The effects of hotel attribute performance on electronic word-of-mouth (eWOM) behaviors

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1. Introduction

Due to the intangibility and experiential nature of services, consumers seek additional information to reduce the uncertainty and complexity involved in making a purchase decision (Litvin et al., 2008). Electronic word-of-mouth (eWOM) has become a major source of information because of its (1) enhanced volume, (2) dispersion, (3) persistence and observability, (4) anonymity and deception, (5) salience of valence, and (6) community engagement (King et al., 2014). Serra Cantallops and Salvi (2014) conducted an extensive review of the eWOM literature and categorized it into two lines of research: antecedents of eWOM and influences of eWOM. However, the extant literature focuses heavily on the influences of eWOM. King et al. (2014: 172) called for studies to “uncover various antecedents of review-writing behavior” to develop feasible eWOM strategies. Specifically, Serra Cantallops and Salvi (2014) pointed out that only a few studies concentrate on factors that lead to eWOM behaviors in the hotel business.

In response to this call, we aim to investigate the role of core and facilitating attributes in predicting eWOM behavior in the hotel industry. We focused on hotel attributes because most of the studies on eWOM antecedents concentrate on second-order predictors, such as satisfaction (e.g., Bronner and de Hoog, 2011; Cheung and Lee, 2012). However, these second-order predictors are often a collected reflection of first-order predictors, such as product quality, service performance, previous experience, and individuals’ economic and psychological characteristics (Cheung and Lee, 2012; Liang et al., 2013). Studies have shown that eWOM behaviors may be influenced directly by product or service attributes, instead of by customers’ perceived satisfaction (e.g., Chaniotakis and Lymeropoulos, 2009; Zhang et al., 2014). If first-order predictors are not included in the model, then the estimation of the second-order predictors could be biased.

The results of previous studies may not apply to the hotel industry as Ennew et al. (2000) and Harrison-Walker (2001) found that WOM behaviors could be industry dependent. We delineated hotel attributes into core attributes and facilitating attributes because the experience of a hotel stay consists of tangible products and intangible services (Millar and Baloglu, 2011; Slevitch and Oh, 2010). This approach can yield a complete and accurate understanding of the attribute performance–eWOM behavior relationship.

The present study departs from most eWOM studies in that we examined the eWOM predictor–behavior relationship by treating eWOM behavior as a multidimensional construct. Most eWOM behavior studies treat eWOM behavior as a single-dimension construct (e.g., Boo and Kim, 2013; Brown et al., 2005; Tsao and Hsieh, 2012) while the WOM literature suggests that WOM behavior is likely to be a multidimensional construct (Harrison-Walker, 2001). We argue in the hypothesis development section that eWOM behavior, similar to traditional WOM behavior, is a multidimensional construct. We also proposed in this study that eWOM behaviors can be foretold using first-order predictors, such as product quality, service performance, previous experience, and individuals’ economic and psychological characteristics (Cheung and Lee, 2012; Liang et al., 2013). Studies have shown that eWOM behaviors may be influenced directly by product or service attributes, instead of by customers’ perceived satisfaction (e.g., Chaniotakis and Lymeropoulos, 2009; Zhang et al., 2014). If first-order predictors are not included in the model, then the estimation of the second-order predictors could be biased.

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order predictors, such as the existence of service attributes, instead of relying on second-order predictors, including satisfaction. Theoretically, the results confirmed eWOM behavior is a multidimensional construct as suggested by previous studies and support the idea that the performance of core attributes and the performance of facilitating attributes have different influences on eWOM behaviors. This study also helps identify critical aspects in hotel operation that managers should focus on to encourage positive eWOM behaviors from customers, which will enhance the property’s online presence.

2. Literature review

2.1. eWOM behavior as a multidimensional construct

In the marketing field, WOM has been extensively examined because it provides a theoretical foundation for understanding consumers’ attitude toward a brand. WOM is defined as “oral, person-to-person communication between a perceived non-commercial communicator and a receiver concerning a brand, product, or a service offered for sale” (Arndt, 1967: 190). WOM, which is different from communication initiated by merchants and advertisers, is a form of “informal communication directed at other consumers about the ownership, usage or characteristics of particular goods and services and/or their sellers” (Westbrook, 1987: 261). Therefore, the WOM offered by the message sender may not necessarily be positive (Arndt, 1967).

