Realizing Your Wishes: Alleviating Online Shopping Hesitation via Peer Consumer Review in Social Shopping Context

Research-in-Progress

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Abstract

A large proportion of online consumers tend to abandon their virtual shopping carts instead of finalizing their purchases. In this research in progress paper, we investigate how online shopping hesitation can be alleviated to promote product sales in the context of social shopping. Particularly, we attempt to address the research gap by exploring how online review characteristics (i.e., review credibility, review volume, and review timeliness) mitigate online shopping hesitation and encourage consumers to purchase from their wish-lists. We also explore the potential moderating role of consumer engagement and consumer expertise. In order to validate our research model, we obtained panel data from an online social shopping community and conducted some preliminary analyses. We believe that the results of this study will provide notable insights for both academic researchers and practitioners.

Keywords: Online Shopping Hesitation, Social Shopping, Online Consumer Review, Purchase Decision, Heuristic-Systematic Model, Elaboration Likelihood Model.
Introduction

Nowadays, online shopping remains very popular. In 2013, consumers spent over US $963 billion in online shopping (Weinstein 2013). Despite the popularity of online shopping, approximately 75 percent of online consumers are found to abandon their virtual shopping carts, which store products they intend to purchase before finalizing their purchases (MediaPost 2002). This phenomenon is termed by Cho et al. (2006) as online shopping hesitation, which is referred as “postponing or deferring product purchases by having additional processing time before making final product-purchase decisions on the Internet” (Cho et al. 2006, p.261) (e.g., abandoning shopping carts, hesitating to purchase products from a wish-list). This critical online shopping phenomenon has been receiving increasing scholarly attention. For instance, Cho et al. (2006) identified four categories of determinants of consumers’ online shopping hesitation, including perceived uncertainty factors, medium/channel innovation factors, contextual factors and consumer characteristics factors, by conducting a survey on online shoppers. Similarly, Kukar-Kinney and Close (2010) explained consumers' decision to abandon their online shopping carts by focusing on the role of inhibitors in an online consumers’ purchase process, such as social influence, lack of availability, lack of payment methods, high price, shoppers’ financial status, time pressure, using shopping carts for organizing purpose, privacy and security issues, and technical issues. In addition, some consumers may use the online shop as a source of information for investigating the products they are interested in. Therefore, they often hesitate to purchase the products added to their virtual shopping carts. However, there is still a paucity of research that investigates the means to alleviate consumers’ online shopping hesitation and encourage them to purchase the products they have added to their shopping carts.

With the advancement of social networking technologies, social shopping platforms have become a major channel where members search for product information, exchange product information with other members, and conduct purchases online. There are various forms of social shopping platforms. Some platforms support onsite purchase (e.g., fab.com and oretsy.com) whereas others only provide links to external online retail stores (e.g., caboodle.com and wanelo.com). Some platforms only allow members to add products to wish-lists (e.g., fancy.com and polyvore.com) while others support both wish-lists and buy-lists (e.g., svpply.com and ownza.com). Nonetheless, all social shopping platforms enable their members to share their product reviews and recommendations to peer consumers they have connected with through the embedded social networking features.

Social shopping platforms offer a unique opportunity to utilize peer product reviews to address online shopping hesitation. On a social shopping platform, a wish-list can be viewed as an online shopping cart. Consumers can store their favorite products as well as the products they plan to purchase in the wish-lists. The wish-lists are visible to all members in social shopping communities, and can be used to signal their interests and tastes to peer consumers. In the same context, peer product reviews may refer to the reviews that are posted by peers followed by a consumer. Prior literature has demonstrated the importance of online consumer reviews in influencing consumers’ purchase decision (Awad and Ragowsky 2008; Lee and Lee 2009; Lee and Youn 2009; Park and Lee 2009), and hence we expect that providing an appropriate amount of credible and timely peer consumer review on products already included in a consumer’s publicly available wish-list will encourage the consumer to purchase the products from her wish-list.

Building on the prior literature, we attempt to address the research gap by exploring how characteristics of peer product review (i.e., review credibility, review volume, and review timeliness) mitigate online shopping hesitation and encourage consumers to purchase from the wish-lists. More specifically, we endeavor to answer the following research questions in this study:

1. How will review characteristics (i.e., review credibility, review volume, and review timeliness) affect a consumer’s decision to purchase the products in her wish-list on a social shopping platform?

2. How will the effects of review characteristics on purchase decision vary for consumers with different consumer characteristics (i.e., consumer involvement and expertise)?

