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## Determinants of E-WOM Influence: The Role of Consumers' Internet Experience

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### Abstract

Research has widely demonstrated that personal sources of information are more influential than firm-generated sources. The potential impact of others' opinions has dramatically increased with the development of the Internet. However, very little is known about what makes certain opinions more influential than others. The purpose of this paper is to examine the determinants of electronic word of mouth (e-WOM) influence. We demonstrate that the influence of e-WOM depends on source credibility, valence, and the volume of information obtained from e-WOM. More interestingly, we also find that there exists a quadratic relationship between consumers' Internet experience and e-WOM influence.

**Keywords:** E-WOM, Internet experience, Source credibility, Valence, Volume

## 1 Introduction

The potential impact of others' opinions has dramatically increased with the development of the Internet [35], [59], [99]. The Internet is changing the way consumers communicate by providing a common space in which to share opinions and reviews [52]. Consumers' opinions can be read by other consumers around the world, and thus have a great potential reach [59]. This communication process is known as electronic word of mouth (e-WOM). Recent studies have shown that e-WOM influences consumer behavior [29], [60], [63], [65], [101], as well as company sales [35], [43]. In fact, 90% of online shoppers consult consumers' opinions online before purchase [25], and 70% of consumers trust e-WOM [82]. As with traditional WOM, e-WOM has been shown to have more impact compared to firm-generated sources of information on the Internet [16]. It is also more effective than traditional advertising media, which appears to be losing its effectiveness [81], [89]. Consumer confidence in TV, newspapers and magazine ads declined by around 25% between 2009 and 2011 [82]. In light of e-WOM's reach and influence, it is interesting to study how e-WOM works and what makes certain opinions more influential than others. In addition, marketers are becoming increasingly interested in extending their understanding of e-WOM in order to use it as a new communication tool [69].

Marketing literature has widely studied the determinants of traditional WOM influence [13], [19]. However, as e-WOM develops online, its determinants may differ from those of traditional WOM. Few researchers have examined which factors determine e-WOM influence [69], and most of them have focused on objective data including sales levels, number of posted reviews, or posted ratings [35], [39], [43], [51], [71], [106]-[108]. These studies, however, shed little light on how e-WOM affects individual consumers' attitudes and behaviors, so an understanding of how e-WOM works from the consumer perspective is becoming increasingly necessary [99]. Moreover, much of the existing WOM research using subjective data focuses almost exclusively on transmission behavior [7], [33], [99]. In contrast, to further understand this process, this paper analyzes the determinants of e-WOM influence focusing on reception behavior. This analysis will allow us to generate suggestions about how companies can take advantage of e-WOM. In particular, source credibility, volume of information, valence of opinions, the type of website on which consumers find these opinions, and consumers' Internet experience are analyzed with reference to their potential impact.

## 2 Conceptual Framework and Hypotheses

This section aims to explain the e-WOM concept and its differences with traditional WOM. Hypotheses development follows the conceptualization of e-WOM. Literature review leads us to examine determinants of e-WOM related with the Information source, determinants related with the communication process and determinants related with the receiver.

### 2.1 From WOM to E-WOM

WOM is defined as "a face to face conversation between consumers about a product or service experience" [97] p. 77. This face to face conversation is usually private, and conducted between two parties: the source of the information and the receiver [50]. The source and the receiver are usually friends, relatives or acquaintances [20]. The main characteristic of WOM is that the source is independent – the source has no commercial interest in providing WOM, and thus this communication process is more credible than firm-generated information [9].

The advance of new technologies has allowed consumers to share product-related information through the Internet, thereby increasing the potential impact of WOM [31], [35]. E-WOM is defined as "any positive or negative statement made by potential, actual or former customers about a product or company, which is made available to a multitude of people and institutions via the Internet" [60] p. 39. Consumers can share opinions through different platforms. These platforms, which facilitate the creation and exchange of user-generated content, are usually referred to as social media [66]. Social media includes Web channels such as blogs, review sites, social network sites and forums.

Although WOM and e-WOM both provide consumers' opinions about a product or brand, they do not use the same channels to transmit information, and therefore are dissimilar. As Figure 1 shows, WOM occurs in a simultaneous and bidirectional conversation, face to face between source and receiver [50], [57]. However, in e-WOM the conversation does not have to be simultaneous and bidirectional. The source writes an opinion on the Internet that can stay there for a long time. Thus, many consumers can see this opinion and decide whether to answer the source. The permanence of the opinion increases the level of information exchange compared to traditional WOM communication [60]. In addition, unlike WOM, the source and receiver do not usually know each other in e-WOM. Most of the time, the source remains anonymous [64], [91].

