



# Dissatisfaction, Disconfirmation, and Distrust: an Empirical Examination of Value Co-Destruction through Negative Electronic Word-of-Mouth (eWOM)

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## Abstract

Electronic word-of-mouth (eWOM) is a key source of information for consumers and is also a vitally important source of value to business and website owners. In this study, we investigate what causes consumers to trust or distrust a review website and how value is created (or destroyed) through online reviews, which are one type of eWOM. Building on the expectation confirmation model, this study examines how consumers' disconfirmation of previous eWOM leads to distrust of the eWOM, which in turn leads to negative eWOM and ultimately to distrust of the review website itself. Experience-based dissatisfaction directly affects the writing of negative reviews, but only indirectly influences distrust of the website. We analyze survey data collected from users of the TripAdvisor website ( $n = 227$ ), with PLS results providing support for our model. Implications exist for consumers who are users of review websites as readers of eWOM, for business owners whose products and services are reviewed online, and for review website platforms.

**Keywords** Negative eWOM · Value co-destruction · Distrust · Dissatisfaction · Expectation confirmation

## 1 Introduction

Electronic word-of-mouth (eWOM) in the form of online reviews is vitally important in today's business world. eWOM is widely used by consumers as they evaluate products and services and is relied upon by business owners to build reputation. As consumers increasingly read and rely on eWOM when considering a purchase, business owners increasingly desire the posting of as many favorable reviews as possible. This is not surprising since it has been repeatedly shown that

eWOM can increase transactions, sales, and profits (Cheung et al. 2012; Chevalier and Mayzlin 2006; Clemons et al. 2006; Duan et al. 2008; Zhu and Zhang 2010). Furthermore, with eWOM representing the primary source of value for online review websites, such sites desire to be known as trusted and reliable sources of information. The interactions between consumers searching for information and businesses seeking to provide it online appears to be a clear example of value co-creation between consumers, service providers, and review websites (Grönroos and Voima 2013; See-To and Ho 2014; Zwass 2010).

Researchers are increasingly recognizing, however, that not all online interactions between consumers, service providers, and websites co-create value; another potential outcome is co-destruction. If co-creation is a concept of referring to an interactive process involving at least two different parties that are engaged in specific forms of mutually beneficial collaboration (Vargo et al. 2008), co-destruction is its antipode, an interactional process between service systems involving at least two different parties that results in a decline in the well-being of at least one member of the system (Edvardsson et al. 2011; Plé and Chumpitaz Cáceres 2010). Given the growing consciousness that value formation is two-sided, with potentially negative outcomes, and given the bias within literature towards the examination of positive value co-creation, value

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co-destruction has emerged as an important area for investigation (Sigala et al. 2017).

The purpose of this paper is therefore to clarify the role of eWOM in the value co-destruction process among consumers, product/service providers, and online review websites. Researchers have begun to explore the relationship between expectation disconfirmation, dissatisfaction, and outcome behaviors such as negative WOM and eWOM (Bougie et al. 2003; Sánchez-García and Currás-Pérez 2011; Zeelenberg and Pieters 2004). We seek to continue these investigations into the antecedents of negative eWOM, and to go beyond them to identify the manner in which negative eWOM can influence trust in online review websites. The erosion of trust in review websites is a key co-destructive outcome that remains under-investigated. Thus, the specific research questions that guide our efforts are: “What is the process by which negative eWOM is created?”, and “What are the implications of negative eWOM for trust of an online review website?”

As we explore these research questions, we explain that when consumers experience a product/service offering such as a hotel stay, their *ex ante* expectations are formed by existing eWOM. First, when expectations are not met, dissatisfaction and disconfirmation of expectations arise. Disconfirmation refers to the difference between the actual experience of hotel and the expectation formulated by previous eWOM, while dissatisfaction implies the degree of unsatisfied experience with respect to the hotel. Second, disconfirmation and dissatisfaction yield distrust of the eWOM, with new negative eWOM created by the consumer. Distrust of eWOM implies the degree of distrust that the customer has with respect to the previous eWOM and the negativity of eWOM measures the degree of negative expression that the customer writes on the review site. Finally, dissatisfaction, distrust of eWOM, and negative eWOM lead to distrust of review website, a form of value co-destruction. Hence, distrust of review website is the dependent variable of this study that measures the degree of distrust of the relevant website by the customer.

We explain how this can happen even in a setting where reviews are valid, legitimate, and honest. This explanation extends research on value co-destruction, complementing explanations of co-destruction centered around false reviews (Sigala 2017). Thus, the primary contribution of this study is that we clarify the link from eWOM to distrust, and more generally, the role of eWOM in the process of value co-destruction. An important secondary contribution is that we highlight the mediating roles that distrust of previous eWOM and negativity of eWOM play in this process. Finally, to our knowledge, this research study is the first to combine the study of disconfirmation, distrust, and negative eWOM in a single model.

The paper proceeds as follows. In the Literature Review section, we describe foregoing research on eWOM, trust and

distrust, as well as value co-destruction. Then, in the Theoretical Development section, we explain the basis for this study, the expectation confirmation model (ECM). After this, we present our research model and develop our hypotheses, which explain that consumer experiences that disconfirm previous eWOM lead to distrust of the eWOM and to the writing of negative reviews, which leads to distrust of the review website itself. The Method section explains our survey research methodology and describes the characteristics of our sample of TripAdvisor reviewers. The Results section describes our PLS results, which broadly support our research model. There, we also note key mediating effects in our model. In the Discussion section, we first note the theoretical implications of our study for researchers. We then describe the practical implications for users of online reviews, for business owners whose products and services are being reviewed, and for owners of websites that provide online reviews. We also discuss the limitations of this study and present suggestions for future research.

## 2 Literature Review

### 2.1 Electronic Word of Mouth (eWOM)

Word of mouth (WOM) can be defined as the exchange of information between consumers that could influence their behavior and attitudes towards a product or service (Arndt 1967). The rapid growth of online platforms has led to a new form of online communication known as electronic WOM (eWOM) where people can talk about brand, product, or service experiences on social media and online review platforms. In comparison to WOM, eWOM possesses unique characteristics such as greater scalability and speed of diffusion, greater persistency and accessibility, as well as greater measurability and quantifiability (Cheung and Thadani 2012; Hung and Li 2007; Karakaya and Ganim Barnes 2010; Lee et al. 2008). As such, eWOM can be 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” (Hennig-Thurau et al. 2004, p. 39).

One of the advantages of eWOM is that it is widely available. In the past, consumers could only access WOM from family, friends, and acquaintances; today, they can look at online comments (eWOM) to obtain or share information about companies, products, or brands from a large number of individuals (King et al. 2014). eWOM is often readily shared because of the greater anonymity of online communications. Users can provide their opinions online, without the drawbacks of incrimination from identity as in face-to-face WOM (Wang and Fesenmaier 2004).

For companies, eWOM provides a new opportunity to listen to consumers' needs and adjust the promotion of products or services (Cheung and Thadani 2012). eWOM allows companies to understand what factors motivate consumers to post their opinions online and, perhaps more importantly, to gauge the impact of those comments on other potential consumers (Sparks and Browning 2011).

## 2.2 Negative eWOM

Initial research on WOM identified four types of motivations for people to write and share WOM: product-involvement, self-involvement, other-involvement, and message-involvement (Dichter 1966). The list was later extended to eleven motives that contributed to WOM communication: concern for others, desire to help the company, social benefits, exertion of power, post-purchase advice seeking, self-enhancement, economic rewards, convenience in seeking redress, hope for further support, expression of positive emotions, and expression of negative feelings (Engel et al. 1995; Hennig-Thurau et al. 2004; Sundaram et al. 1998).

