



The influence of eWOM communications: An application of online social network framework

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ABSTRACT

Drawing on Online Social Network (OSN) Framework (Brown, Boderick, & Lee, 2007), this study examines the role of electronic word-of-mouth (eWOM) in consumer review websites by investigating its effects on the decision-making process of consumers. OSN framework postulates that individuals consider the websites to be primary “actors” and develop social relationships with the *websites themselves* rather than the *other online participants*. This study proposes and empirically tests an integrative model of three social network constructs associated with the website (i.e., tie strength, homophily, and source credibility) and their relationship to consumers' evaluations associated with attitudes and perceived influence of eWOM effectiveness. An online survey with a sample size of 793 respondents revealed that the homophily and tie strength between a website and a consumer are important drivers of source credibility, which in turn influence attitude toward the reviews as well as the website. The attitudes formed through the perceptions of tie-strength, homophily and source credibility ultimately determines the influence of eWOM consumers' purchase decisions.

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1. Introduction

In recent years, social media websites have gained substantial popularity in consumers' information searches and subsequent purchase decisions (Gretzel, 2006; Kim, Lim, & Brymer, 2015; Lee & Koo, 2015). The growing importance of consumers' communications through such websites as part of the process of making their purchase decisions has been well documented in consumer behavior research, and numerous studies have emphasized the influence of electronic word-of-mouth (eWOM) on consumers' attitudes, intentions, and behaviors associated with purchases (e.g., Elwalda, Lü, & Ali, 2016; Gruen, Osmonbekov, & Czaplewski, 2006; Huang, Cai, Tsang, & Zhou, 2011; Lee & Shin, 2014; Litvin, Goldsmith, & Pan, 2008; Zhu & Zhang, 2010). According to a survey, 90% of consumer respondents claimed that online reviews influenced their purchase decisions directly (Dimensional Research, 2013). In the context of tourism and travel, these

websites help tourists obtain information and share personal experiences, opinions, photos, hotel reviews, and vacation suggestions. Such online reviews affect more than \$10 billion annually in online travel purchases (Nusair, Bilgihan, Okumus, & Cobanoglu, 2013).

This study identified two critical issues that should be considered regarding the increased importance of online reviews as one type of eWOM: (1) lack of social presence in social media websites (e.g., Brown, Broderick, & Lee, 2007; Steffes & Burgee, 2009), and (2) increasing skepticism about the credibility of eWOM information (e.g., Dellarocas, 2003; Yoo & Gretzel, 2008). First, although the influences of social relationships are important in consumers' behavior and decision-making processes (Brown & Reingen, 1987; Granovetter, 1983), research on the social effects of eWOM communication is scarce. Prior eWOM studies have ignored the ways in which social relationships are formed within the context of social networks, and how they affect a consumer's decision to purchase a product or service. In fact, one of the most obvious characteristics of online communications is that they are often one-directional. Most consumers online are characterized as “lurkers” who read information and reviews, but rarely or never participate (Heinonen, 2011; Rau, Gao, & Ding, 2008). For these reasons,

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understanding social/relational interactions in eWOM communication through the application of social relationship theories may not be entirely appropriate in the context of social media websites (Brown et al., 2007).

The second issue of interest relates to the credibility of eWOM information. Unlike traditional WOM from direct sources, eWOM recommendations originate typically from unknown individuals in a text-based format. Due to this anonymity, consumers have difficulty determining the reliability of the information and become more skeptical about it (Chatterjee, 2001). A *New York Times* article (Streitfeld, 2012) suggested that online reviews are popular among consumers and have been shown to have a significant influence on their purchasing decisions; however, the trust placed in online review forums is dubious. For example, some retailers hire writers to post positive reviews of their own businesses or negative reviews of their competitors. Similarly, the Social Shopping Study found that 57% of shoppers consider online reviews as a credible source, while 35% questioned whether they are biased or written by real customers (Brown et al., 2007). In other words, both the value and prevalent use of online reviews yield incentives for illegal marketing practices that involve creating commercially advantageous fake reviews. As a result, the credibility of online consumer reviews is compromised by significantly increasing and the difficult-to-identify fake reviews (Zhang, Zhou, Kehoe, & Kilic, 2016).

The common underlying reason for these two phenomena can be derived from the fundamental differences between traditional WOM and eWOM. While WOM spreads via intimate communication among friends, family, and other acquaintances, eWOM information posted to online review websites is typically from unknown individuals. Due to the limited social interactions in this online network environment, consumers become skeptical about the credibility of eWOM recommendations (Brown et al., 2007; Heinonen, 2011). In this regard, the conceptualizations of the Online Social Network (OSN) proposed by Brown et al. (2007) may provide a useful approach for an in-depth study of eWOM communications. Their framework suggests that, because direct interpersonal contact is rare and reviews are from unknown individuals, individuals in a web-based interface behave as if the websites themselves are the primary actors within OSNs and they relate to those websites rather than to other individuals (Brown et al., 2007; Rodgers, Negash, & Suk, 2005). In this context, the website becomes the primary unit of relationship and individuals build relationships with the website rather than with other individuals.

Accordingly, this study contributes to the literature by examining the social and relational influences of eWOM communication through the aforementioned OSN perspective: tie strength (i.e., intensity of a relationship between an individual and a website) and homophily (i.e., the congruence between an individual's interests and website content). Specifically, the objectives of this study were to: (1) conceptualize the OSNs to understand social relationships in online review websites; (2) propose an integrative model to investigate interrelationships among tie strength, homophily, source credibility, attitudes towards a website and eWOM information, the effectiveness of eWOM, and (3) provide implications for marketers to engage consumers effectively through review systems by offering an understanding of the process of eWOM and its antecedents and outcomes.

2. Literature review and hypothesis development

2.1. Word-of-mouth (WOM) and electronic word-of-mouth (eWOM)

Traditionally, WOM has been defined as “oral, person-to-person communication between a perceived non-commercial

communicator and a receiver concerning a brand, a product, or a service offered for sale” (Arndt, 1967, p. 190). A great deal of research has demonstrated that WOM recommendations from other individuals play a significant role in the process of product evaluation and subsequent purchase decisions (e.g., Litvin et al., 2008; Park & Lee, 2009; Zhang, Craciun, & Shin, 2010). WOM recommendation has been shown to be more effective than other marketing communication tools, such as personal selling or mass media advertising, because user-generated reviews from a familiar WOM source is often considered more credible and without a strong commercial intent (Gruen et al., 2006; Trusov, Bucklin, & Pauwels, 2009).

With the development of the Web, in which e-commerce has become a strategic emphasis for business and consumers, the interest in WOM has been reconceptualized as eWOM. Traditional face to face WOM is changing into eWOM, and before the right purchasing decision, consumers can get information regarding products or services via eWOM (Hussain, Ahmed, Jafar, Rabnawaz, & Jianzhou, 2017). Although eWOM is an extended information source of WOM, the two differ in several respects. Traditional WOM is disseminated within the limited social boundaries of an individual's friends and family. Thus, its influence diminishes quickly over time and distance (Duan, Gu, & Whinston, 2008). However, in the online environment, eWOM has enabled information to reach a much wider audience (Xie, Miao, Kuo, & Lee, 2011). Another important difference between WOM and eWOM is that, in contrast to WOM, the information communicated by eWOM is often anonymous (Heinonen, 2011; Hoffman & Novak, 1996). Because of these important differences between WOM and eWOM, it is essential for researchers and practitioners to understand the social aspects of online communication from a different perspective.