With advances in information technology, WOM has taken on an electronic form (electronic word of mouth, eWOM) and has an enhanced effect on business as eWOM can reach a broader audience with limited geographic and time barriers. Thus, eWOM 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” (Hennig-Thurau et al., 2004: 39).

Harrison-Walker (2001) developed a set of items for measuring different aspects of WOM behaviors. After a series of scale purifications, she found that WOM can be separated into two constructs, WOM activity and WOM praise. When WOM activity was assessed, several behaviors were included, such as the frequency of WOM communication, the number of people with whom the sender communicates, and the quantity of information provided by the sender during the process. At the same time, WOM praise focuses on the favorableness of WOM communication. When further assessing the antecedents of WOM activity, Harrison-Walker found that affective commitment is positively related to WOM activity, but service quality is not always positively associated with WOM activity. She also examined how WOM activity may be different based on industry differences. After comparing participants from the hair salon industry and the veterinary industry, she found that affective commitment has a positive influence on WOM activity in both industries, but service quality has a positive impact on WOM activity in the veterinary industry only but not in the hair salon industry. She concluded that WOM activity can differ depending on which type of business the message sender experiences and whether the service quality can be easily assessed by consumers. If consumers find it difficult to evaluate the quality, they are more inclined to use other cues or process to evaluate the service. Thus, the relationship among key constructs, including the service process, service outcome, and WOM activity, should be examined further.

Harrison-Walker’s (2001) findings provided a theoretical foundation and empirical support for studies in several areas, such as food purchase (e.g., Chakrabarti, 2010) and retailing (e.g., Brown et al., 2005). Chakrabarti (2010) assessed key factors influencing consumers’ purchase behavior of organic food using an expert survey and found that WOM activity and WOM praise have a significant influence on consumer behavior. The results suggested that, with active WOM activities and positive WOM praise, consumers have a stronger intention to purchase organic food. Brown and colleagues (2005) investigated antecedents of consumers’ positive WOM intentions and behaviors in the retailing context and found that satisfaction and commitment have a significant influence on WOM praise and activity. As the Internet environment is different from the real world, the nature of eWOM and thus, eWOM behaviors are likely to be different. In the context of hotel operations, previous studies also found that eWOM behaviors, such as the valence and the volume of eWOM and the platform where eWOM is posted, have a significant influence on hotels, such as customers’ booking intention and willingness to pay for accommodation (e.g., Casalo et al., 2015; Ladhari and Michaud, 2015; Mauri and Minazzi, 2013; Nieto-Garcia et al., 2017; Tsao et al., 2015; Viglia et al., 2016). Therefore, the present study tests and extends Harrison-Walker’s (2001) WOM behavior framework in the eWOM context.

2.2. Predictors of eWOM behavior

Previous studies suggested various predictors for eWOM behaviors (e.g., Sánchez-García and Currás-Pérez, 2011; Serra Cantallops and Salvi, 2014). However, these predictors pooled first-order predictors (e.g., hotel attributes) together with second-order predictors (e.g., perceived service quality and satisfaction) that are the outcomes of first-order predictors. For instance, satisfaction can be measured only after customers have consumed the service and is subject to customers’ expectations and the observed reality. However, first-order predictors, such as hotel attribute performance, can be measured without the predisposition of other factors. This is consistent with de Matos and Rossi’s (2008) observation that most studies treat WOM and eWOM as the outcome variables of other constructs (e.g., satisfaction) rather than the central constructs in the research.

eWOM is also affected by personal motivations, such as social benefits, self-enhancement, extraversion, dissonance reduction, and altruism (e.g., Bronner and de Hoog, 2011; Cheung and Lee, 2012; Daugherty et al., 2008; Gvili and Levy, 2016; Hennig-Thurau et al., 2004; Lin and Xu, 2017; Litvin et al., 2008; Nadkarni and Hofmann, 2012; Kwok and Xie, 2016). For example, Bronner and de Hoog (2011) found that self-directed, social benefits (helping other vacationers, helping companies, and consumer empowerment) are major motivation factors that lead to eWOM. The authors concluded that vacationers who are self-directed tend to select marketer-generated websites on which to post reviews, with a smaller number of aspects included in the reviews, addressing the negative aspect of the experience with text. Those who are directed by other factors tend to post comments on consumer-generated websites; their reviews include a vast array of different aspects, which tend to have more positive expressions, text, and ratings.