Negative WOM was shown to have a stronger influence than positive WOM on consumers' brand evaluation (Arndt 1967). In this light, eWOM is also reported to have similar results to WOM; that is, the effect of eWOM on purchase decisions is greater for negative eWOM than for positive eWOM (Sparks and Browning 2011). Consumers tend to trust negative eWOM more for experience goods than for search goods. Experience goods such as hotels can thus sustain greater damage from negative reviews as eWOM magnifies consumer uncertainties, which are a result of a fear induced by a lack of information. Still others have studied positive and negative reviews in an online world, differentiating between hedonic versus utilitarian products (Sen and Lerman 2007). Utilitarian products were found to have a negativity bias, which means that readers trust and pay more attention to negative reviews. It was also found that consumers trust negative reviews more when considering products that satisfy practical needs. In general, the effect of negative or positive sentiments on source or message credibility, depends on the type of product (high or low consumer involvement), and on any prior expectations the reader has about a particular product or service (Sen and Lerman 2007).

It is generally accepted that positive and negative WOM appear to be the result of varying levels of satisfaction; dissatisfied consumers chose to seek redress, engage in negative WOM, or discontinue use of the product or service based on their level of satisfaction (Blodgett et al. 1993; Sugathan et al. 2017; Sánchez-García and Currás-Pérez 2011; Wetzter et al. 2007; Zeelenberg and Pieters 2004). What very little of this prior work does, however, is examine the effects of eWOM on

trust and the potential for destroying value among consumers, product/service providers, and online review platforms.

## 2.3 Trust and Distrust

Many studies suggested that eWOM has an impact on consumers' trust (Burgess et al. 2011; Dickinger 2011; Wang et al. 2014). Trust is often used to describe a "willingness to depend or to become vulnerable to the other party when one cannot control the other party's actions" (Mayer et al. 1995). Recently researchers have started to explore the concept of distrust and suspicion in the online context and suggested that consumers' skepticism toward eWOM communications may be an influential factor in online interactions (Qiu et al. 2012; Sen and Lerman 2007; Zhang et al. 2016). In the hotel industry, trust is often influenced by factors such as customer satisfaction, a hotel's image, and peer feedback (Wang et al. 2014). Consumers' trust in eWOM can also be influenced by the eWOM platform or website (Dickinger 2011).

Essentially, eWOM is able to indirectly influence consumer tendencies to purchase a product or use a service through value co-creation (Jaakkola et al. 2015; See-To and Ho 2014). Previous research has shown that negative or positive eWOM toward the product or service will influence customers' attitude and trust toward the product or service (Chung et al. 2015; Sparks and Browning 2011). Additionally, it was shown that consumers are more likely to remember negative information than positive information (Cheung and Thadani 2012; Sánchez-García and Currás-Pérez 2011).

Within the hospitality context, researchers have found that positive reviews can significantly increase the number of bookings in a hotel (Ye et al. 2009). Others have shown that positive WOM leads to more favorable attitude toward a specific product than negative WOM (Lai Ying and Chung 2007). However, a few negative messages can be helpful in promoting a positive attitude towards a website and can increase the credibility of eWOM messages (Doh and Hwang 2009). This is because some consumers may suspect the credibility of a website or the set of multiple eWOM messages if there is a lack of negative comments (Zhang et al. 2016). Additionally, it was also found that the valence of the reviews (positive vs. negative) significantly affected consumers' attitude toward the reviewed product (Sen and Lerman 2007). Other researchers investigated how the message valence influences consumers' judgment of eWOM credibility (Qiu et al. 2012). Still others found that consumers' general skepticism toward eWOM makes them believe negative reviews more than positive reviews. However, the electronic nature of eWOM and online communities reduces members' ability to judge the credibility of a source of a message (Dancer et al. 2014).

## 2.4 eWOM as Co-Creation and Co-Destruction Mechanism

Among the useful and valuable features of eWOM are the degree of interaction between users through reviews, comments, and ratings (Confente 2015; Hennig-Thurau et al. 2004) and the degree to which network effects take place (Katz and Shapiro 1994). An eWOM platform provides value for consumers while consumers are also creating value for each other, for product/service providers, and for the platform itself through reviews and comments. This reflects a concept called value co-creation that refers to an interactive process involving at least two different parties that are engaged in specific forms of mutually beneficial collaboration (Vargo et al. 2008). Co-creation is the basis of Service-Dominant (S-D) logic that focuses on services instead of products in economic exchange (Vargo and Lusch 2004). In S-D logic, the customer is not a passive recipient of pre-existing value but is an active co-creator of value. Applying these S-D logic assumptions to the context of eWOM writing allows researchers to explain that consumers increasingly seek to collaborate in value creation by writing eWOM about their own product /service experiences. They co-create value by providing information for other consumers, by providing feedback to firms, and by generating content for eWOM platforms. At the same time, firms may participate in the value co-creation process by responding to reviews and/or adjusting product/service offerings in response to customer feedback. eWOM platforms create value by providing a marketplace for information exchanges among consumers and firms, and by providing search and purchase-related services online.

Some researchers have argued that merely positive creation of value is unrealistic because negative aspects of value creation do exist in practice (Echeverri and Skålén 2011; Plé and Chumpitaz Cáceres 2010). Therefore, they developed the notion of ‘value co-destruction’ to represent possible negative outcomes. Value co-destruction can be defined as ‘an interactional process between service systems that results in a decline in at least one of the system’s well-being.’ (Plé and Chumpitaz Cáceres 2010, p. 431). Value co-destruction has been observed in banking, healthcare, and tourism contexts (Robertson et al. 2014; Sigala 2017; Worthington and Durkin 2012), and in disciplines such as marketing and information systems (Echeverri and Skålén 2011; Edvardsson et al. 2011; Vartiainen and Tuunanen 2016). It can occur as a result of disagreement between actors (Lefebvre and Plé 2011), when there exist unequal opportunities for all parties involved in value exchange (Marcos-Cuevas et al. 2015), when resources are inappropriately used (Worthington and Durkin 2012), or as a result of consumer misbehavior (Kashif and Zarkada 2015).

To date, value creation in the context of eWOM is still little understood (Buonincontri et al. 2017) with

value co-destruction receiving even less attention (Sugathan et al. 2017). Thus, this paper attempts to fill this knowledge gap by drawing upon the S-D logic framework to explore how value is being co-created or co-destroyed through social, collaborative practices in the context of eWOM writing.

## 3 Theoretical Background and Research Hypotheses

### 3.1 The Expectation Confirmation Model (ECM)

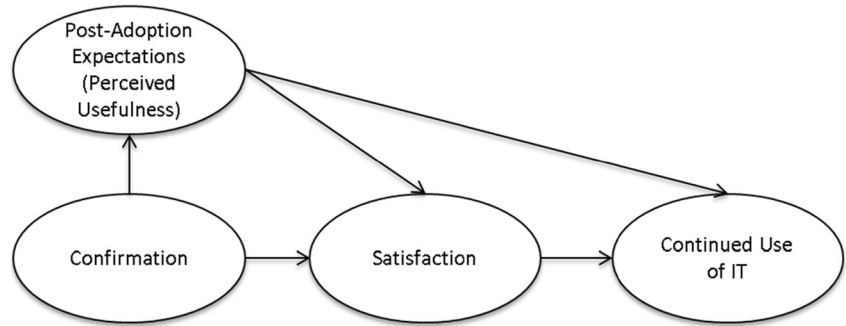
IS researchers have developed a model of continued IS usage that has become known as the Expectation Confirmation Model (ECM) (Bhattacharjee 2001; Chung et al. 2015; Hossain and Quaddus 2012; Hsu and Lin 2015). In this model, consumers’ performance expectations after experiencing a good or service are either confirmed or disconfirmed, yielding an initial level of confirmation. Confirmation of expectations is positively related to post-adoption expectations (measured as ex-post perceived usefulness). Post-adoption expectations are distinct from the initial expectation before purchase (Bhattacharjee 2001; Thong et al. 2006). Post-adoption expectations are continually updated as the user continues to interact with the IS in light of his or her initial level of expectation confirmation. It is these updated expectations that are the primary determinant of satisfaction and continued usage of an IS (Davis 1989; Karahanna and Straub 1999; Venkatesh 2000). Confirmation is positively related to satisfaction, and satisfaction, in turn, is positively related to continued usage of an IS (see Fig. 1).