2.2. Theoretical background

Brown et al. (2007) OSN framework draws on two different, but interrelated theoretical foundations to investigate social and relational factors that determine eWOM effectiveness: *Social Network Theory* (Granovetter, 1983) and *Consumer-Brand Relationship* (Fournier, 1998). The application of these two theories, which have been used to examine online social relationships in the specific context of consumer review websites, is elaborated below.

Social Network Theory. A social network is defined as “a set of people, organizations, or other social entities, connected by a set of socially meaningful relationships” (Lea, Yu, Maguluru, & Nicholas, 2006, p. 121). People engage in social networks for a wide range of economic, social, emotional, and psychological benefits and the extent of their engagement has to do with their thoughts, attitudes, and behaviors (Granovetter, 1983). This network approach is based on two assumptions: (1) social networks play a significant role in determining individual attributes and actions (e.g., by exposure to information and ideas), and (2) the network of relationships in which the individuals are embedded is more important in explaining behavior than are the intrinsic attributes of the individuals themselves. Through its emphasis on relationships and interactions among different social actors, the social network perspective allows researchers to study an individual's attitudes and behaviors within a broader network of relationships. Therefore, adopting a network approach is a suitable method to obtain an in-depth understanding of consumer interactions through eWOM communication and their influence on consumer decisions.

Consumer-Brand Relationship. To better understand eWOM communication within the OSN context, it is necessary to examine the consumer-brand relationship theory. According to Fournier (1998), consumers build a relationship with a product or brand in the same manner that they would develop and nurture

relationships with other people. The consumer and the brand or product can be considered as “partners” in a relationship that is conceptually similar to the relationships among people. This consumer–brand relationship, which is based on an individual’s underlying need for an emotional attachment with a brand, is supported by the belief that brands are humanized in the minds of consumers and can serve as relational partners (Kim & Lehto, 2012). Consumers often assign human personality attributes to brands, thereby creating the important symbolic nature of the brands. Accordingly, a brand with the “right” personality can lead consumers to believe that the brand is relevant, and that they should have positive attitudes towards it and maintain a relationship with it (Aaker, 1997; Fournier, 1998; Kim & Lehto, 2012).

Application of social network and consumer–brand relationship to online review websites. Brown et al. (2007) proposed the OSN framework based on traditional social network and brand–consumer relationship theories. They argued that traditional network approaches tend to focus on face-to-face and one-on-one interactions among individuals within limited social boundaries. However, research that focuses on the nature of online communication suggests that individuals are associated with websites rather than other individuals, as if the websites are the primary actors and partners in the social network. In addition, individuals seem to build consumer–website relationships and interact more commonly with websites than with actual individuals. In this context, the actors in OSNs are individuals who relate to websites because person-to-person contact is infrequent. Each individual contributes and receives information posted on an individual basis; therefore, the website can be considered the primary unit of relationship.

2.3. Proposed model and hypothesis development

This study proposes a conceptual model that integrates social network constructs and their influence on various consumer responses, such as attitudes and purchase intentions. More specifically, the study extended and tested empirically the OSN model of Brown et al. (2007)—which identified the three key components of

tie strength, homophily, and source credibility—on eWOM communications and their influences in the context of consumer review websites. Fig. 1 provides a comprehensive illustration of the research model.

2.3.1. Tie strength

The first social network construct in the proposed model is tie strength, which is defined as “the potency of the bond between members of a network” (Mittal, Huppertz, & Khare, 2008, p. 196). Many studies have adopted identifying tie strength as an analytical framework for the study of individuals and organizations/websites (Sohrabi & Akbari, 2016). People use social networks to fulfill a variety of social needs such as self-expression and self-presentation (Back et al., 2010; Wilcox & Stephen, 2012). Using a social network can enhance self-esteem and positively affect well-being (Gonzales & Hancock, 2011; Valkenburg, Peter, & Schouten, 2006). Individuals may also form strong ties with a website by frequently visiting it and perceiving it as being important for them. Network researchers have distinguished between strong ties and weak ties depending on the number and types of resources exchanged, the frequency of these exchanges, the intensity of emotions associated with the exchanges, and the intimacy of the relationship partners (Granovetter, 1983). Those with strong ties, such as family and friends, tend to establish closer relationships within an individual’s network. People with strong relationships tend to have common interests and backgrounds, and are willing to provide material and emotional support to one another (Chu & Kim, 2011; Goldenberg, Libai, & Muller, 2001). On the other hand, weak ties are often characterized by infrequent and distant relationships. Weak tie relationships often occur among distant relationships and are composed of a wide set of acquaintances with different cultural and social backgrounds (Goldenberg et al., 2001).

According to Brown et al. (2007) OSN framework, the idea of individual-to-individual social ties is less relevant in an online environment. Instead, it can be reasoned that a consumer’s relationship with a website itself would have a greater influence on his or her attitudes than a relationship with other participants on the website. Consumers are more likely to use online review websites

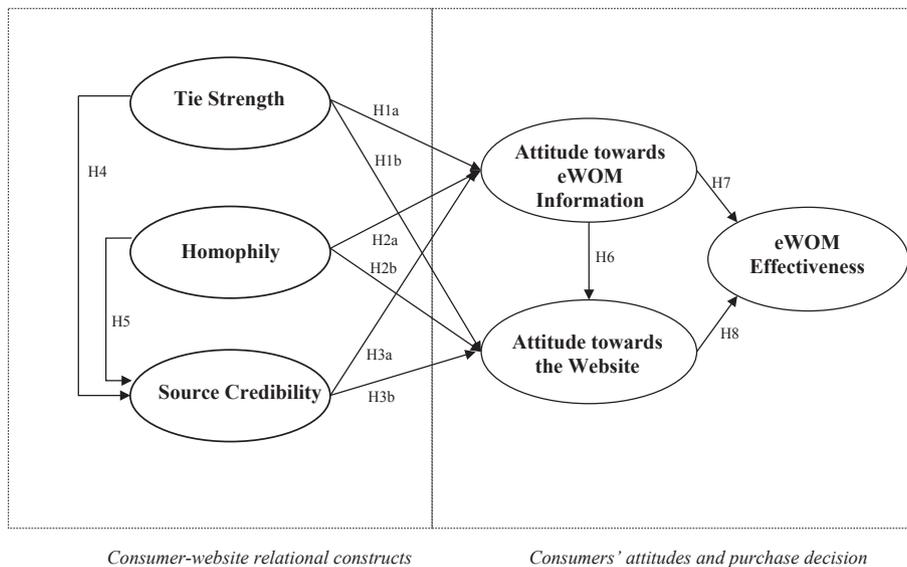


Fig. 1. The proposed conceptual model. Note: H1a: Tie strength → Attitude towards eWOM information; H1b: Tie strength → Attitude towards a website; H2a: Homophily → Attitude towards eWOM information; H2b: Homophily → Attitude towards a website; H3a: Source credibility → Attitude towards eWOM information; H3b: Source credibility → Attitude toward a website; H4: Tie strength → Source credibility; H5: Homophily → Source credibility; H6: Attitude towards eWOM information → Attitude toward a website; H7: Attitude towards eWOM information → eWOM effectiveness; H8: Attitude towards a website → eWOM effectiveness.