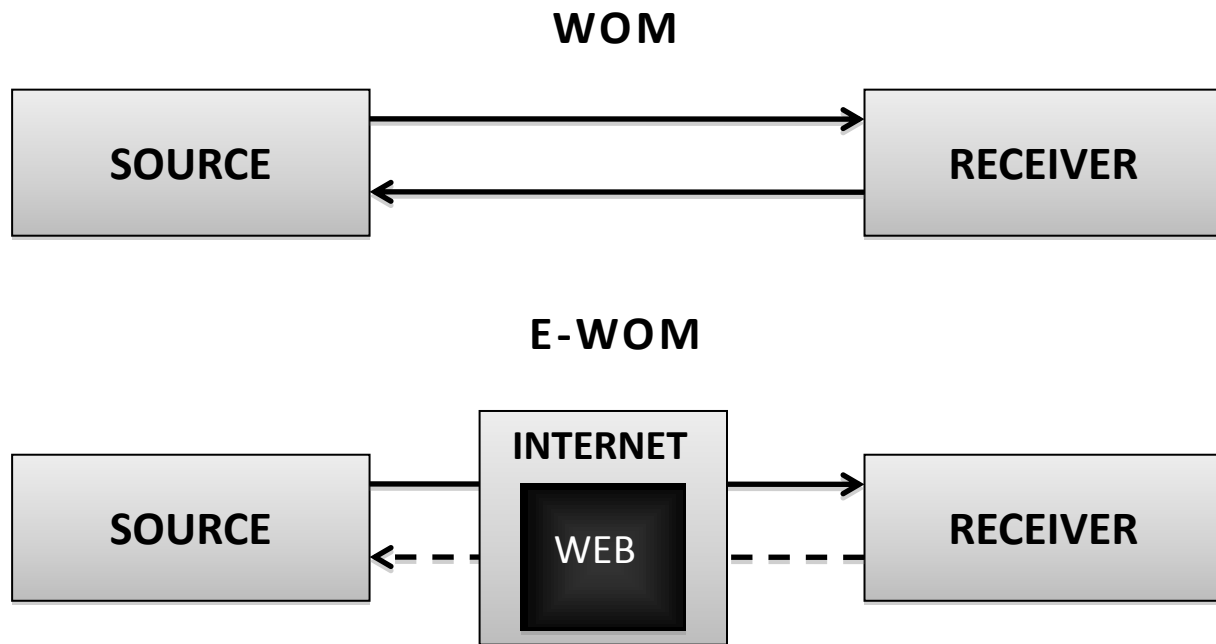


Figure 1. WOM vs. e-WOM  
Source: Adapted from López and Sicilia [73]

## 2.2 Determinants of E-WOM Influence

Differences between WOM and e-WOM make it necessary to study the specific determinants of e-WOM influence. The first determinant to be considered is information source. Traditional WOM research has established the importance of the information source in this communication process [13], [19]. Unlike traditional WOM, the information source in e-WOM is anonymous, which further enhances the role of source credibility in this communication process [33]. Therefore, the impact of source credibility cannot be ignored in this context. As shown in Table 1, previous studies have analyzed the impact of source credibility on e-WOM; however, the direct impact of source credibility on e-WOM influence has not yet been firmly established.

We also consider the characteristics that are related to the communication process as determinants of e-WOM influence. We study two of the most important WOM attributes that have been examined in the literature: valence and volume [75]. Valence captures the nature of the information, i.e. whether it is positive or negative [71], and volume refers to the number of posted messages [71]. These variables have usually been studied using objective data, thereby providing inconclusive results. Several studies have shown that positive e-WOM valence impacts on product sales [35], [39], while other studies have found no evidence for this relationship [28], [43], [71]. This discrepancy could be explained with reference to the fact that consumers' perceived valence may differ from the objective average rating. Similarly, with regards to volume, some studies have shown that the number of opinions posted about a product affects sales [35], [43], [71], while others have found no evidence to support this claim [51]. Therefore, this paper tries to clarify the inconsistent results found in the literature by studying valence and volume as perceived by consumers. Valence and volume are then re-examined in this context by considering a receiver perspective. In addition, characteristics related to this medium may be particularly salient here; indeed, recent research has started to analyze these factors [51], [108]. In this study we posit that the type of website on which consumers find the opinions in question may be a determinant of e-WOM influence. [98] showed that the type of website had no effect on e-WOM influence. These authors considered three types of sites (retailer vs. third-party commercially linked to retailer vs. no commercially linked third-party) but consumers could not effectively distinguish the differences between them. Thus, we have simplified this idea using only two types (firm-sponsored and third-party websites).

Finally, receiver characteristics have been previously studied in the context of traditional WOM [13], [50]. However, as e-WOM develops online, receiver characteristics related to the experience with this medium may also determine e-WOM influence. Thus, we analyze the role of consumers' Internet experience in e-WOM influence. Following an objective perspective, a recent study [108] has shown that e-WOM is more influential for consumers with a high level of Internet experience. However, these authors suggest that the effect could also occur in the opposite direction; that is, e-WOM could be more influential for consumers with low levels of Internet experience. To resolve this problem, we propose a quadratic relationship between consumers' Internet experience and e-WOM influence.

According to the above discussion, we can divide the factors that determine e-WOM influence into three groups: information source, communication process and receiver, as shown in Figure 2.

Table 1: Existing research on the determinants of e-WOM

Study	Determinants	Dependent variable	Type of measurement
[51]	Volume*	TV ratings	Objective
[35]	Valence	Sales	Objective
[28]	Volume, Valence*	Sales	Objective
[43]	Volume, Valence*	Sales	Objective
[39]	Valence	Future sales	Objective
[71]	Volume, Valence*	Sales	Objective
[108]	Internet experience	Sales	Objective
[98]	Type of website (retailer vs. third-party commercially linked to retailer vs. no commercially linked third-party)*	e-WOM influence	Subjective
[67]	Volume*, Valence	Preference	Subjective
[45]	Source credibility (dimension: trustworthiness)	Perceived e-WOM credibility	Subjective
[33]	Source credibility (dimension: reputation of source)	Perceived e-WOM credibility	Subjective
[32]	Source credibility (dimensions: expertise and trustworthiness)	Information usefulness	Subjective
[56]	Source credibility (dimension: reputation of review)	e-WOM credibility	Subjective
Current study	Volume, Valence, Source credibility (dimension: trustworthiness), type of website (firm-sponsored and third-party websites), Internet experience (quadratic effect)	e-WOM influence	Subjective

