equity of a private-label brand: Measuring and examining determinants", *Journal of Marketing Theory and Practice,* Vol. 25 No. 1, pp. 39-56.

Glynn, M.S., Brodie, R.J. and Motion, J. (2012), "The benefits of manufacturer brands to retailers", *European Journal of Marketing,* Vol. 46 No. 9, pp. 1127-1149.

Goldsmith, R.E., Lafferty, B.A. and Newell, S.J. (2000), "The impact of corporate credibility and celebrity credibility on consumer reaction to advertisements and brands", *Journal of Advertising*, Vol. 29 No. 3, pp. 43-54.

Gretzel, U. and Yoo, K.H. (2008), "Use and impact of online travel reviews", *Information and Communication Technologies in Tourism 2008*, pp. 35-46.

Grewal, D., Gotlieb, J. and Marmorstein, H. (1994), "The moderating effects of message framing and source credibility on the price-perceived risk relationship", *Journal of Consumer Research*, Vol. 21 No. 1, pp. 145-153.

Hanel, P.H. and Vione, K.C. (2016), "Do student samples provide an accurate estimate of the general public?" *PloS one*, Vol. 11 No. 12, doi:10.1371/journal.pone.0168354

Hatch, M.J. and Schultz, M. (2001), "Are the strategic stars aligned for your corporate brand", *Harvard Business Review*, Vol. 79 No. 2, pp. 128-134.

Hayes, A.F. (2018), *Introduction to mediation, moderation and conditional process analysis (2nd Ed)*, New York, NY: Guildford Press.

Hennig-Thurau, T., Gwinner, K.P., Walsh, G. and Gremler, D.D. (2004), "Electronic word-of-mouth via consumer-opinion platforms: what motivates consumers to articulate themselves on the internet?", *Journal of Interactive Marketing*, Vol. 18 No. 1, pp. 38-52.

Hoeffler, S. and Keller, K.L. (2003), "The marketing advantages of strong brands", *Journal of Brand Management*, Vol. 10 No. 6, pp. 421-445.

Ho, Y.W. and Merrilees, B. (2008), "The performance benefits of being brand-orientated", *Journal of Product & Brand Management*, Vol. 17 No. 6, pp. 372-383.

Ho-Dac, N.N., Carson, S. J. and Moore, W. L. (2013), "The Effects of Positive and Negative Online Customer Reviews: Do Brand Strength and Category Maturity Matter?", *Journal of Marketing*, Vol. 77 No. 6, pp. 37-53.

Interbrand best global brands 2017 (2018), available at: https://www.interbrand.com/best-brands/best-global-brands/2017/ (accessed 24 January 2020)

Isaac, M.S. and Grayson, K. (2017), "Beyond skepticism: Can accessing persuasion knowledge bolster credibility", *Journal of Consumer Research*, Vol. 43 No. 6, pp. 895-912.

Jacoby, J. and Kyner, D.B. (1973), "Brand loyalty vs. repeat purchasing behavior", *Journal of Marketing Research*, Vol. 10 No. 1, pp. 1-9.

Karakaya, F. and Barnes, N.G. (2010), "Impact of online reviews of customer care experience on brand or company selection", *The Journal of Consumer Marketing,* Vol. 27 No. 5, pp. 447-457.

Kay, M.J. (2006), "Strong brands and corporate brands", *European Journal of Marketing*, Vol. 40 No. 7/8, pp. 742-760.

Keller, K.L. (1993), "Conceptualizing, measuring, and managing customer-based brand equity", *Journal of Marketing,* Vol. 57 No. 1, pp. 1-22.

Keller, K.L. (2001), *Building customer-based brand equity: A blueprint for creating strong brands,* Cambridge, MA: Marketing Science Institute.

Keller, K.L. (2020), "Consumer research insights on brands and branding: A JCR curation", *Journal of Consumer Research*, Vol. 46 No. 5, pp. 995-1001.

Keller, K.L. and Lehmann, D.R. (2006), "Brands and branding: Research findings and future priorities", *Marketing Science*, Vol. 25 No. 6, pp. 740-759.

Kirmani, A. and Zhu, R. (2007), "Vigilant against manipulation: The effect of regulatory focus on the use of persuasion knowledge", *Journal of Marketing Research*, Vo. 44 No. 4, pp. 688-701.

Krishnan, V., Sullivan, U.Y., Groza, M.D. and Aurand, T.W. (2013), "The brand recall index: A metric for assessing value", *Journal of Consumer Marketing*, Vol. 30 No. 5, pp. 415-426.