with which they have closer relationships and strong ties. Furthermore, when consumers use a certain review website more frequently and thus develop a strong relationship with it, they are likely to have a more favorable attitude towards the reviews, as well as the website itself. Therefore, the following hypotheses were proposed:

H1a-b. *Among consumers who use eWOM to find a service provider on consumer review websites, higher degrees of tie strength between the consumer and the website will lead to a positive attitude (a) towards eWOM information on the website and (b) towards the website.*

2.3.2. Homophily

Another construct that offers a deeper understanding of the social influence of online reviews is homophily. Homophily is described as the degree to which individuals who interact with one another are similar in terms of certain attributes; age, gender, ethnicity, and level of education (Rogers, 1983). Individuals with greater levels of interpersonal attraction and trust develop greater levels of emotional attachment (Hyun & Kim, 2014). Moreover, individuals are more likely to interact with people who share similar attributes because they reduce potential conflicts in the relationship through greater trust and emotional attachment (Katz, Lazer, Arrow, & Contractor, 2004). Therefore, information exchange through WOM communication occurs more easily among homophilous individuals than heterogeneous ones (Brown & Reingen, 1987; Chu & Kim, 2011).

OSN framework proposes that the traditional conceptualization of homophily based on similar individual characteristics is inappropriate in today's increasingly virtual environments (Noë, Whitaker, Chorley, & Pollet, 2016). Members of online social networks often do not have access to the characteristics that are associated traditionally with homophily, such as demographic and psychological backgrounds. Online homophily is rather driven by shared interests that can be evaluated at the website, but not at the individual level (Brown et al., 2007; Chu & Kim, 2011). Based on the consumer–website relationship, which proposes that consumers tend to affiliate with the contents of a website rather than with individual users, it is expected that consumers who have strong homophily with a website will have positive attitudes towards the website as well as the information on it. If the website provides information and content that matches the information seekers' own characteristics and interests, they are likely to have a favorable attitude towards the website and the information on it. Based on this rationale, the following hypotheses were proposed:

H2a-b. *Among consumers who use eWOM to find a service provider on consumer review websites, higher levels of homophily between the consumer and the website will lead to a positive attitude (a) towards eWOM information on the website and (b) towards the website.*

2.3.3. Source credibility

Source credibility is a term used to imply a communicator's positive characteristics that affect the receiver's acceptance of a message. Considerable evidence from previous research has shown that source credibility is a critical factor in determining the effectiveness of eWOM (e.g., Park & Lee, 2009; Wu & Wang, 2011). Although there is still debate about the precise dimensions of the construct, source credibility is often considered to be comprised of two important dimensions: perceived trustworthiness (website reputation) and the expertise of the information sender. Perceived trustworthiness refers to the extent to which the source communicates valid information (Willemssen, Neijens, & Bronner, 2012), and is often associated with consumers' perceptions of the website

(Park & Lee, 2009). Consumers tend to consider information on well-known websites to be more credible than that on unknown websites. The other facet of source credibility is perceived expertise, which is defined as the extent to which a source is considered capable of making valid assertions (Willemssen et al., 2012). Consumers are likely to believe information posted by those who have greater expertise, knowledge, experience, or skills related to a particular product or brand (Ohanian, 1990).

An extensive amount of research has reported empirical evidence that source credibility has a positive influence on message receivers' attitudes and behaviors and credible sources are more persuasive than non-credible sources (e.g., Ayeh, Au, & Law, 2013; Dou, Walden, Lee, & Lee, 2012; Petty, Cacioppo, & Goldman, 1981). In the field of advertising and promotion, source credibility plays an important role in enhancing consumers' attitudes towards advertisements and brands, as well as their purchase intentions. Therefore, if consumers believe that a review on a well-respected website has been written by an expert, they are more likely to consider it in a positive light and the positive effect on their purchasing decisions will be stronger. It is expected that when consumers perceive that reviews on websites are credible and reliable, they are more likely to develop a positive attitude towards both the website and its reviews. Given the above, the following hypotheses were developed:

H3a-b. *Among consumers who use eWOM to find a service provider on consumer review websites, higher levels of source credibility will lead to a positive attitude (a) towards the eWOM information on the website and (b) towards the website.*

2.3.4. Relationships among tie strength, homophily, and source credibility

In a traditional WOM context, the credibility of information received is often determined by evaluating the sender's level of knowledge and expertise (Brown et al., 2007; Gotlieb & Sarel, 1991). Because the sender and receiver typically have a close personal relationship in this context, it is easier for the receiver to evaluate the sender's knowledge, which ultimately determines source credibility. However, in an online environment, such evaluations are relatively impersonal information exchanges with unknown individuals. Because reviews are posted by individuals whose attributes and backgrounds are unknown, evaluations of the reviews are based strongly on the website and its content rather than on the individual reviewer (Brown et al., 2007).

In considering the social and relational factors that determine source credibility, the degree of closeness (tie-strength) and similarities (homophily) of the relationship should be taken into account. Individuals tend to perceive information generated within groups with strong tie relations as more credible (Brown et al., 2007; Mack, Blose, & Pan, 2008; Zhu & Zhang, 2010). Furthermore, it was found that individuals tend to believe that others with whom they share similar attributes are more honest and trustworthy, and that trust is rooted in perceived commonalities (Ayeh et al., 2013; Levin, Whitener, & Cross, 2006; McAllister, 1995). Based on this rationale, this study proposed that evaluations of credibility are influenced by the perceptions of the relationship with the website, as expressed by tie strength and homophily. When individuals feel close ties to a website because of shared common interests, they are likely to perceive the reviews on the site as more credible. Therefore, the following hypotheses were proposed:

H4. *Among consumers who use eWOM to find a service provider, higher levels of tie strength between a website and consumer will lead to a higher level of source credibility.*

H5. Among consumers who use eWOM to find a service provider, higher levels of homophily between a website and consumer will lead to a higher level of source credibility.

2.3.5. Consumers' attitudes and eWOM effectiveness

Consumer behavior studies indicate that consumers' affective and cognitive attitudes towards eWOM information determine the relationship between eWOM evaluations and product evaluations (Harrison-Walker, 2001). However, little empirical research has been conducted on the interrelationships between online reviews (content), websites (where the content is posted), and review effectiveness (purchase decisions). Because previous studies have tested these variables independently, it is unclear whether the effect of contents on intentions is direct, or is mediated by the attitude towards a website. Although less attention has been paid to these relationships, there are reasons to believe that a positive attitude towards a review is an important antecedent to predicting attitudes towards a website, and the way in which this relationship ultimately influences purchase decisions.