\*This variable has no significant effect on the dependent variable

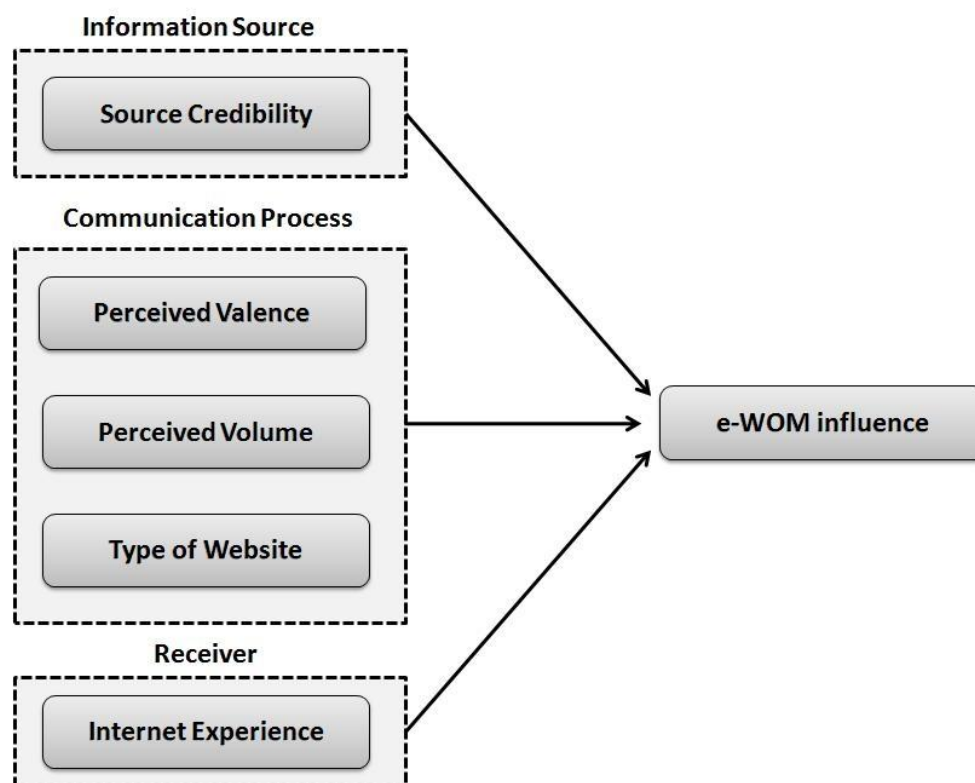


Figure 2: Conceptual framework of determinants of e-WOM influence

## 2.3 Information Source: Perceived Source Credibility

Extant literature about information sources has shown that source credibility determines communication effectiveness [62]. Therefore, source credibility has been considered a crucial determinant of persuasion [86]. Source credibility is defined as “a message recipient’s perception of the credibility of a message source” [24] p. 753, reflecting nothing about the message itself. Source credibility is a complex concept, and although several dimensions have been established in the literature (see Table 2), researchers do not necessarily or completely agree on its multidimensional nature [3]. Scales representing factors of source credibility have changed over time, as have the number of significant factors and their resulting amount of variance [8], [93]. In computer-mediated communication, where textual messages are exchanged, some source attributes are difficult to assess because a virtual discussion may not permit the conveyance of such cues [33]. As shown in Table 2, the dimensions most often used to examine source credibility have been expertise and trustworthiness [41], [62], but these are difficult to analyze in e-WOM [91]. Not all websites offer information about the source, which helps the receiver to deliberate about the source’s level of expertise. However, an increasing number of websites are offering tools through which the receiver is able to determine the level of trust placed in the source by others. In addition, as consumers perceive risk before buying or when searching for information in this medium, trust between parties becomes very relevant in this context [20]. Therefore, following recent research developed in an online context [25], [52], we study source credibility from a unidimensional (trustworthiness) perspective.

Table 2: Source credibility dimensions

Study	Source credibility dimensions
[103]	Trustworthiness, objectivity, dynamism, and competence
[77]	Authoritativeness and character
[17]	Expertise, bias, and judge’s point of view
[78]	Competence, trustworthiness, and goodwill
[85]	Trustworthiness, expertise, and attractiveness
[41], [62]	Trustworthiness and expertise

Trust management literature has studied the role of source credibility in the online environment. The key input to trust decisions is reputation information, which is divided into two categories: first-hand experiences and third-party recommendations based on these first-hand experiences [94]. As the source can be anonymous, websites can offer specific tools by which to evaluate third-party recommendations, thereby reducing the risks relating to conducting this interaction within the electronic environment [37]. A good example of these tools is reputation systems. An increasing number of websites are offering these systems, by which receivers can determine the level of trust others have placed in different sources. Reputation systems were initially developed in the realm of e-commerce, but they now exist within several other Web content domains [79]. The basic idea is to let parties rate one another, which can assist them in deciding whether or not to transact with that party in the future [66]. Previous studies have shown that ratings influenced consumers’ trust in the source [11]. This system can be easily translated to e-WOM in that it allows receivers to evaluate the usefulness of opinions. Thus, when seeking product opinions online, receivers can actively deliberate on source credibility by drawing on these reputation systems. In fact, previous studies have shown that consumers use information about the source to evaluate the message. For example, receivers can examine explicit identity information about the source [95].