We choose to build on the ECM because we investigate (dis)confirmation and its outcomes. In our context of hotel reviews, (dis)confirmation can occur when the consumer forms expectations based on initially-existing eWOM, then experiences better service than his or her expectation (which we will refer to as confirmation). The consumer may also experience poorer service than his or her expectation (which we will refer to as disconfirmation).

In our study, we focus on disconfirmation, which often results in the consumer writing additional negative eWOM after a hotel stay. We take this focus on disconfirmation because of our intention to investigate the process of value co-destruction between the consumer, hotel, and online review website. We will argue in the upcoming subsections that disconfirmation, dissatisfaction, and negative eWOM lead to distrust of the online review platform. Distrust toward the online review platform indicates an increasing likelihood to discontinue usage of the platform, with continued usage being one of the foci of the ECM.



**Fig. 1** The expectation confirmation model (Bhattacharjee 2001)



**3.2 Research Model**

We now present our research model and hypotheses (see Fig. 2). In this model, disconfirmation with previous eWOM affects distrust of previous eWOM as well as the negativity of eWOM. Dissatisfaction with the hotel also affects the negativity of eWOM. Finally the dependent variable, distrust of website is affected by three variables: distrust of previous eWOM, negativity of eWOM, and dissatisfaction with hotel. In addition, to improve the predictability of this model, four control variables of frequency, age, gender, and attachment to website are included.

**3.3 Disconfirmation with Previous eWOM**

Disconfirmation implies a situation when the performance of a product or service does not meet with consumers’ expectations (Oliver 1980). An example of such disconfirmation would be when a traveler visits a hotel on the basis of strongly positive online reviews, but then is disappointed after his or her experience there.<sup>1</sup>

When disconfirmation arises, the consumer reasonably asks why his or her expectations were not met. The consumer considers not only the quality and rationality of the arguments made in the prior information, but also a number of other related cues (Petty and Cacioppo 1986). In the aforementioned example of our traveler, he or she may thus have been initially persuaded to choose the hotel based on the literal and logical content of the eWOM. He or she may also have been persuaded by factors such as the number of individuals who recommended the hotel, whether it was

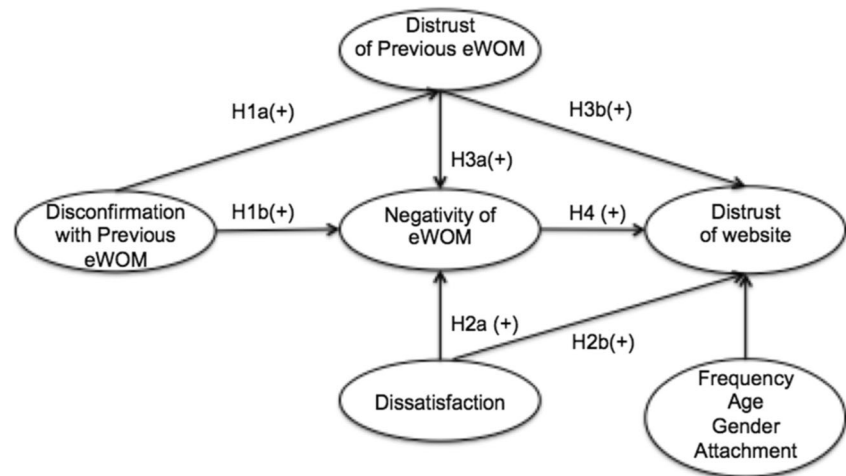
recommended by highly-regarded reviewers who are frequent contributors to the online website, or by the engaging, interesting, witty, or otherwise likable writing style of the prior eWOM contributors. The consumer evaluates his or her experience using the eWOM and ultimately assesses whether the contributors were knowledgeable and competent, and whether the information they provided was believable and credible (Petty et al. 1981). If the consumer reaches a negative evaluation regarding the eWOM, we argue that he or she will be less likely to rely upon it when making future decisions, forming a level of distrust for the eWOM.

Our argument aligns with explanations that expectation confirmation is positively associated with a number of factors, including perceived usefulness, satisfaction, and ultimately with continued usage of an information system (Bhattacharjee 2001; Lin et al. 2005; Thong et al. 2006). Trust is one aspect of the continued usage decision-making process (Bhattacharjee and Sanford 2006; Sussman and Siegal 2003). In the eWOM context, we argue that online review websites are a type of information system and thus that the linkages from expectation confirmation to continued usage are likely to hold here as well. Thus, confirmation should increase trust and be associated ultimately with continued usage of the eWOM, while disconfirmation would increase distrust and be associated ultimately with discontinued usage of the eWOM.<sup>2</sup> Formally,

<sup>1</sup> Note that the traveler described in this example is experiencing two distinct types of disconfirmation. The first is disconfirmation about the expected usefulness of the eWOM – this is disconfirmation arising from an online experience. The second is disconfirmation related to expectations about the hotel – this is disconfirmation resulting from an offline, real-world experience at the hotel. The first type of disconfirmation (disconfirmation with previous eWOM) is the focus of this study. The second type of disconfirmation (disconfirmation about the quality of the hotel stay) is not included within our research model. We acknowledge that these two types of disconfirmation may be related to one another, but reserve such an exploration for future research. To reiterate, the construct in our research model is “disconfirmation with previous eWOM”.

<sup>2</sup> We are assuming here that consumers are experiencing disconfirmation with positive reviews. That is, consumers form high expectations based on positive eWOM, book a hotel stay, and subsequently experience disconfirmation with those reviews after the hotel stay does not meet their eWOM-based expectations. We acknowledge the possibility that a consumer could have read negative eWOM reviews, formed low expectations, booked a hotel stay, had a positive experience at the hotel, and then experienced disconfirmation with the negative reviews. However, we are not considering such a scenario because (1) we find it highly unlikely that consumers would book a hotel stay on the basis of negative eWOM about that property, thus eliminating the possibility of experiencing disconfirmation with negative eWOM based on an unexpectedly positive hotel stay experience, and because (2) the vast majority of eWOM reviews have a positive valence, averaging approximately 4 out of 5 points or higher on the most widely-used review websites (Melían-González et al. 2013; Zervas et al. 2015), and thus the scenario of disconfirmation with widely-existing positive eWOM is more common than disconfirmation with relatively rare negative eWOM.

Fig. 2 Research model



**H1a.** *Disconfirmation with previous eWOM will be positively associated with distrust of previous eWOM.*

Given that eWOM is one of the sources from which consumers form expectations about a product or service, they are likely to see eWOM as valuable and have a desire to contribute eWOM. When expectations based on previous eWOM are confirmed, consumers would have reason to write additional positive eWOM. Researchers have identified a number of reasons why individuals contribute eWOM, including self-oriented motives such as self-expression, personal development, utilitarian motives, and enjoyment, as well as other-oriented motives such as social affiliation, altruism, and reciprocity. Overall, writers often see their eWOM as a contribution to the public good (Peddibhotla and Subramani 2007).

