

Online Reviews and Pre-Purchase Cognitive Dissonance: A Theoretical Framework and Research Propositions

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ABSTRACT

Online review systems have been widely used by online consumers to facilitate purchase decisions. Existing research has demonstrated the impact of online reviews on e-commerce outcomes such as business profitability and purchase intentions. Little attention, however, has been paid to the relationship between online reviews and a consumer's internal beliefs of an online retailer in the pre-purchase stage and how this relationship affects the consumer's purchase decision. Therefore, this study applies the theory of cognitive dissonance and develops a theoretical framework that analyzes these relationships. The framework offered by this study may help increase the understanding of online consumer behavior.

Keywords: *Online reviews, cognitive dissonance, purchase decision.*

1. INTRODUCTION

Since the introduction of the Internet, retailers have used it as one of the major marketing tools to attract customer attentions and visits [1]. One of the most importance evolvments of using the Internet as a marketing tool is the creation of online review systems. Online review systems have been suggested to be one of the most influential communication channels because online consumers can obtain information related to products and retailers [2]. Because of this particular characteristic, online reviews have been shown to be an important factor that influences sales volume and business growth ([3-5]).

Meanwhile, it is suggested that most real life purchases involve choices among alternatives with incomplete information [6]. Specifically, when shopping online, consumers are facing more alternatives and having less direct information as they are unable to touch or feel the products. To overcome this drawback, many online retailers have adopted online reviews systems that provide relevant information to consumers in order to affect their purchase decisions. Because of this attribute, previous studies have investigated the relationship between online reviews and consumer purchase decisions. For instance, Chatterjee [1] reported that online reviews had significant influence on purchase intentions of products and retailers. Park and Lee [7] examined the impact of quality and quantity aspect of online reviews on purchase decisions and found that the quality of online reviews and the number of online reviews had a positive impact on purchase intentions. Xia and Bechwati [8] studied the impact of online reviews on consumers' purchase intentions using the concept of cognitive personalization and found that online reviews influence consumers' purchase intentions.

Although online review systems are designed to help consumers obtain information, this purpose is sometimes difficult to achieve. Specifically, not all

consumers provide online reviews after shopping and those submitted reviews might contain partial information about the overall performance of a retailer or attributes of a product [9]. Because of this information asymmetry, many consumers have been facing the situation where they have to make purchase decisions based upon both online reviews and their internal beliefs (i.e., cognition) of a product or an online retailer.

Meanwhile, individual cognition and consumer behavior have been discussed intensively in the marketing literature. An important theory used by previous research has been the theory of cognitive dissonance developed by Festinger [10], which is suggested to be one of the greatest social psychology theories ever [11]. Cognitive dissonance theory posits that a psychological discomfort occurs when there is an inconsistency between the person's internal beliefs and external information. Building on the assumption of the theory of cognitive dissonance, previous studies have provided important findings related to consumer purchase decisions. For instance, Korgaonkar and Moschis [12] examined the effects of cognitive dissonance, expectations, and product performance on product evaluations and found that product involvement played an important role on moderating the post decisional product evaluation. Milliman and Decker [13] demonstrated that the use of post-purchase communication could significantly reduce dissonance and improve direct marketing effectiveness. George and Edward [14] developed a theoretical framework that explains how the degree of personal involvement in a purchase decision affects the information needed to reduce cognitive dissonance associated with that purchase. Keng and Liao [15] studied the consequences of post-purchase dissonance, and found that post-purchase dissonance negatively affected post purchase satisfaction and repurchase intention, and positive affected complaint intention.

Although the theory cognitive dissonance has been widely used to discuss consumer behaviors in context

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of the post-purchase stage, Koller and Salzberger [16] suggested that the concept of cognitive dissonance is also applicable to the pre-purchase phase. Thus, the major purpose of this study is to apply the theory of cognitive dissonance to analyze the relationship between online reviews and a consumer's internal belief of an online retailer. In addition, this study explains whether the inconsistency between online reviews and the consumer's internal beliefs could lead to cognitive dissonance, which in turn could affect the consumer's purchase decision in the pre-purchase stage.

The remainder of this study is organized as follows. In the second section, I provide a brief review on online reviews followed by a review on the theory of cognitive dissonance. Next, I present the theoretical arguments and propositions for the proposed theoretical framework. I then provide a discussion on the implications followed by limitations and future research directions. The final section concludes this study with a brief summary.