Generally speaking, behavioral influences are stronger when source credibility is high, compared to when it is low [13], [41]. For example, in the classic WOM context, if you are going to buy a mobile phone, and your best friend recommends a specific model to you, you will be more likely to follow his/her advice than if the advice was given to you by a stranger. Your friend is a highly credible source because you think her/his recommendation will be unbiased; s/he will give you a honest opinion about the product, and thus your decision is more likely to be influenced by your friend than by the stranger, who is usually considered to be less credible. Because of the differences between WOM and e-WOM, consumer perceptions of e-WOM credibility may be suspect because of the lack of personal knowledge about the motivations of unseen strangers offering recommendations [26]. This problem may be resolved when the website on which the opinion is found uses a reputation system. Receivers will not rely on information from sources they do not view as credible [78]; if the sources are perceived as being low in credibility, they will be discounted and will not be very persuasive [19]. On the contrary, when the consumer considers an opinion come from a credible source, the information should be seen as more persuasive compared to e-WOM information that comes from less credible sources. Therefore, we propose the following:

*H1: Perceived source credibility of e-WOM positively influences decision-making.*



## 2.4 Communication Process

We analyze three aspects related with the communication process that may determine e-WOM influence: the perceived valence of e-WOM, the volume of opinions that consumers have read to make the decision, and the type of website where consumers have found the opinions.

### 2.4.1 Perceived Valence of E-WOM

According to Information Integration Theory [4], integration is a process of combining different pieces of information. When consumers are exposed to several opinions, they combine them into an overall evaluation by averaging them out [4]. The result of this process is the perceived valence of e-WOM. Such perceptions may differ from the objective ratio of valence [90]. For example, the objective ratio for a specific product could be two positive opinions to a negative one; the net result would therefore be +1. According to this objective perspective, when the number of positive opinions is higher than the number of negative ones, the objective valence will be positive [90]. However, traditional literature on interpersonal influences has shown that negative information is more diagnostic than positive information [30], [61], [107]. In terms of Information Integration Theory [4], before integrating information consumers assign value to each piece of information according to its credibility and reliability. Thus, the most credible information should have more weight in the final average. This reasoning suggests that the objective valence of opinions does not have to correspond with the subjective valence. Previous studies have shown that positive e-WOM is far more common than negative e-WOM [35], [44]. A study by Google [53], for instance, showed that 80% of online opinions are between four and five stars. However, a few negative opinions mixed in with positive ones may increase the potential impact of e-WOM because they add credibility to the aggregate score [42]. In this case, a lower objective ratio could have more impact than a higher objective ratio. Therefore, the relationship between valence and e-WOM impact should be established based on this subjective perspective. According to this reasoning, we propose the following:

*H2: The perceived mean valence of e-WOM positively influences decision-making.*

### 2.4.2 Perceived Volume of E-WOM

Volume is associated with the number of posted opinions [71]. As consumers cannot read all opinions that individuals have written on the Internet about a specific product [26], and following the subjective perspective taken in this paper, we refer to volume as the number of posted messages that consumers declare to have found about a product. Previous studies have found that the volume of information on e-WOM correlates significantly with its impact on consumer behavior [5]. The volume of e-WOM has a primarily informative role, as it enhances product awareness. Thus, the greater the volume of e-WOM about a product, the more likely a consumer will be to hear about it [71]. As a result, many consumer opinions can be a signal of product popularity. Since the number of opinions may represent the number of interested consumers with prior purchasing or usage experience [26], [86], [88], a high volume may give the consumer a more reliable impression of the real consequences of using a product or service, because more people have self-reportedly experienced it [100]. Consumers may also interpret popularity as a signal of high quality [21]. The volume of opinions may therefore be considered an indicator of product performance in the market [35], so consumers can make inferences about the quality of the product based on the volume of e-WOM. On the basis of the above reasoning, we propose the following:

*H3: The perceived volume of e-WOM positively influences decision-making.*

### 2.4.3 Type of Website on Which Opinions are Found

Online consumer opinions can be found on two types of websites: firm-sponsored websites, where the product is sponsored and/or commercialized; and third-party websites, where the product is not sponsored and/or commercialized [26], [55]. Amazon is an example of a firm-sponsored website, as it sells products and provides consumers' opinions about these products to help others in their purchasing decisions. In contrast, Epinions is an example of a third-party website, because its primary focus is on collecting consumers' opinions. Although e-WOM is non-commercial in nature [14], [16], its influence could depend on where the opinions are found. [98] suggests that the type of website on which opinions are found affects consumers' propensities to follow product recommendations. When opinions are posted on a firm-sponsored website, receivers may perceive a possibility of the source being influenced by the marketer [105]. Additionally, on firm-sponsored websites marketers can filter consumer opinions and even offer a specific review format in order to guide consumers to post their opinions in the way the firm would like [38], [74], [87]. This filtering process may make consumers suspicious of the site. When opinions are displayed on firm-sponsored websites, consumers have no way of knowing whether the opinions are filtered, and it is therefore reasonable to think that these opinions will have less influence on consumers' decisions than the opinions found on third-party websites. Therefore, our hypothesis is in line with the views of previous authors [2], [96] who have supported the superiority of independent websites as sources of information. Thus, we propose:

*H4: The influence of e-WOM on decision-making is greater when opinions are found on third-party websites than when they are found on firm-sponsored websites.*