Conversely, in the case of a low level of expectation confirmation (that is, a disconfirmation), consumers can be motivated by anger to vent their emotions, by disappointment to warn others, or by regret to strengthen social bonds through communication with other consumers (Wetzer et al. 2007). Each emotion should yield eWOM with a negative valence that would clearly and accurately communicate to future readers. While disappointment and regret should lead to negative eWOM intended to assist future readers, anger would lead to negative eWOM that would assist readers even without a specific other-focused intention to do so. Ultimately, these three emotions, anger, disappointment, and regret, have been shown to lead consumers to express their opinions about a product or service in response to disconfirmation of expectations. This linkage has been shown to hold in both online and offline contexts (Sánchez-García and Currás-Pérez 2011; Zeelenberg and Pieters 2004). We therefore hypothesize:

**H1b.** *Disconfirmation with previous eWOM will be positively associated with negativity of eWOM.*

### 3.4 Dissatisfaction with Hotel

Dissatisfaction forms in the mind of a consumer when the performance of a product or service does not meet the consumer's expectations (Bhattacharjee 2001; Chung et al. 2015; Hossain and Quaddus 2012; Hsu and Lin 2015). This level of dissatisfaction has several outcomes. Researchers have identified that dissatisfaction increases the likelihood that a consumer will ultimately discontinue use of the product or service (Bhattacharjee 2001). In addition to the possibility of discontinuing use, consumers experience a negative emotional reaction (Hennig-Thurau et al. 2004). As we have noted, this negative emotional reaction leads to a desire to vent those emotions – and can also be coupled with an altruistic motivation to protect other consumers from the same disappointing product/service experience (Peddibhotla and Subramani 2007; Wetzer et al. 2007; Yoo and Gretzel 2008). Perhaps unsurprisingly, higher levels of customer satisfaction have been shown to increase the likelihood of consumers authoring positive eWOM; and conversely, low levels of satisfaction have been shown to increase the likelihood of negative WOM and eWOM (Hennig-Thurau et al. 2004; Richins 1983; Sánchez-García and Currás-Pérez 2011; Zeelenberg and Pieters 2004). To confirm this relationship, we hypothesize:

**H2a.** *Dissatisfaction with hotel will be positively associated with negativity of eWOM.*<sup>3</sup>

Dissatisfaction, again arising from a gap between consumers' expectations and the actual performance of a product or service, may yield not only a negative evaluation (as evidenced by subsequent negative eWOM and explained above

<sup>3</sup> Note that we have not hypothesized a relationship from (dis)confirmation to (dis)satisfaction as in the ECM. This is because disconfirmation in our model is disconfirmation about the usefulness of the eWOM, while dissatisfaction is dissatisfaction with the hotel.

in H2a), but other broader outcomes as well. Assuming that consumers have accessed information prior to experiencing a product or service, these consumers who are displeased or frustrated with an experience rationally question the credibility of information sources about that hotel. The application in our context is that consumers question the trustworthiness of the online review website.

This is perhaps unsurprising given that trust can be described as experience-based and built over time through repeated interactions with a firm, product, or service (Rousseau et al. 1998). The accumulation of knowledge about tourism experiences influences trust and reputation over time (Stamboulis and Skayannis 2003). When a dissatisfying experience occurs, trust can only be damaged. Given that satisfaction influences trust in the context of consumer relationships (Garbarino and Johnson 1999), the converse should be true as well

**H2b.** *Dissatisfaction with hotel will be positively associated with distrust of the website.*

### 3.5 Distrust of Previous eWOM

Consumers who have identified eWOM that lacks credibility, accuracy, or reliability through their experience of a product or service rationally distrust that eWOM. Consumers are then able to act on this distrust in multiple ways. One potential action is to warn others about the poor experience that they had with the product or service that is described in the eWOM. The consumer's warning can be delivered in order to strengthen social bonds with other consumers (Wetzer et al. 2007). These warnings are most easily delivered via additional eWOM. The consumer is thereby able to augment the previously-existing eWOM that is now perceived as unreliable and untrustworthy by creating new online reviews that provide a more accurate description of the product or service under consideration. We therefore hypothesize

**H3a.** *Distrust of previous eWOM will be positively associated with negativity of eWOM.*

We argue that consumers who have formed a sense of distrust towards previously-existing eWOM will be likely to distrust the website source of that eWOM. The perceived credibility of an information source has been identified as a key factor in trust of an information system (Bhattacharjee and Sanford 2006; Cheung et al. 2009; Filieri et al. 2015). We apply this insight in our context to explain that when a level of distrust in previously existing eWOM forms, consumers question source credibility. In this case, the questioned source would be the information system website that provided the eWOM.

We furthermore note that it has been shown that trust in product recommendations influences consumers' intention to continue to use and purchase from websites (Hsiao et al. 2010). Trust can thus be transferred from WOM or eWOM to a website. Trust in one function of an information system can be transferred to another function of an information system (Lu et al. 2011). More directly, WOM has been shown to be associated with online trust of a firm (Kuan and Bock 2007), and thus the credibility of WOM or eWOM, and the trust in that WOM or eWOM will be important to enhance and build trust towards a firm or its website. Furthermore, as we have noted, repeated experiences over time build trust in a firm (Rousseau et al. 1998), a finding that has been replicated in tourism contexts (Stamboulis and Skayannis 2003). Applying this finding, distrust in eWOM arising from disconfirmation accumulates to yield distrust in the online review website itself. Formally, we state

**H3b.** *Distrust of previous eWOM will be positively associated with distrust of website.*

### 3.6 Negativity of eWOM

When consumers author negative eWOM, this indicates that they have experienced disconfirmation of expectations with previously-published eWOM (as hypothesized in H1b). Consumers anticipated that the eWOM would be credible, useful, accurate, and ultimately valuable. They assumed that the eWOM would help them make a good decision about the product or service that they were considering. Instead, their eWOM-based expectations were not confirmed and so they have authored negative eWOM as a corrective to the misleading eWOM that they had relied upon.

We argue that rational consumers seek eWOM from online review websites that they perceive to be trustworthy. Source credibility is an important reason why individuals evaluate information as useful (Bhattacharjee and Sanford 2006). It is not simply the content of a message that leads to an evaluation of usefulness, but also the reliability of the source from which that information was gleaned. Credibility leads individuals to adopt eWOM (Cheung et al. 2009). And indeed, credibility is an antecedent of website trust (Filieri et al. 2015). Social commerce, such as through eWOM, improves perceptions of credibility (Zheng et al. 2017). Thus, there are two separate evaluations of trustworthiness made by consumers – an evaluation of the message as well as an evaluation of the message's source.

We observe that because rational consumers seek eWOM from sources that they perceive to be trustworthy, when they experience disconfirmation (as evidenced by negative eWOM), this will cause them to reevaluate their perceptions of trustworthiness. They will re-evaluate not only their

perception of the trustworthiness of the eWOM (as in H1a), but also the trustworthiness of the eWOM website source. In fact, WOM has been shown to influence the online trust of a firm (Kuan and Bock 2007). Therefore, we hypothesize

**H4.** *Negativity of eWOM will be positively associated with distrust of the website.*

## 4 Methodology

### 4.1 Data Collection

Data was collected from members of the TripAdvisor online community who had posted review comments after staying at hotels. Researchers have recognized that travel review websites are widely and increasingly used by consumers as an important information source (Burgess et al. 2011; Shin et al. 2016; Wani et al. 2017). We chose TripAdvisor because it is one of the most popular online review websites, with over 390 million average unique monthly visitors and over 535 million reviews (TripAdvisor 2017). We chose hotel reviews because those reviews are considered the best fit for the purpose of this study because they hold a good mix of both positive and negative reviews by the members, with many reviews indicating a hotel stay that was planned on the basis of reviews that had been previously posted.

First, we developed a preliminary questionnaire, which was then refined to improve content and construct validities of the survey questionnaire based on feedback from seven individuals: two marketing and two MIS researchers, and three potential respondents. A pilot test was then conducted with the refined questionnaire using 70 undergraduate and MBA students to ensure the clarity of the questionnaire.

To contact TripAdvisor members directly, we employed Qualtrics, an international data collection agency that has a large number of panel members in the US and UK. The survey was prepared for online administration and tests were conducted with potential respondents to ensure the quality of the agency's sampling procedure. Following successful trials, formal data collection was carried out.