We aim to address those two research questions by gathering and analyzing a secondary data set obtained from a popular Asian social shopping platform. We expect to contribute to IS Research in the following ways. First, by addressing online shopping hesitation in social shopping context, our study addresses an
important gap in prior research. Second, by investigating the relationship between characteristics of online consumer reviews and consumers’ purchase decision as well as the relative impact of each review characteristic, our study will enrich the literature on electronic word-of-mouth communication. Third, our study will extend existing research by utilizing secondary panel data obtained from a real social shopping platform rather than conducting a survey/experiment. Our findings will also help practitioners address online shopping hesitation and increase sales by utilizing online consumer reviews in social shopping communities.

The remainder of this paper is structured as follows. First, we review relevant literature and our theoretical foundation. After that, we propose our research model and describe how each hypothesis is derived. Lastly, the methodology and intended contributions of this study will be presented.

**Literature Review and Theoretical Foundation**

**Online Consumer Reviews**

On online platforms with social networking functionalities, consumers are susceptible to the influence of peers’ opinions, referred to as electronic word of mouth, or eWOM (2011). eWOM can take various forms, and one of them is online consumer reviews, defined as either positive or negative statements made by consumers about products, companies, or services on the Internet (Hennig-Thurau et al. 2004). Prior research has demonstrated the power of online consumer reviews in influencing consumer decision making. For instance, Chen and Xie (2008) evidenced the key role online consumer review played in marketing and encouraging purchase decision. Riegner (2007) showed that 9% of broadband users made their purchase decision based on eWOM, including online consumer reviews. Lastly, Zhu and Zhang (2010) found that online consumer reviews promoted consumers’ decision to purchase video games, which in turn boosted game sales.

**Review Quality and Quantity**

From an information processing perspective, the effectiveness of online consumer reviews in persuading consumers to purchase certain products depends on the quality and quantity of the reviews (Park et al. 2007). Insomuch as online consumer reviews are considered information, the quality of the reviews can be defined in terms of intrinsic quality (i.e., the content quality of the review) and contextual quality (i.e., the relevance or appropriateness of the review to consumers) (Katerattanakul and Siau 1999; Wang and Strong 1996). In the present study, we adopt review credibility and review timeliness to represent the two dimensions of review quality.

*Review credibility* is defined as the extent to which a review reflects the true quality of a product (Ballou and Pazer 1985; Huang et al. 1998; Wang and Strong 1996). An important element of review quality (Bailey and Pearson 1983; Negash et al. 2003; Park et al. 2007), review credibility has been found to dominate consumers’ assessment of the persuasiveness of online consumer reviews (Wathen and Burkell 2002) and determine their willingness to adopt the opinions expressed in the reviews (McKnight and Kacmar 2006).

*Review timeliness* refers to the degree to which a review is provided at a suitable time (Ballou and Pazer 1985; Huang et al. 1998). With the rapid establishment of eWOM infrastructure supported by the advancement of Web 2.0 technology, a large number of online consumer reviews as well as other user generated content have been accumulating on various online communities. The huge volume of reviews induces heavy cognitive burden on consumers, resulting in information overload (Park and Lee 2008; Qiu and Wang 2011), the phenomenon of too much information overwhelming a consumer and hindering her purchase decision making (Park and Lee 2008). On social shopping platform, this issue becomes more salient as peer consumers’ reviews are continuously pushed to members. Therefore, it is imperative for both practitioners and academics to investigate the manner in which peer reviews should be provided to consumers to improve consumer learning without simultaneously increasing their information overload. A potential strategy may be to personalize the provision of peer reviews, such that a consumer only receives reviews on products in which she has recently expressed interest. In other words, a consumer is provided with reviews only when she needs them. To our knowledge, there has been a scarcity of research
investigating how online reviews can be provided to potential consumers in a timely fashion, a gap that this study aims to fill.

In addition to review quality, the quantity of online peer consumer reviews, or review volume, can also influence consumers’ product evaluation and purchase decision. For example, Huang and Chen (2006) showed that large quantity of positive reviews enhanced consumers’ intention to purchase books online. Duan et al. (2008) found that the volume of consumer review promoted product awareness and encouraged consumers to put the products being reviewed into consideration. Park and Kim (2008) and Park et al. (2007) also evidenced that the number of reviews was an important indicator of the popularity of a product, which in turn determined consumers’ purchase intention.