Marketing research has long suggested that advertising is likely to be more persuasive and effective for those who hold favorable attitudes towards advertising (Mehta, 2000). In turn, positive attitudes towards advertisements tend to develop higher purchase intentions for the items advertised (Brown & Staymen, 1992; Mackenzie, Lutz, & Belch, 1986). Recent work in online consumer behavior has adapted this concept to measure consumers' attitudes towards websites (Chen & Wells, 1999; Wu, Wei, & Chen, 2008). According to this research, when consumers perceive that the content of a website is high quality, they are more likely to have a favorable attitude towards the website and purchase from it. Similarly, if reviews are perceived to be credible because of strong tie strength and homophily, consumers are more likely to evaluate those reviews and the website favorably, and they will consider the reviews when they make a purchasing decision. It seems reasonable to assume that attitudes towards eWOM information and the website are linked positively to the influence of eWOM on the receivers' purchase decisions, which is represented as eWOM effectiveness in this study. Based on these arguments, the following hypotheses were proposed:

H6. Consumers' attitudes towards eWOM information are related positively to their attitudes towards the website.

H7. Consumers' attitudes towards the eWOM information on a website are related positively to the influence of eWOM on their purchase decisions.

H8. Consumers' attitudes towards the website are related positively to the influence of eWOM on their purchase decisions.

3. Methodology

3.1. Sample and data collection

This study employed a web-based, self-administered questionnaire. The main survey questionnaire used a random sample of 7000 students, staff, and faculty members from a university in the Midwestern U.S. The initial invitation to complete the survey questionnaire was followed up by two reminders to increase the response rate. A total of 920 questionnaires out of the 7000 sent were returned over a three-week period, which resulted in an overall response rate of 13%. Of these responses, there were 100 incomplete responses on one or more sections of the survey as well as 21 responses with more than 20 subsequent identical answers that were discarded. Six responses that included significant outliers

were also removed through Mahalanobis distance statistical procedure (Tabachnick & Fidell, 2001), leaving a total sample of 793 cases in this study, for a net response rate of 11%.

Table 1 summarizes the respondents' demographic information. More than half were female (58.7%) and the majority was between the ages of 19 and 34 (73.3%). A total of 44.1% of the respondents were college students, while 46.6% of the respondents were college graduates or had attained a postgraduate degree. Approximately 50% of the respondents earned \$40,000 or less annually. Most respondents were Caucasian (70.9%), followed by Asians/Pacific Islanders (16.1%), and African Americans (4.2%). Overall, the participants were relatively younger and well educated compared to the general U.S. population. While the sampling frame was considered a convenience sample, their combined diversity was representative of general online users in the U.S. identified in previous studies (e.g., Zichuhr & Smith, 2013). Using AMOS 19.0, Structural Equation Modeling (SEM) was employed to test the proposed model.

3.2. Measurement

The proposed model included six latent variables: (1) tie strength; (2) homophily; (3) source credibility; (4) attitude towards eWOM information; (5) attitude towards the website, and (6) eWOM effectiveness. Although various measurement instruments were available to assess all latent variables, these scales have never been tested in the current context (i.e., online consumer review websites). Thus, first, different scales for each construct were created based on a number of relevant studies and then were modified to fit the research setting.

The measurements for tie strength included three questions associated with the respondents' relationship with a website, including frequency of use, perceived importance, and closeness of the relationship (Brown & Reingen, 1987; Chu & Kim, 2011; Norman & Russell, 2006). Frequency of communication was measured using a 7-point Likert scale, with 1 = never to 7 = very

Table 1
Sample profile: demographic characteristics.

Demographics	Categories	Frequency (n = 793)	Percent
Gender	Male	321	40.5
	Female	456	58.7
Age	18	81	10.2
	19–24	376	47.4
	25–34	205	25.9
	35–44	57	7.2
	45–54	31	3.9
	55–64	19	2.4
	65 and over	8	1.0
Education	Some high school	4	5
	High school graduate	56	7.1
	Technical school	1	1
	Some college	350	44.1
	College graduate	125	15.8
Income	Graduate school	242	30.5
	Less than \$25,000	312	39.3
	\$25,000 – \$39,999	91	11.5
	\$40,000 – \$59,999	71	9.0
	\$60,000 – \$79,999	74	9.3
	\$80,000 – \$99,999	58	7.3
	\$100,000 – \$119,999	71	9.0
	More than \$120,000	83	10.5
Ethnic background	African American	33	4.2
	Caucasian	562	70.9
	Hispanic/Latin American	25	3.2
	Native American	0	0
	Asian or Pacific Islander	128	16.1
	Other	29	3.7

frequently. Perceived importance and closeness were also measured on a 7-point Likert scale, ranging from 1 = not at all important to 7 = very important, and from 1 = not at all close to 7 = very close, respectively. Special attention was devoted to developing a measure for homophily because prior studies have tended to measure “hard” criteria (e.g., similarity in age and gender, which are relevant for traditional WOM settings), but did not incorporate a scale for “softer” criteria (e.g., similarity in interests). In an effort to measure this construct, questions were developed based on the combination of Brown et al. (2007) conceptualization of online homophily with its sub-dimensions and image congruence literature in order to measure similarities in images between the product and its users (Sirgy et al., 1997). Four items developed to measure homophily such as “the interests expressed by the website are not consistent with my own interests,” and “the interests expressed by the website reflect my own interests.” All items developed to measure homophily and the items were measured on a 7-point Likert scale ranging from 1 = “strongly disagree,” to 7 = “strongly agree.”

The two components of source credibility, trustworthiness and perceived expertise, were assessed with the 7-point semantic differential scales proposed by Ohanian (1990). While trustworthiness was measured by pairs of words, such as “undependable–dependable,” “dishonest–honest,” “insincere–sincere,” and “untrustworthy–trustworthy,” expertise was measured by “not an expert–expert,” “inexperienced–experienced,” “unknowledgeable–knowledgeable,” “unqualified–qualified,” and “unskilled–skilled.” In general, attitudes towards the reviews were measured with five 7-point semantic differential scales based upon Wells, Leavitt, and McConville (1971) Reaction Profile: “unattractive–attractive,” “unappealing–appealing,” “unpleasant–pleasant,” “dull–dynamic,” and “not enjoyable–enjoyable.” In addition, their attitude towards the website was operationalized using the attitude scale developed by Chen and Wells (1999). Example items include “I would like to visit this website again in the future” and “I feel surfing this website is a good way for me to spend my time.” Finally, eWOM effectiveness was measured by employing two of the following statements adapted from Jeon and Park (2003), which were modified to fit the research setting: (1) “I will refer to this eWOM information in a purchase (visitation) decision,” and (2) “This eWOM information will crucially affect my purchase (visitation) decision.” All items were measured on a 7-point Likert scale where 1 = “strongly disagree,” and 7 = “strongly agree” (Refer to Appendix 1 for detailed measurement items).

3.3. Pretest

Prior to the main study, quantitative and qualitative pretests were conducted. The goal of the qualitative pretest was to identify participants' general use of consumer review websites and to identify the websites used most frequently for incorporation in the main study. Twenty respondents who were faculty members and students at the same university were asked to list five websites that they used the most and with which they were most familiar. The pretest identified eight consumer review websites: TripAdvisor, Yelp, Urbanspoon, Zagat, Travelpost, Dine, Lonelyplanet, and Virtualtourist. As part of the quantitative pretest, an additional fifty participants were selected from graduate and undergraduate students at the same university who had visited consumer review websites during the past three months. The level of internal consistency in each construct was acceptable with Cronbach's alpha estimates ranging from 0.87 to 0.97 (Tie Strength = 0.88, Homophily = 0.96, Source Credibility = 0.93, Attitude towards eWOM Information = 0.95, Attitude towards a Websites = 0.85, eWOM Effectiveness = 0.94) (Nunnally, 1978). The results indicated

good reliability for the six variables; therefore, all measurement items were included in the main study.