Given our research objectives, we administered the questionnaire to individuals who satisfy the following three characteristics: (1) someone who is a member of the TripAdvisor online community, (2) had stayed in a hotel listed on TripAdvisor within the previous 6 months, and (3) had read reviews about the hotel prior to their stay. In order to ensure that respondents satisfy all three requirements, several screening questions were asked at the beginning of the survey to verify individuals' suitability for the study. Respondents who failed to satisfy any one of the three conditions were excluded. Materializing the full benefits of data collection through

online panels (Brandon et al. 2013; Johnson 2016), we were able to finish the data collection with a reliable and unbiased dataset for the purpose of our research.

A total of 254 responses were received, of which 227 were valid and used for the analysis. A summary of the demographic characteristics of 227 respondents is provided in Table 1. Respondents were 60.4% female, 39.6% male. Respondents were generally older than 30 years of age, with annual incomes above \$50,000, university-educated, travel multiple times per year, travel for at least 5 days per year (and often more), and have been members of the TripAdvisor online community for more than 1 year. Details appear in Table 1.

### 4.2 Operationalization of Constructs

All constructs in the survey were measured using multi-item scales with seven-point Likert rating systems, ranging from 1 (strongly disagree) to 7 (strongly agree). A conscientious effort was made to adapt existing measures validated from prior studies for the latent constructs in this research. The specific items used in this study are shown with relevant references in Table 2.

*Disconfirmation with previous eWOM* was operationalized to capture the degree to which the respondents' actual experience with the hotel confirmed previous reviews and then the score was reversed. *Dissatisfaction with hotel* was operationalized to measure the degree of satisfaction that the respondent experienced before writing the review and then the score was reversed. For these measurements, all items were adapted from Bhattacharjee (2001), Lin et al. (2005), Thong et al. (2006) and Venkatesh and Goyal (2010). *Negativity of eWOM* was operationalized to measure the degree of negative expression that the respondent wrote on the review after experiencing the hotel and items were adapted from Sánchez-García and Currás-Pérez (2011) and Bougie et al. (2003).

*Distrust of previous eWOM* and *distrust of website* were operationalized to measure the degree of distrust that the respondent had with respect to previous eWOM and the relevant website respectively. The measurement items were adapted from Bhattacharjee and Sanford (2006), Cheung et al. (2009), and Filieri et al. (2015).

There are four controls variables in this model: *age* and *gender* as demographic variables and *frequency of travel per year* and *attachment to the relevant website* as personal characteristic variables. Attachment measures the sense of respondent's belongingness to the relevant website and three items were adopted and modified from Cheung and Lee (2012), Chung et al. (2016) and Huang et al. (2009). These control variables are added to increase the predictability of our research model.

Before testing the measurement model, we conducted a test of common method bias (Podsakoff et al. 2003). Self-reported data collected from the same respondent at one time may yield



**Table 1** Demographic characteristics of respondents (*n* = 227)

Characteristics	Category	Freq.	%	Characteristics	Category	Freq.	%
Gender	Male	90	39.6	Travel Frequency /year	1	9	4.0
	Female	137	60.4		2	45	19.8
					3	58	25.6
Age	Under 20	4	1.8	Travel Duration /year	4	45	19.8
	21–30	27	11.9		5	31	13.7
	31–40	73	32.2		> 5	39	17.2
	41–50	47	20.7		< 5 days	31	13.7
	51–60	45	19.8		5–10 days	69	30.4
	Over 60	31	13.7	11–20 days	62	27.3	
Income	<\$20,000	28	11.9	As a member of TripAdvisor	21–30 days	46	20.3
	<\$50,000	68	30.0		> 30 days	19	8.4
	<\$100,000	97	42.7		< 1 year		
	>= \$100,000	34	15.0		1–3 years		
Education	Lower than Univ.	76	33.5	> 3 years	28	12.3	
	University	104	45.8		110	48.5	
	Higher than Univ.	47	20.7		89	39.2	

correlations that systematically contaminate data obtained from that source. The potential impact of common method variance was assessed by incorporating two additional statistical analyses: Harman’s one-factor test (Podsakoff et al. 2003) and the marker variable test (Lindell and Whitney 2001). In Harman’s one-factor test, the emergence of a single factor that accounts for a large proportion of variance in factor analysis suggests common method bias. For our study, no such single factor emerged and the first factor accounted for 39.05% of the total 79.01% variance. The Lindell and Whitney (2001) marker variable test uses a theoretically unrelated marker variable to adjust the correlations among the model’s principal constructs. Because a market variable does not have a theoretically expected relationship with the study’s principal constructs, a high correlation would indicate common method bias. We use a three-item scale variable, opportunism of travel agency ( $\alpha = 0.89$ ), for which there exists little theoretical basis for a relationship with our research variables. The average correlation of the study’s principal constructs with it was low and insignificant ( $r = 0.006$ ), indicating no evidence of common method bias. Although we cannot totally rule out common method concerns, the reported results should be considered in light of these concerns as well as the practical difficulties involved in obtaining data from multiple methods. Taken together, we concluded that common method bias is not a serious threat in this study.

### 5 Analysis and Results

We chose to use the Partial Least Squares (PLS) method with the SmartPLS package to perform a simultaneous evaluation

of both the quality of measurement (the measurement model) and hypothesized relationships (the structural model). The PLS technique is appropriate for this study since it is more prediction-oriented, which is suitable for assessing theories in the early stages of development (Fornell and Bookstein 1982). Considering that this is one of the first attempts to investigate negative eWOM writing behaviors with respect to the distrust of a website, we believe that PLS is suitable for our research.

#### 5.1 Measurement Properties of Variables

The measurement model was assessed through tests of reliability, convergent validity, and discriminant validity. Internal consistency was assessed using Cronbach’s alpha. All constructs employed in this study have an alpha value higher than 0.75, showing strong reliability (Nunnally 1978). Convergent validity was tested using three criteria for all constructs: i) the composite reliability (CR) should be at least 0.70, ii) the average variance extracted (AVE) should be at least 0.5, and iii) all item loadings should be greater than 0.70 (Chin 1998; Fornell and Larcker 1981). Results of our analysis are shown in Table 3. All three conditions of convergent validity are satisfied by having the CRs ranging from 0.92 to 0.96, and the AVEs from 0.74 to 0.95 (Johnson and Wichern 2007). These results indicate that the measurement model has high internal consistency and that convergent validity is confirmed.

Discriminant validity is established when i) the square root of AVE for each construct is greater than the levels of correlation, ii) correlation between pairs of constructs is below 0.9, and iii) cross-loadings of all items have a higher value in the defined construct than in any other constructs. The results in Tables 3 and 4 confirm discriminant validity.

**Table 2** Measurement items

Constructs	Measurement items	Source
Disconfirmation with previous eWOM	My experience with the hotel was as good as previous reviews described (–). The service provided by the hotel was as good as previous reviews described (–). Overall most of my expectation with the hotel was met as previous reviews described (–).	(Bhattacharjee 2001; Lin et al. 2005; Thong et al. 2006; Venkatesh and Goyal 2010)
Dissatisfaction with hotel	Your overall experience with hotel was... ...(very unsatisfied – very satisfied) (–). ...(very displeased- very pleased) (–). ...(very frustrated – very contented) (–).	(Bhattacharjee 2001; Lin et al. 2005; Thong et al. 2006; Venkatesh and Goyal 2010)
Distrust of previous eWOM	I think previous reviews are... ...uncredible. (strongly disagree – strongly agree) ...inaccurate. (strongly disagree – strongly agree) ...untrustworthy. (strongly disagree – strongly agree) ...unreliable. (strongly disagree – strongly agree)	(Bhattacharjee and Sanford 2006; Cheung et al. 2009; Filieri et al. 2015)
Negativity of eWOM	My review of the hotel was... ...negative. (strongly disagree – strongly agree) ...critical. (strongly disagree – strongly agree) ...unpleasant. (strongly disagree – strongly agree)	(Bougie et al. 2003; Sánchez-García and Currás-Pérez 2011)
Attachment	Belonging to TripAdvisor is important to me. I often acknowledge the fact that I am a member of TripAdvisor. I feel a strong attachment to the TripAdvisor community.	(Cheung and Lee 2012; Chung et al. 2016; Huang et al. 2009)
Distrust of website	I think that the ‘TripAdvisor’ travel website is... ...unreliable. (strongly disagree – strongly agree) ...uncredible. (strongly disagree – strongly agree) ...inaccurate. (strongly disagree – strongly agree) ...untrustworthy. (strongly disagree – strongly agree)	(Bhattacharjee and Sanford 2006; Cheung et al. 2009; Filieri et al. 2015)

(–) indicates that items were reverse coded

## 5.2 Results of Structural Model Test

The assessment and estimation of the structural model were conducted using SmartPLS. In order to determine the precision of estimation in this particular PLS effort, a bootstrapping procedure with a resampling of 300 subsamples was used to determine the statistical significance of the parameter estimates. Based on the results of this procedure, the structural model was assessed examining the magnitude, statistical significance of the path coefficients, and  $R^2$  in the structural model (see Fig. 4). Overall, the results suggest a satisfactory fit of the model to the data. The  $R^2$  value of the dependent construct (distrust of website) is 0.531.