Larsen, J.T., McGraw, A.P. and Cacioppo, J.T. (2001), "Can people feel happy and sad at the same time?", *Journal of Personality and Social Psychology*, Vol. 81 No. 4, pp. 684-696.

Lassar, W., Mittal, B. and Sharma, A. (1995), "Measuring customer-based brand equity", *Journal of Consumer Marketing*, Vol. 12 No. 4, pp. 11-19.

Lee, J., Park, D.H. and Han, I. (2008), "The effect of negative online consumer reviews on product attitude: An information processing view", *Electronic Commerce Research and Applications*, Vol. 7 No. 3, pp. 341-352.

Lerman, D. and Garbarino, E. (2002), "Recall and recognition of brand names: A comparison of word and nonword name types", *Psychology & Marketing*, Vol 19 No. 7-8, pp. 621-639.

Leone, R.P., Rao, V.R., Keller, K.L., Luo, A.M., McAlister, L. and Srivastava, R. (2006), "Linking brand equity to customer equity", *Journal of Service Research*, Vol. 9 No. 2, pp. 125-138.

Li, X. and Hitt, L.M. (2008), "Self-selection and information role of online product reviews", *Information Systems Research*, Vol. 19 No. 4, pp. 456-474.

Lim, J.-S., Pham, P. and Heinrichs, J.H. (2020), "Impact of social media activity outcomes on brand equity", *Journal of Product & Brand Management*, https://doi.org/10.1108/JPBM-03-2019-2298.

Lindstrom, M. (2006), "Brand sense: How to build powerful brands through touch, taste, smell, sight and sound", *Strategic Direction*, Vol. 22 No. 2.

Lis, B. and Fischer, M. (2020), "Analyzing different types of negative online consumer reviews", *Journal of Product & Brand Management*, https://doi.org/10.1108/JPBM-05-2018-1876.

MacKenzie, S.B. and Lutz, R.J. (1989), "An empirical examination of the structural antecedents of attitude toward the ad in an advertising pretesting context", *Journal of Marketing*, Vol. 53 No. 2, pp. 48-65.

Mantovani, D., de Andrade, L.M. and Negrão, A. (2017), "How motivations for CSR and consumer-brand social distance influence consumers to adopt pro-social behavior", *Journal of Retailing and Consumer Services*, Vol. 36, pp. 156-163.

Marshall, R. and WoonBong, N. (2003), "An experimental study of the role of brand strength in the relationship between the medium of communication and perceived credibility of the message", *Journal of Interactive Marketing*, Vol. 17 No. 3, pp. 75-79.

Martin, B.A.S. and Strong, C.A. (2016), "The trustworthy brand: Effects of conclusion explicitness and persuasion awareness on consumer judgments", *Marketing Letters,* Vol. 27 No. 3, pp. 473-485.

McDonald, M.H., De Chernatony, L. and Harris, F. (2001), "Corporate marketing and service brands-Moving beyond the fast-moving consumer goods model", *European Journal of Marketing*, Vol. 35 No. 3/4, pp. 335-352.

McGriff, J A. (2012), "A conceptual topic in marketing management: The emerging need for protecting and managing brand equity: The case of online consumer brand boycotts", *International Management Review*, Vol. 8 No. 1, pp. 49-54.

Morewedge, C.K., Zhu, M. and Buechel, E.C. (2018), "Hedonic contrast effects are larger when comparisons are social", *Journal of Consumer Research*, Vol. 46 No. 2, pp. 286-306.

Morgan, N., Pritchard, A. and Piggott, R. (2002), "New Zealand, 100% pure. The creation of a powerful niche destination brand", *Journal of Brand Management*, Vol. 9 No. 4, pp. 335-354.

Mudambi, S.M. and Schuff, D. (2010), "Research note: What makes a helpful online review? A study of customer reviews on Amazon.com", *MIS Quarterly*, Vol. 34 No. 1, pp. 185-200.

Muniz, F., Guzmán, F., Paswan, A. and Crawford, H. (2019), "The immediate effect of corporate social responsibility on consumer-based brand equity", *Journal of Product & Brand Management*, Vol. 28 No. 7, pp. 864-879.

Nan, X. and Heo, K. (2007), "Consumer responses to corporate social responsibility (CSR) initiatives: Examining the role of brand-cause fit in cause-related marketing", *Journal of Advertising*, Vol. 36 No. 2, pp. 63-74.