4. Results

4.1. Stage 1—Exploratory Factor Analysis (EFA)

Because the measurement items for the six constructs (tie strength, homphily, source credibility, attitude towards eWOM information, attitude towards a website, and eWOM effectiveness) had not been used previously in an online review website setting, they were subjected to an Exploratory Factor Analysis (EFA). EFA with varimax rotation was undertaken to refine the scales by deleting items that did not meaningfully load on the underlying constructs and did not strongly correlate with other items measuring the same construct. In order to determine if the data was suitable for EFA, Kaiser-Myer-Olkin (KMO) and Bartlett's Test of Sphericity were first performed. The KMO measure of sampling adequacy was 0.92, above the recommended value of 0.40. Bartlett's Test of Sphericity was significant ($\chi^2 = 14,045.53$, $df = 210$, $p < 0.01$). On the basis of these results, the data were considered suitable for a factor analysis. Only items loading greater than 0.40 on a single construct were retained for further analysis (Hair, Anderson, Tatham, & Black, 1998). Table 2 shows that the factor loadings on their intended constructs are all well above 0.6, with no cross-loadings higher than 0.4. Any item that failed to have a substantially high loading on any factor was deleted from the analysis until a clear factor structure emerged (Floyd & Widaman, 1995). The analysis revealed a six-factor solution explaining approximately 81% of the total variance.

4.2. Stage 2—Measurement model: Confirmatory Factor Analysis (CFA)

The data were then analyzed following the two-step approach recommended by Anderson and Gerbing (1988), which uses measurement and structural models. Confirmatory Factor Analysis (CFA) was performed to evaluate the measurement model and its structure after addressing missing values with the Expectation-Maximization (EM) algorithm imputation method. For all variables in the six main constructs, the skewness was lower than 3 and the kurtosis was lower than 10, thereby meeting the assumption of normality in CFA. The Chi-squared statistic was significant ($\chi^2 = 618.53$, $df = 215$, $p < 0.01$). However, it has been shown widely that Chi-squared tends to be influenced heavily by the sample size (Byrne, 2001). Other indices showed that the fit of the measurement model was acceptable (CFI = 0.93, RMSEA = 0.07). (Bentler & Bonett, 1980; Browne & Cudeck, 1993; Sharma, Mukherjee, Kumar, & Dillon, 2005). The reliability and validity of the multi-item scales for the five-factor measurement model were then assessed (Table 3). Cronbach's alphas were 0.84 or above, demonstrating good reliability. Further, all standardized factor loadings for all items were found to be significant ($p < 0.01$), and discriminant validity was confirmed, as the average variance extracted (AVE) was greater than the square of the correlations between constructs (Hair et al., 1998: Table 4). These results suggested that the hypothesized measurement model was appropriate for further analysis. To test the comment method bias, Harman's single factor score was used. The total variance for a single factor was not more than 50%, suggesting that common method bias does not affect the data.

4.3. Stage 3—Structural model: Structural Equation Modeling (SEM)

The hypothesized path of the model was then tested with Structural Equation Modeling (SEM) with maximum likelihood

Table 2
Exploratory factor analysis.

Constructs	1	2	3	4	5	6
Tie strength (TS)						
TS1: How frequently do you use this website?	0.79	0.15	0.04	0.18	0.27	0.16
TS2: How important is this website to you?	0.85	0.15	0.14	0.20	0.16	0.19
TS3: How close do you feel to this website?	0.88	0.16	0.16	0.05	0.06	0.12
Homophily (HP)						
HP1: The interests of the website are not consistent with my own interests.	0.19	0.87	0.11	0.16	0.12	0.11
HP2: The interests of the website are similar to my own interests.	0.23	0.80	0.14	0.18	0.15	0.16
HP3: The interests of the website are very different from my own interests.	0.29	0.88	0.11	0.20	0.15	0.16
Source credibility (SC)						
SC1: Dishonest – honest	0.19	0.16	0.81	-0.05	-0.10	-0.02
SC2: Untrustworthy – trustworthy	0.20	0.11	0.79	0.16	0.18	0.15
SC3: Inexperienced-experienced	0.24	0.04	0.76	0.23	0.30	0.13
SC4: Unknowledgeable-knowledgeable	0.22	0.47	0.84	0.12	0.09	0.07
SC5: Unqualified-qualified	0.26	0.11	0.83	0.07	0.10	0.02
Attitude towards eWOM information (AI)						
AI1: Unattractive-attractive	0.24	0.18	0.15	0.78	0.21	0.18
AI2: Unappealing-appealing	0.25	0.14	0.22	0.78	0.21	0.16
AI3: Unpleasant-pleasant	0.28	0.09	0.16	0.80	0.15	0.11
AI4: Dull-dynamic	0.23	0.13	0.18	0.77	0.10	0.08
AI5: Not enjoyable-enjoyable	0.24	0.14	0.17	0.82	0.13	0.12
Attitude towards a website (AW):						
AW1: I would like to visit this website again in the future.	0.31	0.19	0.32	0.21	0.68	0.30
AW2: I am satisfied with the service provided by this website.	0.38	0.19	0.25	0.27	0.70	0.24
AW3: Compared with other websites, I would rate this one as one of the best.	0.37	0.21	0.32	0.16	0.60	0.15
eWOM effectiveness (EF):						
EF1: I refer to eWOM information in a purchase decision.	0.19	0.05	0.19	0.23	0.25	0.83
EF2: This eWOM information has a great effect on my purchase decision.	0.23	0.16	0.28	0.18	0.12	0.83
Variance Explained	19.34	18.18	13.45	13.22	8.77	8.66
Cum pct	19.34	37.51	50.96	64.18	72.95	81.60

Note: Principal Component Analysis and Varimax rotation with Kaiser Normalization were used. Bold values indicate the factor on which each item predominantly loads.

Table 3
Summary of the measurement model and convergent validity.

Construct	Path Estimate	Item-total Correlations	Item Reliabilities	C.R.	AVE
Tie Strength			0.85	0.74	0.75
TS1	0.81	0.75			
TS2	0.92	0.83			
TS3	0.87	0.81			
Homophily			0.97	0.91	0.81
HP1	0.87	0.78			
HP2	0.82	0.91			
HP3	0.99	0.82			
Source Credibility			0.91	0.86	0.68
SC1	0.72	0.70			
SC2	0.82	0.78			
SC3	0.86	0.78			
SC4	0.86	0.81			
SC5	0.85	0.81			
Attitude towards eWOM information			0.95	0.88	0.72
AI1	0.88	0.82			
AI2	0.90	0.84			
AI3	0.85	0.81			
AI4	0.77	0.75			
AI5	0.85	0.83			
Attitude towards a website			0.84	0.86	0.77
AW1	0.91	0.84			
AW2	0.91	0.86			
AW3	0.80	0.74			
eWOM effectiveness			0.93	0.87	0.75
EF1	0.87	0.75			
EF2	0.87	0.75			

Note: TS = Tie Strength; HP = Homophily; SC = Source Credibility; AI = Attitude towards eWOM Information; AW = Attitude towards a Website; EF = eWOM Effectiveness. C.R. = Composite Reliability.

estimation. The Chi-squared indicated that the overall model did not fit the data well ($\chi^2 = 534.27, df = 178, p < 0.01$). However, given

the sensitivity of Chi-squared to the sample size (Hair et al., 1998), additional fit indices were also examined (NFI = 0.92, TLI = 0.92, CFI = 0.94, IFI = 0.94, RMSEA = 0.06). All of the fit indices indicated that the model was a good fit to the data and provided ample justification to test the hypothesized paths (Bentler & Bonett, 1980; Browne & Cudeck, 1993; Sharma et al., 2005).