**Dual-Process Theory**

The dual-process theory of human information processing, including the Elaboration likelihood model (ELM) (Petty and Cacioppo 1986) and Heuristic-Systematic model (HSM) (Chaiken 1980) has been used over the years to investigate how information processing behavior leads to decision outcomes (Sher and Lee 2009; Sussman and Siegal 2003; Zhang and Watts 2008). According to these two models (which provide similar mechanism to explain individuals’ information processing strategies), an individual processes a message via central/systematic route, which involves effortful inspection of the message (e.g., the nature of arguments of the message), and/or peripheral/heuristic route, which uses contextual cues of the message (e.g., the number of people endorsing the message), to decide whether the message is acceptable.

In prior research on online consumer reviews adopting ELM and HSM as the theoretical foundation (see Cheung and Thadani 2012 for a review), consumer expertise and consumer engagement (involvement) have emerged as two important moderators affecting consumers’ decision to process reviews via central or peripheral route when making purchase decisions. For instance, Park and Lee (2008) found that highly engaged consumers tended to carefully examine the content of others’ reviews, whereas consumers with lower level of engagement were more likely to rely on peripheral cues of the reviews to make purchase decision. Park and Kim (2008) demonstrated the important role played by consumer expertise in moderating the relationships between type/volume of online consumer reviews and consumers’ intention to purchase. More specifically, while the effect of review type on purchase intention was stronger for expert consumers, the impact of review volume on purchase intention was stronger for novice consumers.

**Research Model and Hypotheses**

Figure 1 depicts the research model for the present study. In this study, we endeavor to investigate potential factors driving consumers to purchase products they have previously expressed intention to purchase (by placing those products in their wish-lists). Therefore, the focal dependent variable for this study is purchase decision, which refers to consumers’ decision to purchase products from their wish-lists. We posit that in social shopping communities, the credibility, timeliness, and volume of peer consumer reviews will positively influence a consumer’s purchase decision. In addition, consumer characteristics (i.e., consumer engagement and expertise) will moderate the effect of review characteristics on consumers’ purchase decision.
Credibility of Peer Consumer Review

As a key dimension of review quality (Bailey and Pearson 1983; Negash et al. 2003; Park et al. 2007), review credibility plays a vital role in consumers’ assessment of whether a review is persuasive and convincing (Wathen and Burkell 2002). While review credibility reflects the intrinsic quality of review content, it is considered in this paper as a peripheral/heuristic cue as it signals others’ endorsement of a review. If a consumer perceive an online review as credible, she is likely to use this review to help reduce anticipated risks in product purchasing (Wathen and Burkell 2002). For instance, McKnight and Kacmar (2006) evidenced that consumers were more likely to accept online advice considered highly credible. Cheung (2009) also empirically validated the relationship between online consumer review credibility and consumers’ review adoption. Accordingly, in this study, we posit that the credibility of peer consumer reviews will encourage a consumer to purchase the reviewed products already in her wish-list.

Hypothesis 1: The credibility of peer consumer reviews positively influences a consumer’s decision to purchase product from her wish-list.

Timeliness of Peer Consumer Review

Prior research has identified timeliness of information as one of the most important determinants of individuals’ satisfaction with information (Bailey and Pearson 1983; Srinivasan 1985); the same can be said about the timeliness of consumer reviews. Review timeliness is considered a peripheral/heuristic cue in this paper, as it is not directly related to messages conveyed in a review. On the basis of their analysis of review data obtained from major online retailing and review websites, Chen (2008) showed that the timing for providing consumer reviews was an important factor affecting consumers’ purchase decision. More specifically, serving consumer reviews immediately after the introduction of a new product actually hurt the sales of such product, the reason being that overloading consumers with information about a product they had not yet developed an interest in induced adverse judgmental decision making on the part of the consumers (Park and Lee 2008). In social shopping context, by adding a product to her wish-list, a consumer signals her interest in learning more about (or her intention to purchase) this particular product. Providing her with peer consumer reviews on the product at this moment (or soon after) should reduce the consumer’s perception of product quality risk and social risk (Cho et al. 2006; Kukar-Kinney and Close 2010) and thus enhance the likelihood that she will transform her purchasing intention into real action (given that the reviews are largely positive). In contrast, peer consumer reviews are less timely if the time interval is long between the moment the product is added to the consumer’s wish-list and the time when reviews on this product become available. As demonstrated in prior research, the longer a consumer leaves a product in her wish-list, the less likely she will be interested in purchasing this product.
Alleviating online shopping hesitation in social shopping context

(Rajamma et al. 2009). Therefore, timely reviews can effectively encourage a consumer to purchase products already in her wish-list. We hence hypothesize:

**Hypothesis 2:** The timeliness of peer consumer reviews positively influences a consumer’s decision to purchase products from her wish-list.