Cheung and Lee (2012) proposed a theoretical model that includes egoistic motivation that increases self-welfare, collective motivation that benefits a group, altruistic motivation that focuses on the welfare of others rather than on oneself, and principism motivation that focuses on moral principles for the greatest good. The authors found that reputation, sense of belonging, and altruism are major motivations that inspire individuals to conduct eWOM. Based on the discussion above, these motivation factors tend to be internalized in eWOM communicators themselves. As personal motivations are not directly involved in service delivery and the consequence of the service experience, these predictors can be viewed as first-order predictors. In sum, motivations and hotel attribute performance can be grouped together as first-order predictors while service quality and customer satisfaction can be grouped together as second-order predictors. In this study, we focus on first-order predictors, especially hotel attributes, because they can be directly observed and managed by hoteliers.

2.3. eWOM behavior as a multidimensional construct

Hennig-Thurau et al. (2004) found that not all eWOM behaviors are triggered by the same predictors. In a study, Hennig-Thurau et al. (2004) operationalized eWOM behaviors into platform visit and
Comment writing. The authors identified eight eWOM predictors: platform assistance, venting negative feelings, concern for other consumers, extraversion/positive self-enhancement, social benefits, economic incentives, helping the company, and advice seeking. The analysis showed that all eight factors except helping the company influence platform visit frequency. However, only four of the eight predictors (concern for other consumers, extraversion, social benefits, and economic incentives) influence comment writing. The authors also found that venting negative feelings may influence the frequency of visiting opinion platforms but does not influence the number of comments written on opinion platforms by consumers. When applied within the context of the hotel business, different predictors may prompt eWOM praise and eWOM activity.

We operationalized eWOM behaviors in four dimensions: intention, frequency, thoroughness, and praise, based on Harrison-Walker’s (2001) conceptual model. Harrison-Walker measured WOM activity by the frequency of communication, the number of participants, and the quantity of information provided by the message sender. WOM praise was measured by the valence of the communication. In the current study, intention reflects the likelihood an individual would engage in eWOM, while frequency reflects the occurrence of an individual engages in eWOM. Both represent the concept of WOM activity proposed by Harrison-Walker. In contrast, other studies (e.g., de Matos and Rossi, 2008) suggested that eWOM should also be assessed from the perspective of the content of the message as the valence has been found to have a significant influence on consumer behaviors (e.g., Chakrabarti, 2010; Lin and Xu, 2017; Tsao et al., 2015). Therefore, we assessed the content of eWOM with thoroughness (the quantity of information) and praise (the valence of the information).

2.4. Hotel attribute performance and eWOM behaviors

Studies have shown that hotel attributes influence customers’ perception of service quality and stay experience. For instance, Yavas and Babakus (2005) compared business and leisure travelers’ preferences and found that these two groups of travelers emphasized different attributes. Although business and leisure customers prioritize general amenities as the most important attribute, business travelers view convenience as the second most important attribute, while leisure travelers view reservation and check-in/out as the second most important attribute. Lockyer and Roberts (2009) explored key factors that may trigger customers’ hotel selection and found that customers use different criteria based on the length of stay. The authors found that for hotel guests who stay only overnight, convenience is the most critical attribute. These guests feel that they can tolerate most situations because their stay is very short. However, for those staying more than one night, tangible attributes, such as guest room conditions, become important.

In the hotel business, core attributes are mostly related to the tangible aspects of the hotel, such as the guest room, the reservation system, swimming pool, or the business center (Slevitch and Oh, 2010). However, customers’ experience in a hotel is not limited to physical aspects. The experience also depends on intangible services: the interpersonal interaction between service providers and customers. Facilitating attributes, defined as professionalism and the attitude demonstrated by service staff and the recovery speed from service failure, complete a customer’s assessment of his or her hotel stay experience (Slevitch and Oh, 2010). Identifying hotel attributes that are perceived as important to hotel guests will enable hotel managers to improve current practices to meet customers’ expectations.