The model and path coefficients are shown in Fig. 2 and Table 5. H1a, which hypothesized a positive relationship between tie strength and attitude towards eWOM information on the website, was supported (path = 0.17, $t = 5.29, p < 0.001$). H1b, which predicted a negative relationship between tie strength and attitude towards a website, was also supported (path = 0.40, $t = 13.24, p < 0.001$). The results of the first two hypotheses demonstrated the importance of tie strength in shaping positive attitudes towards both the website and the information on it. Thus, when consumers feel an affinity with the website, they are likely to have a positive attitude towards the website, as well as the reviews it carries.

H2a, which stated that homophily would have a positive influence on consumer attitudes towards eWOM information, was supported (path = 0.28, $t = 8.96, p < 0.001$). Similarly, H2b, which predicted a positive relationship between homophily and consumer attitude towards a website, was also supported (path = 0.23, $t = 8.02, p < 0.001$). The results showed a significant positive effect of homophily on consumer attitudes towards the reviews on a website and the website itself. As expected in H3a, source credibility had a significant effect on attitude towards the information on the website (path = 0.48, $t = 13.62, p < 0.001$). With respect to H3b, source credibility had a significant influence on attitudes towards a website (path = 0.08, $t = 2.46, p < 0.05$). This significant causality implies that consumers who perceive that a website review is credible report more favorable attitudes towards the website.

H4, which predicted a positive relationship between tie strength and source credibility, was also supported (path = 0.25, $t = 6.67, p < 0.001$). This result implies that tie strength is a strong predictor

Table 4
Descriptive statistics and discriminant validity.

	Mean	SD	1	2	3	4	5	6
1. Tie Strength	3.43	1.80	0.75					
2. Homophily	5.16	1.26	0.24	0.81				
3. Source credibility	5.01	1.21	0.13	0.13	0.68			
4. Attitude toward eWOM information	5.05	1.15	0.45	0.36	0.29	0.77		
5. Attitude toward a website	5.42	1.30	0.21	0.26	0.39	0.53	0.72	
6. eWOM effectiveness	3.74	0.95	0.34	0.23	0.14	0.51	0.29	0.75

Note: the numbers in bold on the diagonal line are the average variance extracted (AVE) by each construct; the numbers below these values are the squared correlation coefficients between the constructs.

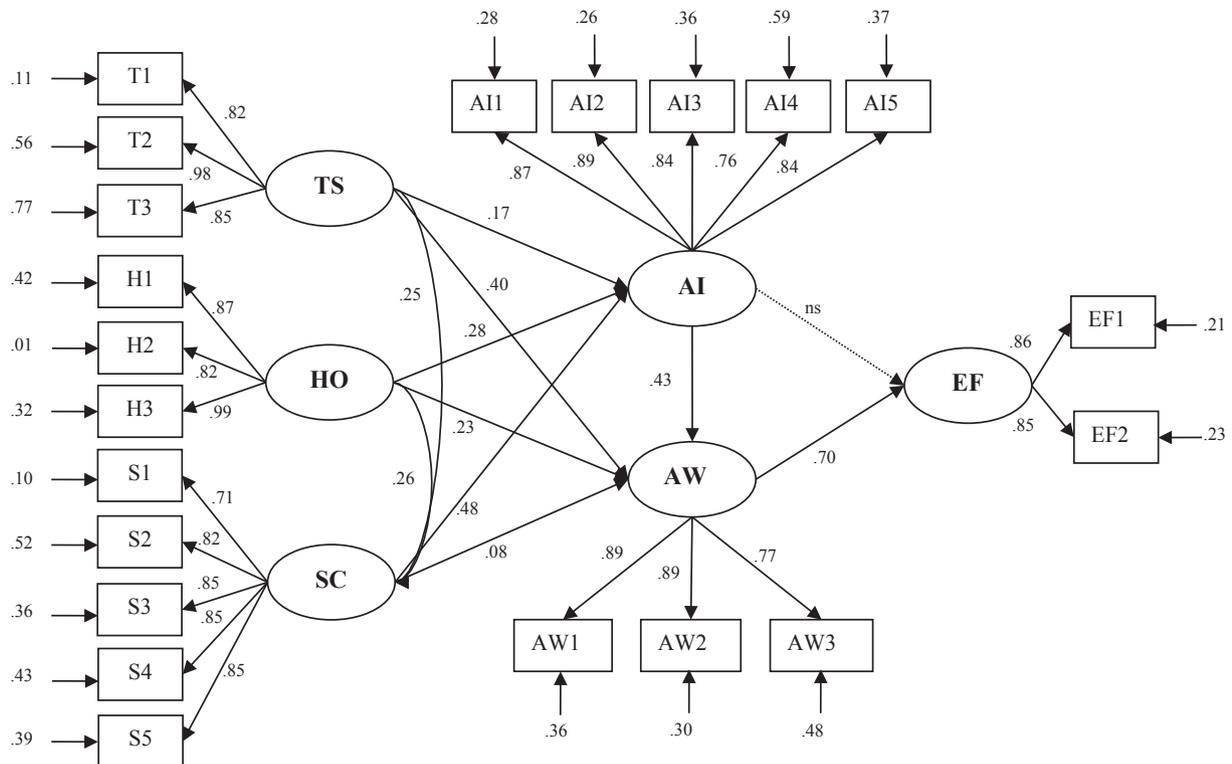


Fig. 2. Structural equation model with parameter estimates. Note: TS = Tie Strength; HP = Homophily; SC = Source Credibility; AI = Attitude towards eWOM Information; AW = Attitude towards a Website; EF = eWOM Effectiveness.

Table 5
Overall model fit and estimated path coefficients.