**Volume of Peer Consumer Review**

In addition to **review credibility** and **review timeliness**, the **volume** of peer consumer reviews has also been identified as a peripheral/heuristic factor that influences consumers’ purchase decision (Amblee and Bui 2011). For instance, the volume of consumer reviews on a particular product has been found to promote product awareness and encourage consumers to consider the product for purchase (Duan et al. 2008). Moreover, the number of consumer reviews has also been shown to correlate with the quality of the product being reviewed (Amblee and Bui 2011), thus posing positive influence on consumers’ decision to purchase the product. In social shopping context, more peer consumer reviews on a product increase consumers’ awareness of the same product in their wish-lists and at the same time reassure the quality of product for them. Hence, consumers will more be likely to purchase products in their wish-lists instead of simply leaving the products there. We therefore propose,

**Hypothesis 3:** The volume of peer consumer reviews positively influences a consumer’s decision to purchase products from her wish-list.

**Consumer Engagement and Expertise**

In online consumer review context, there are two key consumer characteristics highlighted in prior research: consumer **engagement** and consumer **expertise** (Cheung et al. 2014). **Consumer engagement** refers to the frequency in which consumers engage in activities in an online community, including providing reviews and ratings on products. Based on the results of a meta-analysis, Johnson and Eagly (1989) found that engagement (involvement) posed significant influence on individuals’ information processing. Particularly, highly involved individuals tended to focus on processing central cues, such as product-relevant arguments, whereas individuals characterized by low involvement are more likely to rely on peripheral cues, including contextual factors of reviews, source characteristics, and number of recommendations. Consistent with prior studies (Doh and Hwang 2009; Lee and Lee 2009; Lee et al. 2008), consumer engagement is theorized in this study as negatively moderating the positive effect of peer review characteristics on consumer purchase decision making. More specifically, consumer engagement mitigates the positive relationships between **review credibility** and purchase decision, between **review timeliness** and purchase decision, and between **review volume** and purchase decision. We thus hypothesize:

**Hypothesis 4:** Consumer engagement negatively moderates the positive relationship between review credibility and consumer’s decision to purchase products from her wish-list.

**Hypothesis 5:** Consumer engagement negatively moderates the positive relationship between review timeliness and consumer’s decision to purchase products from her wish-list.

**Hypothesis 6:** Consumer engagement negatively moderates the positive relationship between review volume and consumer’s decision to purchase products from her wish-list.

**Consumer expertise** refers to individuals’ level of expertise in products. Prior research reveals that consumers with varying level of expertise tend to process persuasive information differently (Simpson et al. 2008; Sussman and Siegal 2003). In general, consumers with high level of product expertise tend to make purchase decision based on their own knowledge and experiences, and thus are less susceptible to other consumers’ persuasion attempts (Bearden et al. 2001). For instance, Park and Kim (2008) empirically validated the role consumer expertise played in lessening the influence of review content on consumers’ purchase decision. Likewise, Cheung et al. (2014) showed that consumer expertise exerted a negative moderating effect on the relationship between the other consumers’ reviews and the focal consumer’s purchase decision. In a similar vein, we believe that consumers with high level of expertise will be more confident in their own decisions, and therefore they will be influenced by peer reviews to less extent. Specifically, we posit that consumer expertise will mitigate the positive impact of **review credibility**, **review timeliness**, and **review volume** on consumers’ purchase decision.
Hypothesis 7: Consumer expertise negatively moderates the positive relationship between review credibility and consumer’s decision to purchase products from her wish-list.

Hypothesis 8: Consumer expertise negatively moderates the positive relationship between review timeliness and consumer’s decision to purchase products from her wish-list.

Hypothesis 9: Consumer expertise negatively moderates the positive relationship between review volume and consumer’s decision to purchase products from her wish-list.

Research Methodology

Data Collection

To empirically test our research model, we collected consumer peer review data and social interaction data from a popular Asian social shopping platform dedicated to cosmetic products in August 2013. This online platform provides registered members with basic cosmetic product information and news. In addition, it allows members to connect with one another and share product information and purchasing decisions with other members of the online shopping community. Specifically, members of this social shopping platform can add products they wish to purchase to their wish-lists and the products they have already bought to their buy-lists. They can also post reviews on the products bought, reply to peer members’ reviews, recommend peer members’ reviews to others, and follow other members on the platform. In the present study, we focus on the members who have added products to wish-lists and received peer reviews on those products afterwards. We are interested to know whether these members actually purchased the products in their wish-lists (indicated by adding the products to their buy-lists) within a three-month time period after the posting of the reviews.