Napoli, J., Dickinson, S.J., Beverland, M.B. and Farrelly, F. (2014), "Measuring consumer-based brand authenticity", *Journal of Business Research*, Vol. 67 No. 6, pp. 1090-1098.

Nguyen, T.D., Dadzie, C., Davari, A. and Guzman, F. (2015), "Intellectual capital through the eyes of the consumer", *Journal of Product & Brand Management*, Vol. 24 No. 6, pp. 554-566.

Ohanian, R. (1990), "Construction and validation of a scale to measure celebrity endorsers' perceived expertise, trustworthiness, and attractiveness", *Journal of Advertising*, Vol. 19 No. 3, pp. 39-52.

Oliver, R.L. (1999), "Whence consumer loyalty?", *Journal of Marketing*, Vol. 63 No. 4, pp. 33-44.

Paharia, N., Keinan, A., Avery, J. and Schor, J.B. (2010), "The underdog effect: The marketing of disadvantage and determination through brand biography", *Journal of Consumer Research*, Vol. 37 No. 5, pp. 775-790.

Pappu, R. and Christodoulides, G. (2017), "Defining, measuring and managing brand equity", *Journal of Product & Brand Management*, Vol 26 No. 5, pp. 433-434.

Pappu, R. and Quester, P.G. (2016), "How does brand innovativeness affect brand loyalty?", *European Journal of Marketing,* Vol. 50 No. 1, pp. 2-28.

Park, D.H., Lee, J. and Han, I. (2007), "The effect of on-line consumer reviews on consumer purchasing intention: The moderating role of involvement", *International Journal of Electronic Commerce*, Vol. 11 No. 4, pp. 125-148.

Ramaswamy, V. and Ozcan, K. (2016), "Brand value co-creation in a digitalized world: An integrative framework and research implications", *International Journal of Research in Marketing*, Vol. 33 No. 1, pp. 93-106.

Senecal, S. and Nantel, J. (2004), "The influence of online product recommendations on consumers' online choices", *Journal of Retailing*, Vol. 80 No. 2, pp. 159-169.

Seo, Y., Primovic, M. and Jin, Y. (2019), "Overcoming stakeholder social media fatigue: A trialogue approach", *Journal of Business Strategy*, Vol. 40 No. 6, pp. 40-48.

Sichtmann, C. (2007), "An analysis of antecedents and consequences of trust in a corporate brand", *European Journal of Marketing,* Vol. 41 No. 9, pp. 999-1015.

Sinha, J. and Bagchi, R. (2019), "Role of ambient temperature in influencing willingness to pay in auctions and negotiations", *Journal of Marketing*, Vol. 83 No. 4, pp. 121-138.

Shen, H. and Sengupta, J. (2018), "Word of mouth versus word of mouse: Speaking about a brand connects you to it more than writing does," *Journal of Consumer Research*, Vol. 45 No. 3, pp. 595-614.

Shocker, A.D. and Weitz, B. (1988), "A perspective on brand equity principles and issues", *Report*, Vol. 2 No. 4, pp. 88-104.

Skarmeas, D. and Leonidou, C.N. (2013), "When consumers doubt, watch out! The role of CSR skepticism", *Journal of Business Research*, Vol. 66 No. 10, pp. 1831-1838.

Soh, H., Reid, L.N. and King, K.W. (2009), "Measuring trust in advertising", *Journal of Advertising*, Vol. 38 No. 2, pp. 83-104.

Sparks, B.A. and Browning, V. (2011), "The impact of online reviews on hotel booking intentions and perception of trust", *Tourism Management*, Vol. 32 No. 6, pp. 1310-1323.

Steenkamp, J.B.E., Van Heerde, H.J. and Geyskens, I. (2010), "What makes consumers willing to pay a price premium for national brands over private labels?", *Journal of Marketing Research*, Vol. 47 No. 6, pp. 1011-1024.

Sweeney, J., Soutar, G. and Mazzarol, T. (2014), "Factors enhancing word-of-mouth influence: Positive and negative service-related messages", *European Journal of Marketing*, Vol. 48 No. 1/2, pp. 336-359.

Trudeau H., S. and Shobeiri, S. (2016), "The relative impacts of experiential and transformational benefits on consumer-brand relationship", *Journal of Product & Brand Management,* Vol. 25 No. 6, pp. 586-599.

Umashankar, N., Bhagwat, Y. and Kumar, V. (2017), "Do loyal customers really pay more for services?", *Journal of the Academy of Marketing Science*, Vol. 45 No. 6, pp. 807-826.

Urde, M. (1999), "Brand orientation: A mindset for building brands into strategic resources", *Journal of Marketing Management*, Vol. 15 No. 1-3, pp. 117-133.