## 2.5 The Receiver: Consumers' Internet Experience

There are lots of websites dedicated to providing consumer reviews [58]. As a consequence, the volume of information about many products or services is too great for consumers to read and process. Receivers do not want to spend much time on the Internet seeking useful opinions [58]. They need to find and judge the opinions of others when making purchasing decisions [100]; however, not all individuals have the same experience in searching for the information they need. For example, individuals with low levels of Internet experience will search for information in a less efficient manner compared to those with more experience [49], since inexperienced users have less knowledge of the medium, and are not equipped with the same skills as more experienced users. In addition, they may have more difficulty in managing the information flow [72], and be less critical of the information found, compared to experienced users [34]. Therefore, it will be more difficult for them to discriminate among alternatives, and it is more likely that they will think online consumer opinions are unbiased. In fact, according to [23], novice users rarely question who or what is operating behind their computer screen. As consumers with little experience are not aware that firms can manipulate consumers' opinions, e-WOM is likely to have a strong impact on them. However, as experience increases, consumers' awareness about strategic manipulation of e-WOM may be higher. There is a large amount of variation in the quality of online information, so previous negative experiences can decrease the credibility and impact of online opinions [27]. Thus, it is more likely that users with some Internet experience will question e-WOM sources [38], [76]. These doubts may reduce the impact of e-WOM for individuals with some Internet experience, compared to novice users. At the other end of the spectrum, individuals with some Internet experience may also differ from individuals with a great deal of experience. Some consumers may indeed become experts on the Internet. Both time and experience are required to learn about the reputations that websites have developed [102]. Channel Expansion Theory proposes that individuals with high levels of experience in a medium perceive it as being able to offer them rich information [22]. Similarly, previous studies on information searching have found that individuals with high levels of Internet experience use online information sources more than those with less experience [68], [92]. In addition, the information search strategies of experienced users are expected to differ from those of novice users, or those with less experience [10]. The ability to select information that is of a higher relevance to their needs will be much greater for experienced individuals [49], since their strategies will evolve to become more profitable. At this stage, subjects will tend to more stringently verify information obtained on the Web [47]. Moreover, they will know where, exactly, good information sources can be found – indeed, they may have a preferred set of websites because these sources have previously provided successful recommendations [58]. For these individuals, the information found will have a greater effect on decision-making. Therefore, the influence of e-WOM depends on Internet experience, as follows:

*H5: The influence of e-WOM on decision-making initially decreases and then increases, gradually, with consumer Internet experience, drawing a U-shaped curve.*

## 3 Methodology

Data were collected from users of tourist services, because WOM represents the most important information source for travelers [40]. In addition, the Internet has changed tourist behavior dramatically [70]. Many tourists rely on e-WOM to reduce perceived risk and uncertainty before they purchase a service [70]. Specifically, a study by Google and OTX [54] showed that nearly 50% of individuals plan their trips according to the online opinions they read.

The survey population consisted of travelers over the age of 16 who had searched for online opinions to plan their last trip. They had to be first-time visitors to their particular destination, because prior experience with the location could have affected their use of information sources [104]. Data were collected through a questionnaire sent to the individuals via email. We sent 5,156 questionnaires using a university email list. In the email, we clearly indicated that the respondents had to fulfill these two conditions in order to qualify to answer the questionnaire. The questionnaire was attached to the email, and after filling it out the participants had to send it back to researchers. We also suggested that the receivers could pass the questionnaire on to other people. A very similar procedure was developed by [36]. As a result of this process, we collected 176 valid questionnaires.

Before starting data collection, the questionnaire was pretested to ensure it was easily understood. Subjects were asked to recall the last trip they had planned. First, they had to indicate the extent to which e-WOM information influenced their decision. This question is related to the main dependent variable. Next, they were asked about the source credibility of the opinions found on the Internet, and about the perceived valence of these. We used previously established scales to measure e-WOM influence [80], source credibility [46] and perceived valence [86]. The scales are all based on five-point semantic differential scales. In order to measure the perceived volume of information obtained from e-WOM, the respondents were asked to rate how many opinions they had found from other consumers on the Internet, using a five-point-Likert scale (1 = very few and 5 = a lot). The subjects then indicated how many hours they surf the Web during a normal week, in order to assess their Internet experience [83]. They also indicated where they had seen the opinions (either on firm-sponsored or third-party websites). At the end of the questionnaire, the individuals provided some demographic information (sex, age, level of education, and occupation). Table 3 shows the scales used in the questionnaire.



Table 3: Scales

Scale	Items	Type of variable	Range
e-WOM influence [80]	INFL <sub>1</sub> : They gave me completely irrelevant/highly relevant information for my decision-making.	Continuous	From 1 to 5
	INFL <sub>2</sub> : They gave me completely useless/very useful information for my decision-making.		
	INFL <sub>3</sub> : The information they gave me was not helpful/helpful enough to give me an idea of the destination.		
Perceived source credibility [46]	CRED <sub>1</sub> : I do not feel/I feel these people are trustworthy.	Continuous	From 1 to 5
	CRED <sub>2</sub> : I do not believe/I believe they were telling the truth.		
	CRED <sub>3</sub> : I do not feel/I feel they were honest.		
Perceived valence [88]	VAL <sub>1</sub> : In general, they did not recommend/recommended the destination.	Continuous	From 1 to 5
	VAL <sub>2</sub> : They negatively/positively evaluated the destination.		
Perceived volume	VOL: How much information did you obtain from online consumers' reviews when choosing your destination?	Continuous	From 1 to 5
Type of website	WEB: What type of website did you read the opinions on?	Categorical	0 (firm-sponsored website) 1 (third-party website)
Consumers' Internet experience [83]	EXP: How many hours do you spend surfing the Internet in a normal week?	Continuous	Minimum: 0 Maximum: 80

## 4 Results

The results section is organized as follows. We have first validated the scales used in the study checking their validity and reliability. Once we have confirmed the measurements are suitable, we describe the demographic profile of the sample. Finally, we develop a regression analysis to test the proposed hypotheses.