Regarding the hypotheses, we first note that both distrust of previous eWOM and negativity of eWOM are significantly and positively associated with distrust of website, supporting H3b ( $b = 0.515$ ,  $p < 0.001$ ) and H4 ( $b = 0.266$ ,  $p < 0.001$ ). From the expectation confirmation model (ECM), disconfirmation with previous eWOM is positively associated with distrust of previous eWOM and negativity of eWOM respectively, supporting H1a ( $b = 0.585$ ,  $p < 0.001$ ) and H1b ( $b = 0.317$ ,  $p < 0.001$ ). Dissatisfaction, which is another important variable from the ECM, is positively associated with negativity of eWOM, supporting H2a ( $b = 0.569$ ,  $p < 0.001$ ). Only

H2b (dissatisfaction → distrust of website) and H3a (distrust of previous eWOM → negativity of eWOM) were not supported. Among the control variables, only attachment was found to be negatively associated with the dependent variable, distrust of website ( $b = -0.327$ ,  $p < 0.001$ ); travel, age and gender are not significant. Figure 3 shows the full results of the hypothesized structural model test, including the  $R^2$  values, estimated path coefficients, and associated t-values of the paths. Significant paths are indicated with asterisks.

## 5.3 Mediating Effects

In addition to the results from the main research model, it is useful to study the mediating role of two eWOM variables in the model, distrust of previous eWOM and negativity of eWOM in order to clarify the effect of disconfirmation and dissatisfaction on the dependent variable. Results are shown in Fig. 4. As a first step, we checked to see if there is any significant direct relationship from the predictors to the outcome variable. We found that both disconfirmation with previous eWOM and dissatisfaction have significant relationships with the outcome variable, distrust of the website. As a second step, we added the mediator variables into the model and checked the significant relationships. In the case of the relationship

**Table 3** Cross loadings

	DCPR	DSAT	DTPR	NEG	ATTAC	DTTA	Alpha	C.R.	AVE
DCPR1	0.947	0.430	0.397	0.364	-0.211	0.405	0.948	0.961	0.906
DCPR2	0.951	0.432	0.454	0.485	-0.223	0.411			
DCPR3	0.956	0.542	0.559	0.552	-0.215	0.508			
DSAT1	0.574	0.985	0.479	0.542	-0.226	0.386	0.945	0.960	0.945
DSAT2	0.462	0.983	0.399	0.433	-0.226	0.369			
DSAT3	0.345	0.976	0.481	0.422	-0.248	0.385			
DTPR1	0.319	0.320	0.921	0.415	-0.255	0.313	0.942	0.952	0.873
DTPR2	0.379	0.377	0.940	0.455	-0.254	0.314			
DTPR3	0.306	0.211	0.939	0.390	-0.303	0.332			
DTPR4	0.379	0.290	0.937	0.461	-0.292	0.379			
NEG1	0.427	0.457	0.445	0.974	-0.135	0.392	0.949	0.962	0.911
NEG2	0.363	0.499	0.416	0.941	-0.132	0.406			
NEG3	0.446	0.369	0.562	0.949	-0.105	0.364			
ATTAC1	-0.191	-0.216	-0.197	-0.135	0.826	-0.349	0.882	0.919	0.739
ATTAC2	-0.121	-0.139	-0.195	-0.034	0.841	-0.368			
ATTAC3	-0.211	-0.216	-0.306	-0.105	0.924	-0.429			
ATTAC4	-0.251	-0.240	-0.298	-0.171	0.844	-0.420			
DTTA1	0.414	0.376	0.455	0.409	-0.381	0.903	0.931	0.949	0.828
DTTA2	0.352	0.303	0.442	0.326	-0.419	0.908			
DTTA3	0.420	0.395	0.403	0.401	-0.431	0.899			
DTTA4	0.373	0.336	0.391	0.341	-0.472	0.930			

DCPR Disconfirmation with Previous eWOM, DSAT Dissatisfaction with hotel, DTPR Distrust of previous eWOM, NEG Negativity of eWOM, ATTAC Attachment with website, DTTA Distrust of website

from disconfirmation with previous eWOM to distrust of website, it was found that two variables, distrust of previous eWOM and negativity of eWOM, fully mediate the relationship. This is indicated because there are significant relationships from disconfirmation with previous eWOM to distrust of previous eWOM and from distrust of previous eWOM to distrust of website while the previous direct relationship from disconfirmation with previous eWOM to distrust of website

became insignificant. Likewise, in the case of relationship between dissatisfaction and distrust of website, negativity turns out to be a complete mediator between predictor and outcome variable. The results from this supplemental analysis lend confidence to the specification of our structural model.

Furthermore, based on these results, we can conclude that ECM variables such as disconfirmation with previous eWOM, and dissatisfaction indirectly contribute to the distrust

**Table 4** Correlations

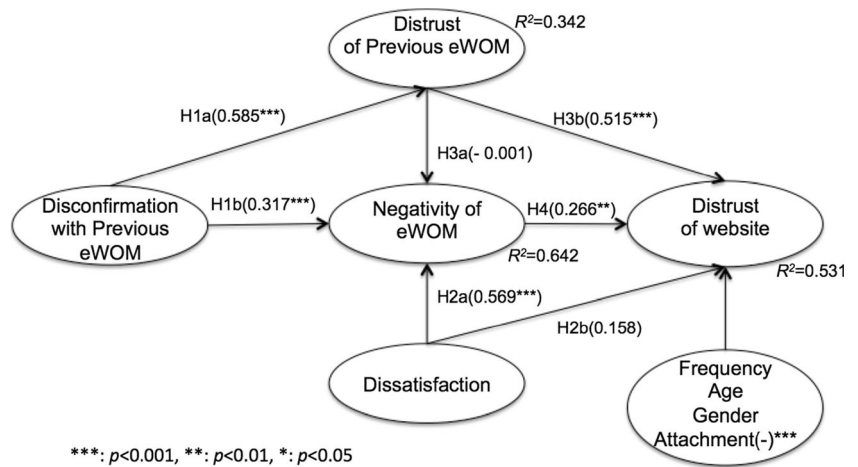
Variable	Mean	SD	DCPR	DSAT	DTPR	NEG	ATTAC	FREQ	AGE	GDR	DTTA
DCPR	2.24	1.55	0.95								
DSAT	2.31	1.73	0.58**	0.97							
DTPR	2.31	1.11	0.49**	0.45**	0.93						
NEG	2.38	1.70	0.51**	0.55**	0.46**	0.96					
ATTAC	5.12	1.12	-0.23**	-0.23**	-0.30**	-0.13	0.86				
FREQ	n/a	n/a	-0.11	-0.10	-0.14*	-0.07	0.20**	n/a			
AGE	n/a	n/a	-0.11	-0.11	-0.02	-0.20**	-0.01	-0.15**	n/a		
GDR	n/a	n/a	0.12	0.12	0.06	0.10	-0.04	-0.15*	-0.21**	n/a	
DTTA	2.05	0.94	0.43**	0.39**	0.55**	0.41**	-0.47**	-0.11	-0.03	-0.40	0.91

Bold face items on the diagonal are the square root of AVE

DCPR Disconfirmation with Previous eWOM, DSAT Dissatisfaction with hotel, DTPR Distrust of previous eWOM, NEG Negativity of eWOM, ATTAC Attachment with website, FREQ Frequency of Travel per year, GDR Gender, DTTA Distrust of website

\*\*  $p < 0.01$ , \*  $p < 0.05$

Fig. 3 Results of analysis



of website. Distrust of previous eWOM and negativity which are affected by ECM factors affect the distrust of website directly. Out of the two mediators, distrust of previous eWOM contributes more to distrust of website with an increased R<sup>2</sup> value of 0.182 (see Tables 5 and 6).