Operationalization of Constructs

We operationalize each construct in our research model as follows

Review Credibility is operationalized as the average number of recommendations received by all the peer product reviews posted by consumers followed by the focal member, after the products reviewed had been added to the member’s wish-list, but before the products were added to the member’s buy-list. A recommendation represents a peer member’s endorsement of a review.

Review Volume is operationalized as the average number of peer product reviews posted by consumers followed by the focal member, after the products reviewed had been added to the member’s wish-list, but before the products were added to the member’s buy-list.

Review Timeliness is operationalized as the average number of days between the time the products were added to the focal member’s wish-list and the time peer reviews on these products were posted by consumers followed by the focal member. Review timeliness is reversely coded as the greater the average number of days, the less the review timeliness.

Consumer Engagement is operationalized as the total number of reviews the focal member has posted for the products in her buy-list.

Consumer Expertise is operationalized as the total number of recommendations the focal member has received for all the reviews she has posted on the products in her buy-list.

Purchase Decision is operationalized as the total number of products added to the focal member’s buy-list within three months after they had been added to her wish-list. A zero value for purchase decision indicates that the member did not purchase any product in her wish-list after receiving peer consumer reviews.

Descriptive Statistics

The data we obtained from the social shopping community includes each member’s wish-list, buy-list, peers a member chooses to follow, and peer product reviews from March 2004 to August 2013. As shown in Table 1, there are a total of 49809 products added to the wish-lists of 2906 members. Among the
49808 products, 4859 were added to the wish-lists of 795 members **before** the posting of reviews on these products by peers followed by these members.

To empirically validate our research model, we focus on these 795 members, among whom 176 members purchased a total of 544 products in their wish-lists after receiving peer reviews on those products while 619 didn’t.

**Table 1. Descriptive Statistics**

<table>
<thead>
<tr>
<th></th>
<th>No. of Products</th>
<th>No. of Members</th>
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<tbody>
<tr>
<td>Peer Reviewed &lt;-&gt; In Wish-list</td>
<td>49809</td>
<td>2906</td>
</tr>
<tr>
<td>In Wish-list -&gt; Peer Reviewed</td>
<td>4859</td>
<td>795</td>
</tr>
<tr>
<td>In Wish-list -&gt; Peer Reviewed -&gt; Purchased</td>
<td>544</td>
<td>176</td>
</tr>
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</table>

**Conclusions and Expected Contributions**

In this study, we seek to examine the impact of online consumer reviews (i.e., review credibility, review timeliness, and review volume) on consumer purchase decisions, particularly on the products that they have previously expressed intention to purchase (by placing those products in their wish-lists). We also explore the potential moderating role of consumer engagement and consumer expertise.

In order to explore this interesting and important phenomenon, we have crawled panel data from an online social shopping community and have conducted some preliminary analyses. 795 members received online consumer reviews on the products that they had previously put into their wish-lists. Among these 795 members, 176 members actually purchased the products in their wish-lists within a three-month period. In the coming months, we will test our research model with the panel data of these 795 members. We believe that the results of this study will provide notable insights for both academic researchers and practitioners.

First, this study will enrich existing knowledge about eWOM communication by explaining how characteristics of online peer reviews influence consumers’ product purchase decision (particularly their decision to purchase products they have previously expressed interest in buying) and by comparing the relative impact of review quality (i.e., review credibility and review timeliness) and review quantity (review volume). Second, our study extends existing research in terms of the method used. In the last decade, a majority of studies used survey/experiment-based to test the impact of online consumer reviews, in which respondents were asked to report the impact of online consumer reviews on their purchase decisions (Cheung and Thadani 2012). The current study uses secondary panel data collected from an online social shopping community and draws inferences from review characteristics and consumer purchasing behavior. Finally, this study is timely to enhance our understanding of online shopping hesitation in the context of online social shopping communities. We believe that the results will provide website designers with a new way to think about how to use online consumer reviews to promote products and boost sales through online social shopping platforms.

**Potential Limitations**

The study also has some potential limitations. In particular, since our dataset is obtained from an Asian social shopping platform, precautions must be taken when applying the findings of our study to other cultural contexts. Future studies can employ larger dataset with samples from a more diverse demographical background to enhance the reliability and generalizability of our study.
References