According to Sparks and Browning’s (2010) study, customers often complain about room features, such as the size of the room, the cleanliness of the room, and the condition of the furniture and the equipment in the room, followed by the services they received, including employee behavior toward the guests, such as being unhelpful, unfriendly, uncooperative, etc. As the core attributes are basic and central to a customer’s experience and satisfaction, it can be hypothesized that they have a significant influence on eWOM activities, such as intention and frequency.

Although most studies focus on the performance of core attributes and their influence on eWOM behaviors, the performance of facilitating attributes also plays a critical role in the service experience, in which facilitating attributes complement and enhance core attributes (Gronroos, 2000; Lovelock and Wirtz, 2011). Thus, the facilitating attributes would have more influence on the valence of eWOM, which is related to the content behavior of eWOM. For instance, Choi and Choi (2014) examined the effects of perceived service recovery justice on customers’ WOM behaviors. The authors found that the service recovery performed by service providers positively influences customers’ WOM behaviors. When consumers perceive that there are fair policies and practices that address the problem, and personnel show care and communicate with consumers with a positive attitude, consumers are more willing to say positive things about the company.

In the general hospitality operations context, several studies have found attribute performance is an important predictor of eWOM behaviors. For instance, Jeong and Jang (2011) found that restaurant service employees can trigger customers’ positive motivation to post comments. Zhang et al. (2014) also examined the relationship between attribute performance and eWOM in a restaurant setting. They found that attribute performance has an asymmetric impact on positive and negative WOM. Specifically, they found that “food taste, restaurant environment, and service have an impact on customer positive eWOM; whereas food taste, physical environment, and price have an impact on negative eWOM” (Zhang et al., 2014: 174). In the hotel context, Hartline and Jones (1996) explored the relationship between attribute performance and WOM intentions. The authors found that housekeeping staff performance has a direct effect on WOM intentions, which does not involve satisfaction. These studies also support the idea that consumers evaluate service experience based on the performance of the attributes, individually and collectively. However, the performance of each attribute influences consumers differently in terms of their eWOM behaviors. As core and facilitating attributes may have different weights on consumer behaviors, it is also assumed that consumers’ eWOM behaviors could differ based on attribute performance. Based on the discussion above, we proposed the following hypotheses:

H1a. The performance of core attributes positively correlates with eWOM activities (intention, frequency, and thoroughness).
H1b. The performance of core attributes positively correlates with eWOM praise.
H1c. The performance of facilitating attributes positively correlates with eWOM praise.

When assessing the relationship between attribute performance and consumer behaviors, Hui et al. (2004) found that there are interactions between process quality attributes and outcome quality attributes. According to the authors’ explanation, process quality attributes are similar to core attributes, and outcome quality attributes are similar to facilitating attributes. The authors found that these attributes have significant interactive effects on customer satisfaction and post-consumption behaviors. Core attributes have a stronger influence on customer satisfaction and post-consumption behaviors when facilitating attributes are favorable than when they are unfavorable. Slevitch and Oh (2010) examined the relationship between the performance of core attributes and attribute performance in the hotel setting. They found that core and facilitating attributes are separate dimensions and influence customer satisfaction. Specifically, the results suggested that the performance of core attributes moderates the effect of the performance of facilitating attributes on customer satisfaction. The authors concluded that more attention should be assigned to core attributes so they maintain a positive performance. When “this condition is met, facilitating attributes will play their positive role” (Slevitch & Oh, 2010: 2010; Lin and Xu, 2017; Tsao et al., 2015). Therefore, we assessed the content of eWOM with thoroughness (the quantity of information) and praise (the valence of the information).
and additional input into facilitating attributes will generate the results desired by hoteliers. Table 1 provides an overview of findings from selected studies related to eWOM behaviors. Based on the discussion above, we propose the following hypotheses:

**H2.** For eWOM behaviors, the effect of the performance of facilitating attributes is stronger on the positive performance of core attributes than on the negative performance of core attributes.