Veloutsou, C., and Guzmán, F. (2017), "The evolution of brand management thinking over the last 25 years as recorded in the Journal of Product and Brand Management", *Journal of Product & Brand Management*, Vol. 26 No. 1, pp. 2-12.

Vermeulen, I.E. and Seegers, D. (2009), "Tried and tested: The impact of online hotel reviews on consumer consideration", *Tourism Management*, Vol. 30 No. 1, pp. 123-127.

Villarroel Ordenes, F., Dhruv, G., Stephan, L., De, R.K., Dominik, M and Martin, W. (2019), "Cutting through content clutter: How speech and image acts drive consumer sharing of social media brand messages," *Journal of Consumer Research*, Vol. 45 No. 5, pp. 988-1012.

Wei, M.L., Fischer, E. and Main, K.J. (2008), "An examination of the effects of activating persuasion knowledge on consumer response to brands engaging in covert marketing", *Journal of Public Policy & Marketing*, Vol. 27 No 1, pp. 34-44.

Wu, P.C. and Wang, Y.C. (2011), "The influences of electronic word-of-mouth message appeal and message source credibility on brand attitude", *Asia Pacific Journal of Marketing and Logistics*, Vol. 23 No. 4, pp. 448-472.

Yin Wong, H. and Merrilees, B. (2008), "The performance benefits of being brand-orientated", *Journal of Product & Brand Management*, Vol. 17 No. 6, pp. 372-383.

Yoo, B. and Donthu, N. (2001), "Developing and validating a multidimensional consumer-based brand equity scale", *Journal of Business Research*, Vol. 52 No. 1, pp. 1-14.

Zhang, K.Z., Zhao, S.J., Cheung, C.M. and Lee, M.K. (2014), "Examining the influence of online reviews on consumers' decision-making: A heuristic–systematic model", *Decision Support Systems*, Vol. 67, pp. 78-89.

Zhu, F. and Zhang, X. (2010), "Impact of online consumer reviews on sales: The moderating role of product and consumer characteristics", *Journal of Marketing*, Vol. 74 No. 2, pp. 133-148.

2018 BrandZ Top 100 Global Brands. (2018), available at: http://www.millwardbrown.com/brandz/top-global-brands/2018 (acessed 2 August 2018)

Appendix: Scale Measures

Study		Operationalization	Source
Variable: Brand Equity	
1	Brand Loyalty	• I consider myself to be loyal to X • X would be my first choice • I will not buy other brands if X is available at the store	Yoo & Donthu (2001)
	Perceived Quality	• The likely quality of X is extremely high • The likelihood that X would be functional is very high	
	Brand Awareness/ Associations	• I can recognize X among other competing brands • I am aware of X • I can quickly recall the symbol or logo of X • I have difficulty in imagining X in my mind	
2	Performance	• From this brand, I can expect superior performance • During use, this brand is highly unlikely to be defective • This brand is made so as to work trouble free • This brand will work very well	Lassar et al. (1995)
	Social Image	• This brand fits my personality • I would be proud to own this brand • This brand will be well regarded by my friends • In its status and style, this brand matches my personality	
	Value	• This brand is well priced • Considering what I would pay for this brand, I will get much more than my money's worth. • I consider this brand to be a bargain because of the benefits I receive	
	Trustworthiness	• I consider the company and people who stand behind this • brand to be very trustworthy • In regard to consumer interests, this company seems to be very caring • I believe that this company does not take advantage of consumers	
	Attachment	• After watching this brand, I am very likely to grow frond of it • For this brand, I have positive personal feelings • With time, I will develop a warm feeling toward this brand	
3	Quality	• The reliability of (Brand X) is very high • (Brand X) is consistent in the quality it offers • The performance of (Brand X) is very high • The quality of (Brand X) is extremely high • The functionality of (Brand X) is very high • (Brand X) has consistent quality • (Brand X) performs consistently • (Brand X) has an acceptable standard of quality	Baalbaki & Guzmán (2016b)