2. LITERATURE REVIEW

2.1 Online Reviews in E-Commerce

As the traditional market has become much more competitive, retailers have recognized the importance of e-commerce related practices on sales. As suggested by the U.S. Department of Commerce, U.S. e-commerce sales were up 17.5% from \$40.4 billion in the second quarter of 2010 to \$47.5 billion in the second quarter of 2011 (www.commerce.gov). Given the perceived important role of e-commerce on global economy, retailers have sought to identify approaches for improving their performance in the context of online markets. Among various approaches, online review systems, defined as platforms that collect, distribute, and aggregates feedback and comments about participants' past behavior [17], have received much attention by researchers and practitioners because of their potential impact on purchase decisions [18].

Since its emergence, online reviews have been studied predominately on their impact on sales. For instance, Clemons, Gao, and Hitt's [19] study demonstrated that online reviews played an important role in determining product growth. Duan, Gu, and Whinston [20] discovered that the volume of online reviews was associated with product sales. Forman, Ghose, and Wiesenfeld [21] revealed that online reviews containing identity-descriptive information resulted in increasing in product sales. Ogut and Onur Tas [22] found that higher customer ratings were related to more online sales.

Because the one of the major purposes of online reviews is to enhance consumers' trust, which in turn reinforces their purchase decisions [17], a second research stream on online reviews has focused on the impact of online reviews on consumer's trust. For instance, Ba and Pavlou [23] showed that consumer reviews partially enhanced consumers' trust in sellers' credibility. Lim, Sia, Lee, and Benbasat [24] found that customer endorsement

by similar peers increased a consumer's trusting beliefs in the store. Lee, Park, and Han [25] demonstrated that online consumer reviews had an impact on consumers' trust in online shopping malls.

Although online reviews provide consumers important information on the trustworthiness of online retailers, it is likely that the information provided by online reviews to be inconsistent with a consumer's pre-purchase internal belief of the retailers. For instance, a consumer might hold a positive attitude toward a specific online retailer before making a purchase decision while online reviews about the online retailer provided by previous consumers demonstrate in an opposite way. In such a situation, the consumer might experience a cognitive dissonance before making the purchase decision. Thus, this study intends to analyze how consumers' purchase decisions are made when experiencing cognitive dissonance. In the following section, theory of cognitive dissonance is briefly reviewed.

2.2 Theory of Cognitive Dissonance

In 1957, Leon Festinger developed the theory of cognitive dissonance that describes the inconsistency between an individual's attitude and actual behavior creates an uncomfortable psychological state (i.e., dissonance), which in turn motivates the individual to engage in activities that help reduce the dissonance. After its introduction, the theory of cognitive dissonance has been applied in various research fields and the most prominent one has been consumer behavior research [16]. For instance, Keng and Liao [15] studied the consequences of post-purchase dissonance and found that post-purchase dissonance influenced post-purchase satisfaction and repurchase intention negatively. In an exploratory study of low-income female consumers' consumption of low-involvement grocery products, Gbadamos [26] revealed that value for money was a key motivation for purchase grocery products and cognitive dissonance might occur in the consumption of these products. George and Edward [14] examined the impact of personal involvement in a purchase decision on the information needed to reduce cognitive dissonance related to the purchase and discovered that the degree of cognitive dissonance experienced by more involved consumers was less than that experienced by less involved consumers.

Although the concept of cognitive dissonance has often been used to discuss post-purchase phenomena, the empirical study conducted by Koller and Salzberger [16] suggested that cognitive dissonance is also applicable to the pre-purchase stage of consumer behavior. Thus, the study intends to discuss pre-purchase cognitive dissonance experienced in the context of e-commerce. Specifically, this study intends to develop a theoretical framework that describes the relationship between online reviews about the online retailer and a consumer's internal belief of the online retailer. Additionally, this study explains how the consumer's purchase decision is made using the theory of cognitive dissonance as the theoretical base. In the

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following sections, the theoretical framework and propositions are presented.