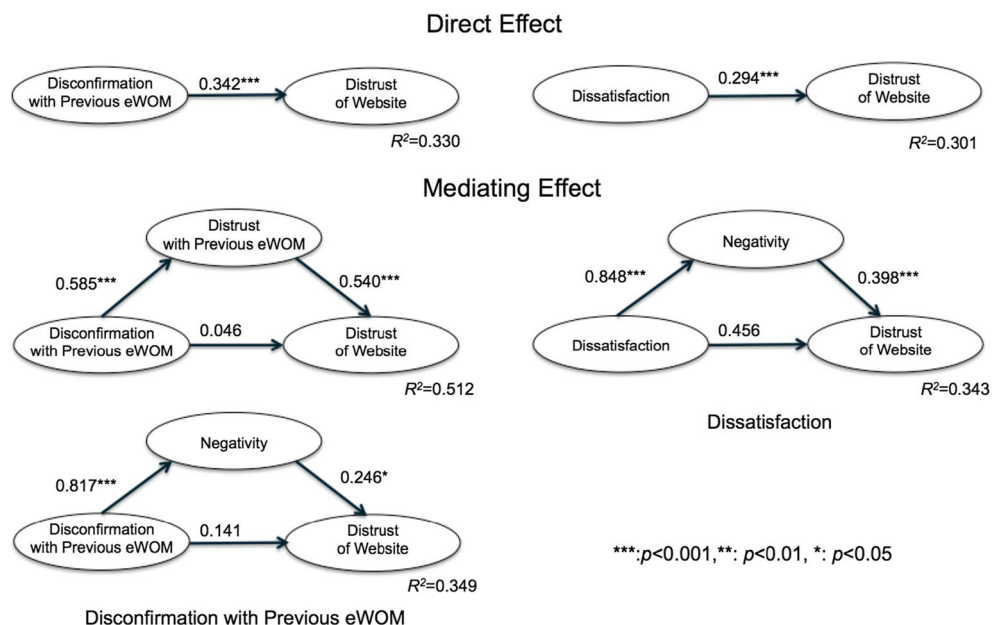
## 6 Discussion and Conclusions

### 6.1 Theoretical Implications

Our research investigates the role of eWOM in the process of value co-destruction among consumers, product/service providers such as hotels, and online review platforms such as TripAdvisor. Statistical results indicate that when consumers' eWOM-based expectations are disconfirmed, the consumer comes to distrust the previous eWOM. eWOM-based

expectation disconfirmation also increases the likelihood that consumers will write negative eWOM. Negative eWOM and distrust of previously-existing eWOM are then positively associated with distrust of the eWOM website itself. This finding is consistent with research based on the ECM that states that disconfirmation affects subsequent behavior such as writing negative eWOM and affects distrust of previous eWOM (Bhattacharjee 2001; Chung et al. 2015). While previous eWOM studies that focused on the determinants of writing eWOM did not differentiate between factors that influence positive eWOM and negative eWOM (Cheung and Thadani 2012; Dichter 1966; Engel et al. 1995; Hennig-Thurau et al. 2004; Sundaram et al. 1998), this study explicitly found factors affecting negative eWOM, factors which may be different from factors affecting positive eWOM. Additional research is required to confirm whether determinants such as confirmation and satisfaction affect the writing of positive eWOM

Fig. 4 Analysis of mediation effects





**Table 5** PLS result of analysis

Hypothesis and Path		Coefficient	t-value
H1a	Disconfirmation with Previous eWOM -> Distrust of Previous dWOM	0.585***	9.526
H1b	Disconfirmation with Previous eWOM -> Negativity of eWOM	0.317***	3.660
H2a	Dissatisfaction -> Negativity of eWOM	0.569***	6.631
H2b	Dissatisfaction -> Distrust of website	0.158	1.472
H3a	Distrust of Previous eWOM -> Negativity of eWOM	-0.001	0.036
H3b	Distrust of Previous eWOM -> Distrust of website	0.515***	6.438
H4	Negativity of eWOM -> Distrust of website	0.266**	2.663
Control Variables			
	Frequency -> Distrust of website	0.040	0.855
	Age -> Distrust of website	0.015	0.288
	Gender -> Distrust of website	-0.002	0.039
	Attachment -> Distrust of website	-0.327***	5.944
<i>R</i> <sup>2</sup>			
	Distrust of Previous eWOM	0.342	
	Negativity of eWOM	0.642	
	Distrust of website	0.532	

\*\*\*:  $p < 0.001$ , \*\*:  $p < 0.01$ , \*:  $p < 0.05$

since these factors have not been studied before in the context of positive eWOM (Engel et al. 1995; Hennig-Thurau et al. 2004; Sundaram et al. 1998).

Additionally, our statistical results indicate that while the aforementioned eWOM-based disconfirmation arises from an online experience (reading the eWOM), dissatisfaction arises from an offline experience, namely the real-world customer experience at the hotel. When customers are dissatisfied with

the hotel, they show an increasing likelihood to write negative eWOM, the presence of which is associated with distrust of the website. This finding confirms the fact that dissatisfaction leads to negative eWOM as previous studies have shown (Blodgett et al. 1993; Sugathan et al. 2017; Sánchez-García and Currás-Pérez 2011; Wetzter et al. 2007; Zeelenberg and Pieters 2004). Furthermore the relationship from dissatisfaction to distrust of the website in the context of negative

**Table 6** PLS result of mediation analysis

Variable	Coefficient	t-value
Disconfirmation with Previous eWOM		
Direct Effect ( $R^2 = 0.330$ )		
Disconfirmation with Previous eWOM -> Distrust of website	0.342***	5.217
Mediating Effect with Distrust with Previous eWOM ( $R^2 = 0.512$ )		
Disconfirmation with Previous eWOM -> Distrust of Previous eWOM	0.585***	9.734
Distrust of Previous eWOM -> Distrust of website	0.540***	7.969
Disconfirmation with Previous eWOM -> Distrust of Website	0.046	0.708
Mediating Effect with Negativity of eWOM ( $R^2 = 0.349$ )		
Disconfirmation with Previous eWOM -> Negativity of eWOM	0.817***	9.238
Negativity of eWOM -> Distrust of website	0.246*	2.172
Disconfirmation with Previous eWOM -> Distrust of website	0.141	1.181
Dissatisfaction		
Direct Effect ( $R^2 = 0.301$ )		
Dissatisfaction -> Distrust of website	0.294***	4.348
Mediating Effect with Negativity of eWOM ( $R^2 = 0.343$ )		
Dissatisfaction -> Negativity of eWOM	0.848***	9.542
Negativity of eWOM -> Distrust of website	0.398***	3.436
Dissatisfaction -> Distrust of website	0.456	0.384

\*\*\*:  $p < 0.001$ , \*\*:  $p < 0.01$ , \*:  $p < 0.05$

eWOM is one of the additional contributions of this study. To summarize, we conclude on the basis of our results that disconfirmation and dissatisfaction lead to negative eWOM and distrust of previously-existing eWOM, and ultimately to distrust of the online review website itself.