Study	Operationalization	Source
	• (Brand X) is well made	
	Preference • (Brand X) would be my first choice • I consider myself to be loyal to (Brand X) • I will not buy other brands if (Brand X) is available at the store • I am committed to buying (Brand X)	
	Sustainability • (Brand X) is an environmentally safe brand • (Brand X) is an environmentally responsible brand • (Brand X) is a sustainable brand • (Brand X) is a healthy brand	
	Social Influence • (Brand X) improves the way I am perceived by others • (Brand X) would make a good impression on other people • (Brand X) would give its owner social approval • (Brand X) helps me feel accepted	
	Message Trust	
1	• The message is honest • The message is truthful • The message is credible • The message is reliable • The message is dependable • The message is accurate • The message is factual • The message is complete • The message is clear	Soh et al. (2009)
3	• Dependable • Reliable • Honest • Sincere • Trustworthy	Ohanian (1990)
	Variable: Attitude toward Online Review	
2	• When I buy a product on-line, I always read reviews that are presented on the Web site. • When I buy a product on-line, the reviews presented on the Web site are helpful for my decision making. • When I buy a product on-line, the reviews presented on the Web site make me confident in purchasing the product. • If I do not read the reviews presented on the Web site when I buy a product on-line, I worry about my decision. • When I buy a product on-line, reading the reviews presented on the Web site impose a burden on me. • When I buy a product on-line, reading the reviews presented on the Web site irritates me.	Park et al. (2007)

CONCLUSION

Today, online purchases are growing all over the world and consumers frequently look at online reviews before making a purchase decision. We are witnessing a paradigm shift in the way consumers search for information, from physical to electronic sources because of both the quality and the quantity of the information available on digital platforms. Nevertheless, there is also a lot of negativity surrounding online reviews given accusations against businesses for manipulating online reviews using various means. Thus, the first question that arises is whether consumers rely on online reviews and make review-based purchase decisions, which the first essay addresses.

Overall, the findings of Essay 1 suggest that higher levels of consumer skepticism result in lower levels of consumer reliance on online reviews. They also suggest that higher skepticism results in consumers being less likely to use reviews in their purchase decisions. Reliance on online reviews mediates the relationship between consumer skepticism and their purchase decisions. Review self-efficacy moderates the relationship between skepticism and consumer reliance on online reviews. Despite having high skepticism about online reviews, consumers with higher review self-efficacy rely more on online reviews compared to consumers with lower review self-efficacy. Regulatory focus moderates the relationship between skepticism and reliance on online reviews. Specifically, promotion-oriented consumers are more likely to rely on online reviews than prevention-oriented consumers despite similar levels of skepticism toward online reviews.

As essay 1 indicates that higher consumer reliance on online reviews leads to increased review-based purchase decisions, brands now need to know how does these reviews affect their brands and what response strategy they need to develop to address negative reviews. Essay 2

suggests that the negative reviews related to the tangibility, responsiveness, and empathy SERVQUAL dimensions have a more detrimental effect on brand equity than negative reviews related to the assurance and reliability dimensions. The results also provide evidence that emotional contagion is more prevalent when consumers read reviews that are specific to the empathy and responsiveness dimensions. Finally, accommodative responses from the service provider are more effective in deterring the effect of a negative online review on brand equity.

The findings of the first essay suggest that reliance on online reviews has a positive effect on review-based purchase decision, and the results of the second essay suggest that reviews affect brand equity. Therefore, brands depend on online reviews to facilitate consumer purchase decisions and to improve their brand equity. Therefore, Essay 3 investigates whether a message from a brand with stronger brand equity generates more trust than a message from a brand with lower brand equity, and thus is more likely to encourage consumers to write online reviews. The third essay also explores what happens when consumers become aware that brands are trying to persuade them to write a review. The findings confirm that consumers are more likely to write online reviews when a message comes from a brand that has stronger brand equity. Also, trust in the message mediates the relationship between brand equity and consumer intention to write an online review, and persuasion knowledge has a differential effect on consumer intention to write reviews.

The three essays altogether have both theoretical and managerial implications. The results of these studies demonstrate that skepticism toward online reviews does not deter consumers from relying on online reviews if they have high review self-efficacy. Also, that consumers with low review-efficacy are less likely to rely on online reviews than their counterparts. Therefore, the provided evidence of the effects of low and high review self-efficacy on consumer reliance

on online reviews further enrich the skepticism, online review, and self-efficacy literature. The findings contribute to the branding literature by providing evidence that the higher a brand's equity, the higher the chance that consumers will positively respond to the request to write an online review. Thus, higher reviews will help the brands to generate more purchase and also to increase the brand equity further. Also, the study contributes to the service quality related literature by providing evidence that not all negative online reviews related to different SERVQUAL dimensions equally affect brand equity. Thus, the relationship between SERVQUAL specific negative reviews and brand equity is not static, as tangibility, responsiveness, and empathy specific negative reviews seem to affect brand equity more than assurance and reliability specific negative reviews.