Hypothesized path	Path estimates	S.E.	t
H1a: Tie strength → Attitude towards eWOM information	0.17*** (0.11)	0.02	5.29
H1b: Tie strength → Attitude towards a website	0.40*** (0.34)	0.03	13.24
H2a: Homophily → Attitude towards eWOM information	0.28*** (0.29)	0.03	8.96
H2b: Homophily → Attitude towards a website	0.23*** (0.30)	0.04	8.02
H3a: Source credibility → Attitude towards eWOM information	0.48*** (0.45)	0.03	13.62
H3b: Source credibility → Attitude toward a website	0.08* (0.10)	0.04	2.46
H4: Tie strength → Source credibility	0.25*** (0.18)	0.03	6.67
H5: Homophily → Source credibility	0.26*** (0.29)	0.04	7.25
H6: Attitude towards eWOM information → Attitude toward a website	0.43*** (0.56)	0.05	11.41
H7: Attitude towards eWOM information → eWOM effectiveness	N/A (N/A)	N/A	N/A
H8: Attitude towards a website → eWOM effectiveness	0.70*** (0.45)	0.03	13.24
Fid indices	χ^2 [df = 178] = 534.274, p = 0.000 NFI = 0.923 TLI = 0.915 CFI = 0.935 IFI = 0.935 RMSEA = 0.063		

Note: N/A = Not Applicable; NFI = Normed Fit Index; TLI = Tucker-Lewis Index; CFI = Comparative Fit Index; IFI = Incremental Fit Index; RMSEA = Root Mean Square Error of Approximation; S.E. = Standard Error; Path estimates are standardized, with unstandardized path estimates in parentheses.

of source credibility. With respect to the association between homophily and source credibility, the results indicated that there was a significant positive relationship between homophily and attitude towards eWOM information (path = 0.26, $t = 7.25$, $p < 0.001$), thus supporting H5. H6 stated that attitude towards eWOM information was related positively to the influence of attitude towards a website. The results showed a significant positive effect of consumers' attitudes towards the eWOM information (reviews) on their attitudes towards the website where the reviews were posted (path = 0.43, $t = 11.41$, $p < 0.001$). Therefore, H6 was supported. Contrary to the predicted relationship, the results of the SEM indicated that there was no evidence of a positive relationship between attitude towards eWOM information and eWOM effectiveness; therefore, H7 was not supported. Finally, H8, which predicted a direct and positive relationship between attitude towards the review website and eWOM effectiveness was supported (path = 0.70, $t = 13.24$, $p < 0.001$).

5. Discussion

The primary objective of this study was to provide a more detailed understanding of the influence that consumers' eWOM communications on online review websites have on their attitudes and purchase decisions from a relational view of consumer–website interactions. To do so, this study extended and tested empirically an OSN model that integrated key social constructs and their influence on consumers' attitudes and intentions. The test of the model revealed a number of interesting results, the most important of which was support for Brown et al. (1997) OSN framework, which states that consumers build relationships with the website itself. Thus, even without face-to-face interactions, consumers still develop various types of relationships with websites, the strength of which has a strong influence on their evaluations of the website, its reviews, and ultimately, their purchase decisions.

With respect to the first social construct, this study confirms the significance of tie strength in the review website setting. Consumers have more favorable attitudes towards the content and website when they establish a stronger relationship with the website. In other words, when consumers had stronger ties with a website, they were more likely to have a positive attitude towards the site and its reviews, and such attitudes triggered their purchase intentions. Homophily was the second social construct investigated. The results revealed that consumers tended to evaluate homophilous websites and their reviews more favorably. Specifically, when the websites contain information that is consistent with, and matches a consumer's own interests, s/he is more likely to perceive higher homophily with the website. This perception was found to be an important antecedent that determined eWOM effectiveness.

Another interesting finding was related to the influence of tie strength and homophily on the perceptions of source credibility. As hypothesized, credibility played a significant role in the decision-making process that affected an individual's attitudes towards a review website and eWOM information, as well as his/her purchase intentions. More importantly, consumers were likely to evaluate the credibility of a review based on the perception of the website to which it refers. A closer match between an individual's interests and those exhibited by the website fostered stronger tie strength and homophily. Furthermore, tie strength and homophily evaluated at the level of the website improved perceptions of credibility, which in turn increased the effectiveness of eWOM. Consistent with previous research that has addressed the role of relationship strength among individuals (e.g., Chu & Kim, 2011; Granovetter, 1973; Steffes & Burgee, 2009), this study confirmed that tie

strength and homophily between a consumer and a website influenced perceptions of credibility, as well as attitudes.

Contrary to prediction, no direct relationship was found between attitude towards eWOM information and eWOM effectiveness. This suggests that while a direct relationship between attitude and effectiveness does not exist, an indirect relationship mediated through a website does. Thus, while consumer attitudes towards reviews were related to their attitudes towards a website, those attitudes did not influence eWOM effectiveness directly. Rather, a consumer's attitudes towards reviews influenced their purchase decisions indirectly through their attitudes towards the website.

An alternative explanation for this result is that the consumption of services is experiential in nature because services involve more customer interaction (Grove & Fisk, 1992). For example, a consumer's perceptions of banking services depend not only on a bank's ability to manage a customer's financial wealth, but also on the customer's overall experience with employees, their ability to receive updated information, being informed of specific promotions, and so on. Perceptions of these experiences will have different meanings for each unique individual, so that, although the same services are offered, individuals will evaluate them differently. Therefore, perceptions regarding reviews may not have a direct influence on eWOM effectiveness.

Another alternative explanation is related to the critical role of the website itself. Consumers' perceptions of reviews affect their purchase intentions through their perceptions about the website. In fact, Brown et al. (2007) OSN framework proposed that the actors in OSNs are individuals who build a relationship with a website. Given that the social exchange occurs between a website and an individual, a consumer's purchase intentions are influenced more by the evaluations of the review website than knowledge of the source alone. A consumer who perceives reviews favorably is more likely to perceive the website favorably as well, and their positive attitude towards the website reinforces their purchase decisions.

Moreover, various motivations to search consumer reviews can explain this unexpected result. In this study, eWOM effectiveness was measured by the extent to which a consumer's purchase decision was influenced by the website's reviews. However, for some consumers, information seeking itself is a source of hedonic pleasure (Mathwick & Rigdon, 2004). It is therefore possible that the influence of eWOM on purchase decisions is weaker for those who use the website for its own sake, not just for the information they find or the items they purchase.

6. Conclusions

6.1. Theoretical implications

This study offers theoretical contributions to the existing literature on eWOM communication and online marketing. First, the results of this study provided evidence that the OSN framework offers a valid approach to study the phenomenon of eWOM communications (Brown et al., 2007). Benefits of eWOM have been well documented in previous literature; however, social influence or relational aspects of such phenomena have been overlooked (Brown et al., 2007; Chu & Kim, 2011). Given the characteristics of eWOM compared to traditional WOM, recent research on the interpersonal influence of eWOM has found that there are limitations in applying the same relational constructs to eWOM (Kumar & Benbasat, 2002). Therefore, the application of website–consumer relationships and the conceptualization of an OSN framework provide a deeper understanding of the eWOM process within review websites. Moreover, this study contributed to the literature through the development of a measurement scale designed

specifically to assess social relationship constructs within the context of consumer review websites.

Second and related to the first contribution, this study called attention to the importance of relational and social aspects of eWOM communication in understanding the effectiveness of online reviews, which is a topic that has largely been ignored in previous studies. The social effect of eWOM is based on the consumer-website relationship, and these social relationship variables can enrich our understanding of consumers' use of online review websites in making their purchase decisions.

The third contribution of this study lies in its analysis of the issue of source credibility, which has attracted tremendous attention in the recent eWOM literature. Although increasing importance has been placed on source credibility in the process of a consumer's online information search and evaluation, little is known about the antecedents that determine perceptions of source credibility. In particular, the concept of source credibility has not been given sufficient attention in the context of online reviews. This study found that, even in an anonymous online environment, consumers still evaluated the credibility of the reviews according to the perceived strength of their relationship with the website. By uncovering the process through which source credibility is formed and the antecedents that determine source credibility, this study addressed this gap in the literature.