These results have implications for the study of value co-destruction, trust and distrust, as well as expectation confirmation. First, regarding value co-destruction, the process that we have identified in this study co-destroys value (a) for the consumer as distrust arises and he or she questions the continuing use of valuable sources of information, (b) for the product/service provider as reputation is eroded through negative eWOM, and (c) for the online review website as consumers increasingly distrust it and its eWOM. Our study contributes to literature because we have thus provided what we believe to be the first explanation for how value co-destruction can take place even on the basis of honest, truthful reviews, and not only in the presence of online deviant behavior through false reviews (Kashif and Zarkada 2015; Sigala 2017). This is our primary contribution.

Second, regarding trust and distrust, supplemental analysis reveals that distrust of previous eWOM as well as negative eWOM play a mediating role that decreases consumers' trust in the online eWOM review platform. Specifically, we found that writing new negative eWOM is influenced by two factors, disconfirmation and dissatisfaction, but not by previous eWOM. This means that people do not write negative eWOM even though previous eWOM that they read about the hotel is not reliable. This has not been studied before since previous studies were primarily focused on individual motivations and characteristics of writing eWOM (Cheung and Thadani 2012; Dichter 1966; Engel et al. 1995; Hennig-Thurau et al. 2004; Sundaram et al. 1998). Even when people think that the content of previous eWOM is neither trustworthy nor reliable, they do not write negative eWOM until they have their own experience with the product or service and form a level of disconfirmation. This is an important secondary contribution to the theoretical understanding of distrust formation and how it is linked to eWOM creation and value co-destruction.

Additionally regarding trust and distrust, we interpret these results on mediating effects to explain that disconfirmation with previous eWOM and dissatisfaction with a hotel are the root causes of distrust of eWOM platform websites. When consumers do not trust previous eWOM and some of them write negative eWOM, the eWOM website will lose a measure of trust from consumers. Paradoxically, eWOM platform websites need to have a certain amount of negative reviews in order to be believable (Doh and Hwang 2009), but a high number of negative reviews indicates that customers are booking hotel stays on the basis of favorable eWOM (for it would be irrational to book based on negative eWOM), then staying at a hotel, and subsequently finding that their eWOM-

influenced expectations were not met. Thus, negative eWOM is both needed for website and hotel credibility – and at the same time an indicator that previous eWOM may not be a reliable basis on which to make a booking decision. Considering this paradox in light of the previous understanding that people tend to trust negative eWOM more than positive eWOM (Arndt 1967; Sen and Lerman 2007; Sparks and Browning 2011) reveals an added trust-related contribution, one that necessitates additional research.

Third and finally, with regard to expectation confirmation literature, we observe that value co-destruction may be explained as a vicious cycle involving disconfirmation with previous eWOM, distrust of previous eWOM, negativity of eWOM, and distrust of the website. This study thus extends previous studies focusing on a co-creation process as a general framework of service-dominant logic (Vargo and Lusch 2004) by also identifying a co-destruction process. This conclusion reveals that consumers discontinue use of an information system when they are dissatisfied with the system and find their expectations about the usefulness of the system to be disconfirmed. This confirms prior research on expectation disconfirmation as an additional supplemental contribution.

## 6.2 Practical Implications

From our findings, we now suggest practical implications for owners and managers at review websites. The dependent variable for our study is distrust of the website, something review websites would quite obviously desire to avoid. How can they build and protect the trust that consumers have in their website? To answer this question, we point to the important role of disconfirmation of expectations in the causal chain that leads to trust or distrust. For instance, in the context of accommodation rating websites, TripAdvisor has an average review score of 3.9 out of 5 for hotels with 101 or more reviews (Melián-González et al. 2013). Similarly, nearly 95% of Airbnb listings have ratings of either 4.5 or 5 (out of a possible 5) (Zervas et al. 2015). On the basis of these high average review scores, consumers may arrive at properties with high expectations. If those expectations are not met, disconfirmation of expectations results. This disconfirmation may lead consumers to conclude, “I thought this place would be great. I guess I can't trust what I read on TripAdvisor/Airbnb.” One implication of this consumer distrust is fewer visitors for these review websites.

Broadly speaking, review websites must work diligently to provide consumers with honest, detailed, and specific reviews. First and most obviously, review websites need to work to root out false reviews, as has been discussed elsewhere (Luca and Zervas 2016; Munzel 2016). False reviews lead to unmet expectations and directly engender website distrust. Second, regarding legitimate reviews, review websites should supplement free-

form comment entry with structured review questions to encourage specific feedback on multiple aspects of a product or service. Returning to the example of accommodation, comments should be solicited on specifics such as sleep quality, cleanliness, linens, quietness, staff attentiveness, ambiance, and so forth. Free-form review entry enables vague, general, non-specific, unstructured eWOM. Specific forms enable consumers to form more-useful and more-detailed expectations. Detailed expectations reduce the likelihood of disconfirmation of expectations, and its consequential website distrust. Third, review websites may provide guidance to reviewers and make suggestions about what constitutes a “3”-level experience versus a “4” or “5”-level review. Divergence in review ratings provides consumers with useful feedback. When all reviews are clustered closely in the 4–5 point range, consumers have relatively little information to help them discriminate between properties. Again, detailed reviews allow consumers to form detailed expectations and avoid disconfirmation – and at the same time protect on-line review websites from the formation of distrust.

Practical implications exist for product and service providers as well. First, encourage honest and specific feedback, even if it’s negative. Honest, specific feedback offers the twin benefits of setting consumers’ expectations correctly to avoid dissatisfaction, disconfirmation, and future negative reviews, as well as identifying areas for attention and improvement. If product and service providers can aggressively respond to issues identified by consumers in reviews, there is reason to believe that they can capture value in the future (Smyth et al. 2010). In the long run, even negative reviews can create rather than destroy value. Second, identify ways to stimulate consumer feedback. For instance, for some time, hotels have posted signs indicating to guests that their property is listed on the TripAdvisor website. Some hotels are also experimenting with sending TripAdvisor review links directly to guests requesting an honest and detailed review after a stay. This adds value for the hotelier by identifying strengths and weaknesses, areas for improvement, and outstanding employees, as well as opening up a channel for interaction with consumers. Third and finally, hotels may seek ways to identify influencers. This can often be accomplished using tools such as the Libra guest management software. Such guests should be identified because the comments of a seasoned world traveler with 300 reviews to his or her credit are more valuable and insightful – both to website readers and to hoteliers, than 2-review individual on his or her first international trip. A closely-related suggestion would be for hotel managers who monitor eWOM to clearly know who his or her core customer is (e.g. business vs. leisure travelers, or specific nationalities) and focus most intently on comments from those core customers.

### 6.3 Limitations and Recommendations for Future Research

As for the limitations of this study, data was collected from a singly industry and a single website. Therefore, generalizations should be made with caution. In the future, researchers may extend our work to include other types of products and services. Online reviews can be found for a diversity of products, including movies, TV shows, books, gaming systems, smartphones, as well as experiences such as restaurant visits, home rentals, and holiday attractions. Issues that may be considered beyond those in this study include the distinction between tangible products and less-tangible service offerings, as well as products and services that are strongly experience-based versus those that are less experience-based. The eWOM generated in such settings may have unique characteristics, and the outcomes may be context-specific as well.

Another potential topic for future research would be the different motivations for consumers to write positive eWOM or negative eWOM, or to choose to write no eWOM at all. Even though some prior studies investigated the various motivations for writing eWOM, they failed to differentiate between factors for authoring positive or negative eWOM once consumers have chosen to write. Factors such as disconfirmation and dissatisfaction have been studied as reasons for writing negative eWOM; however, this finding does not necessarily imply that satisfied customers write positive eWOM. Is satisfaction perhaps associated with non-contribution of eWOM? What about the link between dissatisfaction and non-contribution? A comprehensive rationale for writing positive, negative, or no eWOM remains to be developed.

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