### 4.1 Scale Validation

We assessed the validity of influence, perceived source credibility and perceived valence scales by performing a confirmatory factor analysis (CFA) using EQS 6.1 [15]. The model had acceptable fit indices ( $X^2=20.999$  (17),  $p>0.10$ ; NFI=0.952; CFI=0.990; RMSA=0.043). As Table 4 shows, each item has significant factor loadings ( $p<0.01$ ) on its theorized latent construct. All values are over 0.6, indicating good convergent validity [12]. The Cronbach's alpha ( $\alpha$ ) coefficients are greater than 0.70 [84] and the composite reliabilities exceed the standard of 0.6 suggested by [12]. Equally important, the average variance extracted (AVE) values for each factor are greater than 0.50, as [49] recommend. These findings support the reliability of the multi-item measures. We assessed the discriminant validity using two approaches. First, we compared the AVE for each construct with the squared correlation between construct pairs [48]. As Table 5 shows, the AVE values exceed the squared correlations for all measures. Second, we calculated the confidence interval of plus or minus two standard errors around the correlation between the factors, and determined whether this interval includes 1.0 [6]. None of the confident intervals include 1.0 in our analysis (Table 5). In combination, these two tests provide evidence for the discriminant validity of our measures.

### 4.2 Sample Characteristics

The demographic profile of the sample is outlined in Table 6. The mean age was 30 and nearly 60% of the subjects were female. Approximately 60% of the respondents were employed, while a quarter of them were students. Most (71.4%) had completed a university degree, while around 25% had completed secondary education.

Table 4: Measurements of convergent validity and reliability

	Standardized loadings	t-value	Cronbach's $\alpha$	CR	AVE
<b>E-WOM influence on decision-making</b>			0.854	0.819	0.602
INFL <sub>1</sub>	0.797***	9.931			
INFL <sub>2</sub>	0.819***	10.283			
INFL <sub>3</sub>	0.709***	8.541			
<b>Perceived source credibility</b>			0.858	0.850	0.654
CRED <sub>1</sub>	0.822***	10.549			
CRED <sub>2</sub>	0.753***	9.388			
CRED <sub>3</sub>	0.849***	11.012			
<b>Perceived valence</b>			0.754	0.723	0.566
VAL <sub>1</sub>	0.779***	7.909			
VAL <sub>2</sub>	0.725***	7.461			

\*\*\* p<0.01; \*\*p<0.05; \*p<0.10

Table 5: Measurements of discriminant validity

	E-WOM influence on decision-making	Perceived source credibility	Perceived valence
<b>E-WOM influence on decision-making</b>	0.602	(0.719-0.407)	(0.778-0.438)
<b>Perceived source credibility</b>	0.317	0.654	(0.651-0.271)
<b>Perceived valence</b>	0.370	0.213	0.566

Note: Matrix shows AVE (diagonal), squared correlation (below diagonal) and confidence intervals (above diagonal)

### 4.3 Results

Equation 1 represents the model we used to test our hypotheses.

$$\text{INFL} = \beta_0 + \beta_1 \text{CRED} + \beta_2 \text{VAL} + \beta_3 \text{VOL} + \beta_4 \text{WEB} + \beta_5 \text{EXP} + \beta_6 \text{EXP}^2 + e \quad (1)$$

(Where INFL is e-WOM influence; CRED represents perceived source credibility; VAL is the perceived valence of opinions; VOL represents the perceived volume of opinions; WEB is a dummy variable with a value of 0 if the individual found opinions on firm-sponsored websites, and 1 if he/she found opinions on third-party websites; and EXP represents the consumer's Internet experience.)

In order to test the proposed hypotheses, a hierarchical regression analysis was conducted. The constructs were mean-centered to overcome potential problems arising from multicollinearity [1]. We divided the variables in Equation 1 into two models. The linear variables were entered into the first model, and the quadratic term into the second model [1]. Model 2 was used to test the linear and quadratic hypotheses, as [1] propose. The results from the hierarchical regression analysis are summarized in Table 5. As expected, source credibility ( $\beta_1=0.330$ ;  $p<0.01$ ), valence ( $\beta_2=0.298$ ;  $p<0.01$ ) and volume of e-WOM ( $\beta_3=0.197$ ;  $p<0.05$ ) show a significant positive impact on e-WOM influence. Thus, H1, H2, and H3 are all supported.

The type of website on which receivers find opinions does not exert a significant impact on consumer decision-making ( $\beta_4=0.056$ ;  $p>0.10$ ), and therefore H4 is not supported. Finally, to confirm the presence of a U-shaped relationship, two criteria must be fulfilled: first, the increase in variance explained by adding the quadratic term must be statistically significant; second, the coefficient of the linear Internet experience variable must be negative and the coefficient for the squared term positive [1]. As shown in Table 7, Model 2 includes the quadratic term, whereas Model 1 includes only the linear relationship between Internet experience and e-WOM influence. The coefficient of Internet experience is negative ( $\beta_5=-0.290$ ;  $p<0.05$ ), and that of the quadratic term is positive ( $\beta_6=0.251$ ;  $p<0.05$ ) in Model 2. When comparing Models 1 and 2, an F-test indicates that the inclusion of the squared term significantly improves the model ( $R^2$  change= 0.021;  $p<0.05$ ). Therefore, as proposed, there exists a U-shaped relationship between the influence of e-WOM on decision-making and consumers' Internet experience. This result gives support to H5. Figure 3 shows scatterplot diagrams of the results.