Finally, the proposed model clarified the interrelationship among three variables: attitude towards eWOM information, attitude towards the website, and eWOM effectiveness. The advertising literature has long suggested that the medium through which advertising is published is an important factor in predicting the effectiveness of advertising (e.g., Dreze & Zyufryden, 2000). Although numerous studies have attempted to verify the direct relationship between perceptions of consumer reviews and previous purchase decisions, this research expands our understanding of this relationship through attitude towards the website. Based on the results of this study, attitude towards eWOM information was not related directly to eWOM effectiveness; however, it did exhibit an indirect relationship through the attitude towards the website. This result provides evidence that consumers' purchase decisions are influenced by reviews according to their perceptions about the review websites, thereby suggesting the important role of the website as a source of information.

6.2. Managerial implications

An increasing number of companies have sought recently to employ online review strategies and have begun to use social media to communicate with their consumers. An understanding of the factors that motivate consumers may allow marketers to emphasize appropriate cues in the review system and maximize eWOM effectiveness. The findings of this research indicated that an attempt should be made to focus explicitly on increasing the perceptions of tie strength and homophily between a consumer and a website. Identifying a target market may be an essential step in the development of appropriate website functions, features, topics, promotions, and activities that reflect their target consumers' interests specifically in a way that increases perceived tie strength and homophily. Moreover, marketers should attempt to offer the information most relevant to a target consumer's interests through customization or personalization. For example, to enhance tie-strength and homophily between a website and its users, travel review websites can embrace specialized features that present users with personalized recommendations based on their search history, travel preferences, and site use.

Next, online reviews seemed to be more effective when there was a close relationship between a consumer and a website. This

result demonstrated that such rapport is the basis for consumers' positive attitudes and website use that determine eWOM effectiveness. Specifically, the close relationship between the two enhanced consumers' perceived source credibility, as well as their attitudes and ultimate purchase decisions. The website's ability to retain customers and prolong the duration of each stay may be one of the important factors in maintaining an effective consumer-website relationship. Therefore, marketers need to develop and promote websites that attract new customers and design them to be user-friendly so that they promote customer retention. Strategies such as customization and interactive features also may encourage customers to build a stronger relationship with a website. For example, TripAdvisor has a feature called "Traveler Network" that allows users to add friends to their travel maps by connecting to existing sources, such as an email address or Facebook account (Brown et al., 2007). Through this feature, users can create a network of travelers who can provide their suggestions, reviews, and advice, which leads to more frequent visits and emotional attachment with the website based on shared interests and reciprocity. As a result, these ongoing relationships will increase consumers' perceptions of source credibility and the effect of eWOM information on their intentions.

In addition, this study provided new insights about how online reviews gain credibility. Recently, there have been an increasing number of discussions about the credibility of online reviews and consumers' increased concern about that credibility. As a result, review websites have been attempting to develop various techniques to verify the credibility of their reviews. For reviews to be helpful to both companies and consumers, marketers must consider ways in which to increase the perceived credibility of the reviews effectively by managing consumers' perceptions of tie strength and homophily. This study's social network perspective lends support to the idea that strong and positive consumer-website relationships help both parties benefit from reliable reviews, as the results revealed that homophily and tie strength improved perceptions of credibility. Therefore, it is imperative for the management of online review websites to highlight cues that give consumers a sense of similarity with a website and its contents.

Finally, the current research revealed that the attitude towards the website were most strongly affected by tie strength, while source credibility mostly affects the attitude towards the website information. Consumers will show positive attitude towards the website by revisiting it in the future only if they feel a strong tie with it.

6.3. Limitations and directions for future research

The study's findings are subject to the following limitations. A key limitation is associated with the issue of the ability to generalize the findings to the general population. Given that this study used a relatively homogeneous sample of students, faculty, and staff in a single university in the U.S., the results do not reflect the perceptions of the total population of online review website users. To apply the results more broadly, future studies must include samples of users that are more representative of the general population. Alternatively, future research could compare the use of review websites among different demographics (e.g., level of education, age, income, and cultural background).

The study also did not investigate several potential moderators of eWOM effects, including consumer characteristics and situational factors. With respect to consumer characteristics, future studies can examine their socio-demographic characteristics, which influence attitudes and perceptions regarding a given eWOM. For example, it may be interesting to see whether a

consumer's cultural background plays a significant role in determining the effect of online consumer reviews on purchasing decisions. Moreover, the influence of eWOM reviews could differ depending on the expertise and prior knowledge of consumers. It may also be argued that the influence of reviews on a consumer's purchasing decisions may differ based on situational factors. For example, when consumers have time constraints or are in an uncertain situation, they are more likely to rely on eWOM information. Investigation of such moderating effects can provide meaningful implications for researchers and practitioners. Also, this research did not consider the impact of design features on users' attitude towards the website. Previous research shows that web design features are important in building and nurturing consumer-brand relationships (Bilgihan & Bujisic, 2015). Web designs that are user-friendly increase user participation. The ease of use of e-service has a positive influence adoption likelihood that might be linked with tie strength. Therefore, future research may consider adding design features in the proposed model.

From a methodological standpoint, future eWOM research would benefit from the development and validation of a more finely tuned measure of the tie strength and homophily associated with consumer–website relationships. Although the measures in this study were validated by the pretest and main study, additional evidence of the validity of the scales that measured the facets of online tie strength and homophily should be investigated. Another important limitation of this study was its design as a field study. Future research may need to combine archival statistical data analysis, qualitative content analysis, and potentially, experimental testing, to validate the findings and provide deeper insights.

In conclusion, given the limited amount of research that has investigated the unique characteristics of eWOM communications and the increasing popularity of social media websites, there is an abundance of further research that can be pursued. The focus of this study was to investigate how and to what extent customers' perceptions of review websites affected their attitudes and behaviors. The study examined how the social relationships between a customer and a website, tie-strength, homophily, and source credibility affected an individual's evaluations about a website and its reviews, which, in turn, influenced attitudes and purchase decisions. Future research should identify the effectiveness of online reviews with integration of other theories and frameworks for a deeper understanding of eWOM communication processes.

Appendix 1

Final measurement items.

Latent variable/ Indicator	Measurement Items
Tie strength	
TS1	Approximately how frequently do you use this website?
TS2	Overall, how important is this website to you?
TS3	Overall, how close do you feel to this website?
Homophily	
HP1	In general, the interests of the website are not consistent with my own interests.
HP2	In general, the interests of the website are similar to my own interests.
HP3	In general, the interests of the website are very different from my own interests.
Source Credibility	
SC1	Dishonest – honest
SC2	Untrustworthy – trustworthy
SC3	Inexperienced–experienced

(continued)

Latent variable/ Indicator	Measurement Items
SC4	Unknowledgeable–knowledgeable
SC5	Unqualified–qualified
Attitude towards eWOM information	
AI1	Unattractive–attractive
AI2	Unappealing–appealing
AI3	Unpleasant–pleasant
AI4	Dull–dynamic
AI5	Not enjoyable–enjoyable
Attitude towards website	
AW1	I would like to visit this website again in the future.
AW2	I am satisfied with the service provided by this website.
AW3	Compared with other websites, I would rate this one as one of the best.
eWOM effectiveness	
EF1	I refer to eWOM information in a purchase decision.
EF2	This eWOM information has a great affect on my purchase decision.

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