3. THEORETICAL FRAMEWORK AND PROPOSITIONS

Because of the ubiquitousness of the Internet, online reviews have become a main source that consumers can obtain product information and user experience [4]. Recognizing the effect of online reviews, many online retailers have introduced online review systems to improve their performance. Given the perceived importance of online reviews, many researchers have investigated the impact of online reviews on an online retailer's sales. For instance, Forman, Ghose, and Wiesenfeld [21] found that online reviews containing identity and descriptive information were associated with increase in subsequent online product sales. Hu et al. [4] studied the effect of online reviews on sales and showed that consumers paid attention not only to review scores but also to other contextual information. Most importantly, these researchers demonstrated that the effect of online reviews on sales diminished over time. Park and Lee [7] investigated the relationship between consumer characteristics, attitude toward online reviews, and the outcome of online reviews and found a significant relationship between online reviews and purchase influence. Zhu and Zhang [27] studied how online consumer reviews affect product in video game industry and found that online reviews were more influential for less popular games. Surprisingly, Duan, Gu, and Whinston [20] found that sales were significantly influenced by the volume of online reviews but online reviews had little persuasive effect on consumer purchase decisions.

Although most existing studies have suggested that online reviews have a powerful impact on consumer purchase decisions, Duan et al. [20]'s study questioned whether the relationship between online reviews and purchase decisions could be such straightforward or whether it could be complicated by a consumer's cognitions involved in the purchasing processes. Specifically, when shopping on a specific online retailer's marketplace, a consumer might already have existing internal beliefs of the retailer in terms of its reputation or credibility. Meanwhile, online reviews provided by previous consumer might or might not be consistent with the consumer's existing internal beliefs. When the inconsistency between online reviews and the consumer's internal belief exists, a cognitive dissonance may occur.

According to the theory of cognitive dissonance, human beings prefer to have consistency between their beliefs and behaviors. Therefore, cognitive dissonance could occur when an inconsistency exists between what an individual believes and the actual information he or she receives [10]. Because of the inconsistency, the individual perceives a discomfort, which in turn leads to some actions in order to reduce or eliminate this discomfort. Based on the theory, there are three main approaches to reduce or eliminate the discomfort. First, the individual can change

his or her personal beliefs to be consistent with the information. Second, the individual can search for information that is consistent with his or her beliefs. Finally, the individual can ignore the dissonance. Although Festinger [10] suggests that the above three approaches can be used when cognitive dissonance exists, he further argues that individuals tend to persist in their original beliefs. Similarly, Staw and Ross [28] found that people tend to repeat their behaviors as a means to justify their bad decisions rather than admitting the dissonance.

In the context of online shopping, it is suggested that risks associated with transactions on the Internet are higher than those in the physical environment [29]. Moreover, it is argued that past online experiences could reduce concerns in high-risk purchasing decisions [29] and familiarity of the brand could help reduce the level of risk perceived [30, 31]. Furthermore, a consumer's trusting beliefs, which refer to the consumer believes that an online retailer is benevolent, competent, honest, or predictable could affect the consumer's willingness to purchase [32, 33].

As mentioned earlier, online reviews provide consumers knowledge and information about a product or an online retailer. In other words, an online review system could help consumers reduce the perceived risk associated with online transactions. Since online reviews are opinions and comments provided by previous consumers, this information might be received as external cue and, in turn, might affect a consumer's purchase decisions.

Meanwhile, previous research has suggested that consumers with high degrees of trusting beliefs of an online retailer are more likely to consider buying from that retailer (e.g., [24]). These trusting beliefs, therefore, could be viewed as a consumer's internal beliefs of an online retailer's trustworthiness. Since it is possible for a consumer to face the situation where his or her internal beliefs of an online retailer and online reviews are inconsistent, this inconsistency could create a cognitive dissonance before the consumer makes the purchase decision. This leads to the first proposition:

Proposition 1: The greater inconsistency between an online consumer's internal beliefs of an online retailer's trustworthiness and the exiting online reviews of the online retailer's exists, the greater cognitive dissonance the consumer experiences.

As mentioned earlier, the cognitive dissonance theory describes a psychologically discomfort results from an inconsistency between an individual's internal beliefs and external information. The theory also suggests that people are motivated to reduce or eliminate this discomfort. In the context of online transactions, cognitive dissonance perceived by a consumer might also occur in pre-purchase stage. Specifically, when using online reviews to facilitate a purchase decision, a consumer could introduce him or her into an uncomfortable situation where his or her internal beliefs of an online retailer are

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inconsistent with the comments or ratings provided by other online consumers.

Although online reviews have been considered to have a significant impact on consumers' purchase decisions, Chatterjee [1] suggested that the consequences of word-of-mouth are affected by a consumer's awareness, belief, and attitude. Moreover, Wilson and Peterson [34] claimed that the effect of word-of-mouth information is contingent upon a consumer's receptivity to the information. Furthermore, the literature has suggested that a consumer's predisposition toward the target word-of-mouth information could influence his or her receptivity to the information [1]. In other words, a consumer who has existing feelings or attitudes toward a specific online retailer will make purchase decisions that are largely based upon his or her internal beliefs rather than online reviews. This suggests the second proposition:

Proposition 2: When facing the inconsistency between internal beliefs and online reviews of an online retailer, a consumer will make the purchase decisions based on his or her internal beliefs.