Table 6: Sample characteristics

Characteristic		%
Employment	Student	24.6
	Housewife	1.1
	Unemployed	5.7
	Self-employed	9.7
	Employed/civil servant	58.9
Education	Primary education	3.4
	Secondary education	25.1
	University	71.4
Gender	Male	41.0
	Female	59.0
Age	Mean value (years)	30.0

Table 7: Regression results for the determinants of e-WOM influence on decision-making

	Model 1			Model 2		
	$\beta$	t	p	$\beta$	t	p
Perceived source credibility ( $\beta_1$ )	0.340	4.269	0.000	0.330	4.198	0.000
Perceived valence ( $\beta_2$ )	0.287	3.598	0.000	0.298	3.773	0.000
Perceived volume ( $\beta_3$ )	0.184	2.369	0.019	0.019	2.563	0.012
Type of website ( $\beta_4$ )	0.031	0.405	0.686	0.056	0.716	0.475
Internet experience ( $\beta_5$ )	-0.086	-1.114	0.268	-0.290	-2.294	0.024
Internet experience <sup>2</sup> ( $\beta_6$ )				0.251	2.022	0.045
$R^2$	0.361			0.382		
Adjusted $R^2$	0.334			0.351		
$\Delta R^2$				0.021		0.045

## 5 Discussion

The present study intends to clarify researchers' doubts about e-WOM influence by focusing on reception behavior. Previous research has shown that e-WOM is more influential than firm-generated information [16], [89], so an increasing number of companies are actively making efforts to stimulate and manage e-WOM activity [69]. Therefore, it is extremely important that both academics and practitioners understand how e-WOM works. In addition, we have tried to complement previous results by using a subjective perspective. In this paper we demonstrate that the influence of e-WOM depends on perceived source credibility, perceived valence, perceived volume of e-WOM and receivers' Internet experience.

As with offline WOM, source credibility affects e-WOM influence. When perceived source credibility is high, e-WOM is more influential compared to when perceived source credibility is low. This result extends previous studies, which have supported the idea that credible sources are more persuasive than less credible ones [13], [41] in an online context. It also highlights the importance of source credibility in a communication process where the transmitters are anonymous. In addition, as expected, the higher the perceived favorability, the higher the influence of e-WOM on decision-making. Traditional literature on WOM has found that negative opinions are more diagnostic than positive ones [61], so the objective valence and perceived valence are very likely to differ. The important ratio is that obtained from consumers' aggregations of positive and negative opinions. Where the resultant perceived valence is positive, e-WOM positively impacts consumer decisions. This result is in line with [42], where high correlations were found between attitude towards the product and the number of positive messages. This result also corroborates studies with a more objective approach, which have shown that the valence of opinions affects sales [35], [39]. Another interesting finding of this study is that the impact of e-WOM on decision-making is affected by the volume of information obtained. The more opinions the consumer has accessed about a product or service, the more influence e-WOM has on decision-making. The data supports studies that have found a positive relationship between the volume of e-WOM and cinema box office performance [39], [43], [71]. These studies measured the e-WOM observed on several websites. We validated this result for a different product category and by directly asking the consumers. However, the type of website does not significantly influence decision-making. Although it has been said that third-party websites may be more credible [47], opinions on these sites do not exert a higher influence than those found on firm-sponsored websites. One explanation for this result could be that the data were collected retrospectively, so respondents could not recall exactly where they saw these online opinions. Additionally, some individuals may not

yet have been able to distinguish between the different types of websites; some sites may be seen as independent when in fact they are related or associated somehow with the marketers. Similarly, others may be independent from marketers, but because of the presence of advertising may be seen as being sponsored.

The most interesting result obtained in this study relates to the quadratic relationship between consumers' Internet experience and the influence of e-WOM. Experienced and novice Internet users are more influenced by e-WOM than consumers with moderate experience in this medium. However, as consumers start to become more aware that online opinions could be manipulated by firms, they will become increasingly skeptical of e-WOM. Expert users will know how to check information in order to distinguish fake opinions from honest ones, and will also know where to search for e-WOM, thus having more propensity to follow the recommendations they find. This study, in line with previous research which has shown that Internet experience correlates with consumer behavior [14], [18], [27], [108], resolves the inconsistent results found in the literature. However, the results go against Channel Expansion Theory. As stated above, [22] proposed a linear relationship between experience and the perception of richer information. In addition, there are some studies about information sources that have shown a positive relationship between Internet experience and the impact of online information [14], [68], while other researchers have found the opposite [18], [27]. Similarly, the study conducted by [108], which analyzed the effect of consumers' Internet experience on e-WOM influence, did not make the direction of this relationship clear. Although it showed a positive and linear relationship between Internet experience and e-WOM influence, the authors expressed the possibility that this relationship could occur in any direction. Our study gives researchers a clearer picture about how Internet experience affects e-WOM reception.