## 3. Methodology

### 3.1. Instrument

An online instrument was developed to capture the effects of hotel attribute performance on the four chosen eWOM behaviors (intention, frequency, thoroughness, and praise). The instrument has three sections. The first section collected information about respondents’ demographics, lodging preferences, previous eWOM experience, and attitudes toward incentives and convenience provided by eWOM platforms. The variables that might affect eWOM behaviors (e.g., Hennig-Thurau et al., 2004; Sun et al., 2006) were examined using a seven-point Likert scale. An example item is “I would write comments online because I believe hotels are more accommodating than other hotels in my online posting” (1 = Strongly Disagree, 7 = Strongly Agree).

The second section included treatments that stimulate a hotel stay experience. Many studies have empirically shown that scenario-based methods are good ways of assessing service quality and customer satisfaction in the hospitality field (Chan et al., 2007; Collie et al., 2000; Slevitch and Oh, 2010). The treatment was a 2 × 2 design: two attribute types (core and facilitating) and two performance levels (positive and negative). The scenario was based on a midscale hotel because a mid-scale pipeline report published by Smith Travel Research (2015) stated that as of January 2015 upper midscale and midscale hotels have the largest share of room supply (27.3%) and the largest number of brands. Core attributes and facilitating attributes were operationalized by guest room cleanliness and professionalism of the staff and service recovery, respectively. The four scenarios were (1) positive core/positive facilitating (+C/+F), (2) negative core/negative facilitating (−C/−F), (3) positive core/negative facilitating (+C/−F), and (4) negative core/positive facilitating (−C/+F) (see Appendix A).

The last section measured four eWOM behaviors after receiving the treatment: three eWOM activities (the intention, frequency, and thoroughness of posting eWOM) and eWOM praise. The measurement items were adapted from Harrison-Walker (2001) using a seven-point Likert scale. An example item is “I would mention this hotel more frequently if other hotels in my online posting” (1 = Strongly Disagree, 7 = Strongly Agree).

### 3.2. Data collection

The target sample was consumers who had stayed in a hotel within the previous six months and shared their hotel experience on an online platform (such as Facebook or TripAdvisor). The data were collected through Qualtrics, an online survey service company. The participants had to be at least 18 years old because they were more likely to make or influence the hotel reservation decision. To test the validity of the instrument, a pilot study with 35 participants was conducted, who are regular individuals who had stayed at a hotel during the previous six-month period. Revisions based on the pilot test were incorporated in the final questionnaire to improve clarity and validity.

As the data were collected from a paid panel, a stringent screening mechanism was employed to ensure data quality. For example, certain measurement items were repeated in positive and negative wording. If respondents provided contradictory answers, then the observation was deleted. Observations were also deleted if they showed the same choice option for all questions. As a result, only 252 out of the 517 observations collected were retained for analysis. To check non-response bias, the incomplete responses were compared to the complete responses for demographics, hotel preference, and previous eWOM experience. No
A statistically significant difference was identified. All respondents were randomly assigned to one of four treatment scenarios. The number of responses was about the same for the four scenarios, ranging between 61 and 66.

3.3. Analysis procedures

For hypothesis testing, the present study had to establish a best-fit model for each of the eWOM behaviors based on a pool of 14 first-order predictors. To facilitate the model selection process, we employed a screening process to identify the variables that clearly do not have predictive power over eWOM behaviors. The predictors were first categorized into five groups based on the literature review. They were demographics, hotel experience, previous eWOM experience, hotel attribute performance, and platform assistance and incentives. Each eWOM behavior was then regressed on each of the predictor groups. The groups that did not have statistically significant predictive power for all four eWOM behaviors were excluded from the final model for hypothesis testing. The Akaike information criterion (AIC) and Schwarz’s Bayesian information criterion (BIC) are presented in Table 3 in addition to common regression model fit statistics to provide additional model fit information. Both model selection criteria were based on the value of the likelihood function and included a penalty for the number of variables used. The BIC penalized the number of variables included stronger than does the AIC. Smaller AIC and BIC values indicate better-fitting models.

After the models were established, we used multivariate multiple regression to examine the direction and size of the predictors’ influence on the four eWOM behaviors. At the individual model level, multivariate multiple regression is identical to ordinary least squares (OLS) regression. The advantage of multivariate multiple regression is that it facilitates the comparison among coefficients of the same predictor on different models. Hypotheses H1a, H1b, and H1c were tested based on the results of the multivariate multiple regression and the comparisons of the same predictor’s coefficients in different eWOM behaviors. To test Hypothesis H2, we ran the same models on two sub-samples: the positive core attributes performance sample and the negative core attributes performance sample. We did not use the typical approach of including an interaction term of core and facilitating attributes because both variables were dummies and the interaction term would have resulted in comparing only the positive-core/positive-facilitating group with the rest of the three combinations.