4. DISCUSSION

This study has intended to develop a theoretical framework that describes online consumer behavior using the concepts described in the theory of cognitive dissonance. This emphasis has not been received much attention in the e-commerce literature. Thus, the basic rationale of this study is that a consumer experiences a greater cognitive dissonance when a greater inconsistency between his or her internal beliefs of an online retailer and online reviews about the online retailer exists. Additionally, a consumer will make the purchase decisions based on his or her internal beliefs when a cognitive dissonance is experienced.

4.1 Implications for Theory

As mentioned earlier, this study applies the theory of cognitive dissonance in the stage of pre-purchase in the context of e-commerce. Because prior studies have paid little attention to this perspective, this study extends prior research in two major ways. First, since the theoretical framework offered by this study conceptually distinguishes pre-purchase and post-purchase decisions in the context of e-commerce, it makes a sharper distinction in establishing how a consumer's purchase decisions are made.

While previous research in cognitive dissonance has provided much insight into how individuals cope with dissonance in various settings (e.g., [35-37]), the theoretical framework offered by this study provides a new insight into the understanding of how cognitive dissonance is formed in the context of e-commerce. Since the e-commerce literature lacks research on the pre-purchase stage of cognitive dissonance, the inclusion of pre-purchase stage of cognitive dissonance provides the basis for future research to explore factors that affect such

dissonance as well as the strategies that online consumers use to deal with the dissonance.

4.2 Implications for Practice

If empirically validated by future research, the theoretical offered by this study could have important implications for practice. First, understanding pre-purchase cognitive dissonance in the context of e-commerce may provide insight into the improvement of sale performance as retailers can employ practices that manage online reviews more effectively. As this study has claimed that a consumer will make the purchase decision based on his or her internal beliefs when experiencing cognitive dissonance, online retailers should pay more attention to building positive brand image or brand management. This can be done by, for example, using endorsements and testimonials.

I have also argued that high levels of pre-purchase cognitive dissonance will be experienced when there are high levels of inconsistency between an online consumer's internal beliefs of an online retailer and the actual online reviews. From this perspective, online retailers should constantly monitor their online review profiles and engage in service recovery practices (see [38, 39] for service recovery practices) when needed.

5. LIMITATIONS AND FUTURE RESEARCH DIRECTIONS

By exploring pre-purchase cognitive dissonance in the context of e-commerce, this study provides another perspective for understanding online consumer behavior. Although this study intends to offer a new perspective, it is not without limitations. First, when examining online reviews, previous research has demonstrated that attributes of consumers could have an impact on their perceptions of online reviews. For instance, Zhu and Zhang [27] found that there is a positive relationship between the reliance on online reviews and a consumers' Internet experience. Thus, a first limitation of this study is that it did not account for these factors and future research that includes personal attributes is needed to strengthen the theoretical framework offered by this study.

Given individual perceptions and cognitions can change over time, a second limitation is that the propositions offered by this study did not incorporate the impact of time on an online consumer's internal beliefs and cognitions. Future longitudinal studies, therefore, are needed to validate our theoretical framework.

A final limitation of this study is that it did not considered the potential impact of the number of online reviews on an online consumer's perception and cognition. Specifically, previous research has shown that the number or volume of online reviews could affect consumers' decision-making process (e.g., [40, 41]). Given this study mainly focuses on the types of online reviews (i.e., positive and negative), future research can benefit from

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including the number or volume of online reviews to the theoretical framework offered by this study.

6. CONCLUSION

In this study, I have sought to develop a theoretical framework that explains the cognitive dissonance experienced in the pre-purchase stage in the context of e-commerce by applying Festinger's [10] theory of cognitive dissonance. This emphasis has been neglected in the e-commerce literature. Thus, I believe that consumer purchase decision can be conceptually better understood when pre-purchase cognitive dissonance is examined. I provide the theoretical framework and the propositions that guide future theoretical and empirical research. In addition, I offer online retail organizations suggestions and recommendations on how the proposed theoretical framework and propositions can be used to enhance organizational outcomes through managing online reviews more effectively.

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