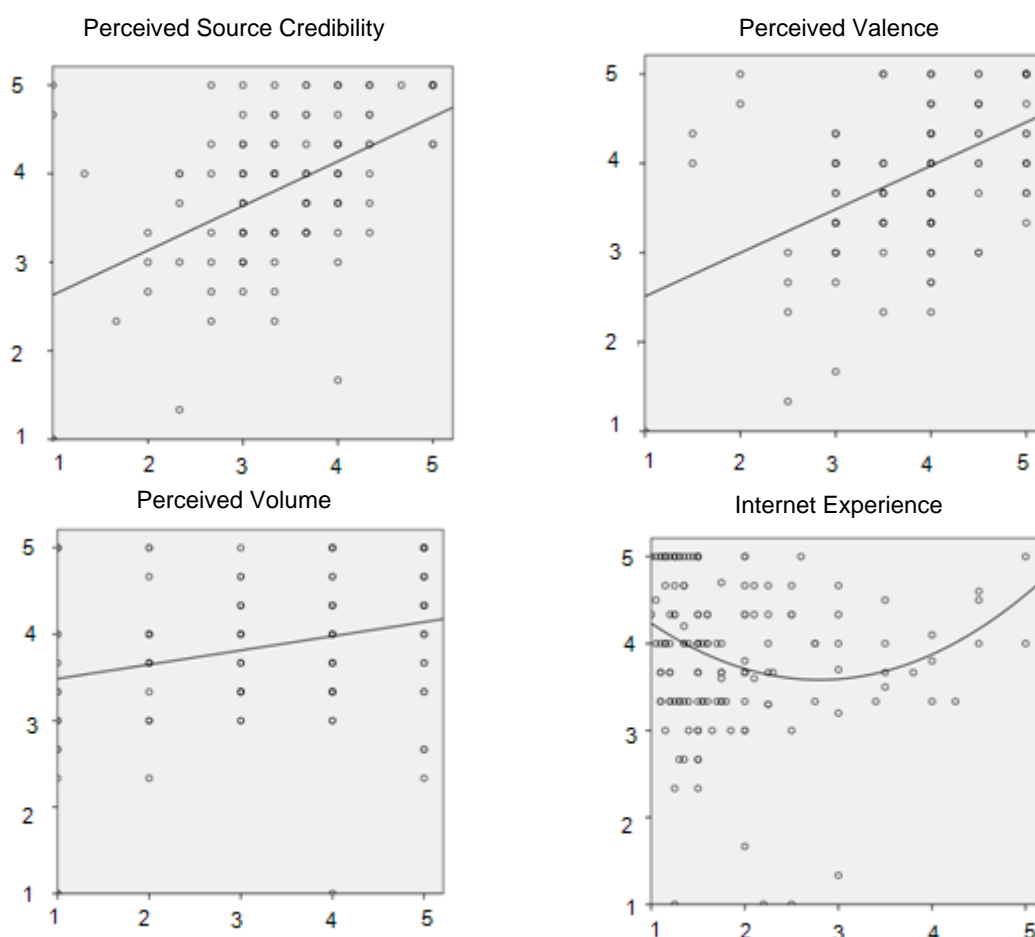


Figure 3: Relationships between e-WOM influence and its determinants

## 6 Managerial Implications

The above results have several implications for marketers. Consumer opinions are essential to firms in their efforts to understand the responses of customers to their products, and to improve their marketing campaigns or products accordingly.

Firms should bear in mind that e-WOM has a great impact on consumer behavior, so they should try to stimulate and manage e-WOM activity. Special attention needs to be devoted to customer satisfaction and complaints. Customer satisfaction should be constantly monitored in order to identify problem areas and make necessary modifications.

These actions will enhance customer satisfaction so as to generate positive e-WOM with a positive perceived valence. Additionally, we have demonstrated that perceived source credibility has a very important bearing on e-WOM influence, so webmasters should provide consumers with tools by which they can evaluate the source credibility of the website. For instance, information could be provided about the transmitter, thereby increasing his/her credibility, and could also present the transmitter's nickname, duration of membership, and number or quality of opinions he/she has written, as well as a profile of the different sources. These actions may increase the impact e-WOM has on consumers with moderate levels of Internet experience, because online opinions affect them the least. Companies should pay more attention to these consumers in order to enhance e-WOM influence. When a website offers useful opinions for decision-making, consumers are more likely to become loyal customers of this source. Thus, any signal that ensures the quality of others' opinions may help to increase the impact of e-WOM on consumers with moderate experience. Additionally, marketers can foster e-WOM activity on the Internet by encouraging new product trials or providing unique information to customers or opinion-leaders in order to spread the word via the Internet. In this way, the volume of e-WOM will increase and its impact will be higher.

Furthermore, the managerial implications suggested above could be especially interesting for the tourism industry, given that e-WOM is the most frequently consulted information source among tourists [40]. For example, in order to enhance source credibility, destination marketing organizations could engage local inhabitants, who know the area well, to post opinions recommending restaurants, monuments, or places to visit. For potential tourists, this information may be even more relevant than information provided by other tourists, who do not know the destination as well as locals.

## 7 Limitations and Future Research

Future research should address the limitations apparent in the current study. The data were collected retrospectively; although participants were asked about their last trip in order to reduce the time between the planning of the trip and data collection, they might not have clearly remembered the information they were asked about. Future research could replicate the study by asking for similar information while consumers are actually searching for others' opinions, or immediately after purchase. This aspect would allow them to better recall the website on which they found the opinions. It would also be interesting to analyze which source characteristics affect source credibility. This feature may make webmasters aware of the importance of providing certain types of information about the sources in order to increase their credibility. For example, following our previous recommendation, future research could study whether local inhabitants are more credible than tourists as information sources for tourism destinations. In addition, as the importance of social media has increased in recent years, future research could analyze whether the impact of e-WOM could depend on the type of platform on which the opinions are found. For example, it could be interesting to compare the effect of e-WOM created on social network sites, blogs and virtual communities. Social network sites offer the possibility to create a very detailed profile of the source. Bloggers are usually opinion leaders that develop their influence online. Virtual communities facilitate sources and receivers' interactions, allowing them to create a social relationship; thus, this type of information exchange could not occur between strangers. Therefore, the different characteristics of these sites could affect their potential influence.

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