4. Results

The sample profile and predictor summaries are presented in Table 2. The sample was evenly distributed among age groups between 18 and 65 years, with a slight dip in the 36–45 years group. The majority of respondents had at least a college degree or some college (82.2%) and held a full-time position in various industries (73.2%). Thirty-six point five percent of the respondents stayed at a hotel one to three times per year, while the rest stayed at least four times. On average, they stayed at a hotel for three to five nights (51.2%), and they mainly stayed for leisure purposes (64.3%). Upper-upscale hotels were the most common type of choice (29.4%), followed by upper midscale (27.8%). The majority of the respondents (74.5%) booked their hotels online for at least half of their trips. Only a small portion of participants (3.2%) had never commented on their hotel experience. All subjects in the sample had posting consumption experience online, but the majority (67%) posted about less than half of their consumption experiences. The Kruskal-Wallis test results showed no statistically significant difference in the distribution of demographic variables among the four attribute performance treatments.

Multivariate analysis of variance (MANOVA) was conducted to examine the effect of each predictor group on the four eWOM behaviors as a whole. Only previous eWOM experience (F = 2.25, p < 0.01) and attribute performance (F = 13.14, p < 0.01) showed a statistically significant effect. This preliminary result is consistent with the authors’ postulation that attribute performance plays an important role in eWOM behaviors.

Table 3 presents the model fit statistics of each of the predictor groups and the final model. Although commonly used as control variables in consumer behavior studies, the demographics and hotel experience predictors did not have predictive power for any of the eWOM behaviors in the F-test, suggesting that they might not be important.
A close look at the predictors yielded interesting insights. Platform incentives predicted all four behaviors, indicating potential as a useful management tool. Previous eWOM experience predicted eWOM activities (intention, frequency, and thoroughness) but not eWOM praise. This result suggests that individuals with previous eWOM experience might post frequently and write thoroughly but not necessarily favorably. Attribute performance predicted intention, frequency, and praise but not thoroughness. This result suggests that a good hotel performance might increase the probability of sharing the experience and writing favorable comments but not necessarily promote guests to write thoroughly. The results are preliminary evidence that individual eWOM behaviors may not share the same set of predictors. Overall, the predictors related to previous eWOM experience, attribute performance, and platform incentives were included in the final model for hypothesis testing.

For testing Hypothesis H1a, we employed MANOVA with the three eWOM activities as the dependent variable and core attribute performance as the independent variable while controlling for previous eWOM experience, monetary and nonmonetary incentives and platform convenience. The results show that core attribute performance significantly affects the three eWOM activities as a whole (Wilk’s Lambda, Pillai’s Trace, Lawley-Hotelling, and Roy’s Largest Root all have an F value of 5.6 and significant at 0.01 level). H1a is supported when the three eWOM activities are treated as a whole. However, when the three eWOM activities are tested individually, only eWOM intention and frequency are significantly affected by core attribute performance, while eWOM thoroughness is not (Table 4). This result confirms our argument that eWOM is a multi-dimensional construct and each dimension should be examined individually as each dimension could behave differently. Hypothesis H1b was supported in that the performance of core attributes predicts eWOM praise.

The result regarding facilitating attribute is quite interesting. It significantly affects the three eWOM activities as a whole (Wilk’s Lambda, Pillai’s Trace, Lawley-Hotelling, and Roy’s Largest Root all
have an F value of 3.09 and significant at 0.01 level) but is not significant for the three eWOM activities individually (Table 4). This again confirms the risk of treating eWOM as a one-dimensional variable in setting strategies and calls for further investigation. We posited that the effect of facilitating attribute performance might be contingent on that of the core attribute performance. Our investigation results were reported in Table 5 and would be discussed later.

The result in Table 4 is consistent with Hypothesis H1c because the performance of facilitating attributes statistically significantly predicts only praise. In a further examination, the effect of the performance of core attributes on praise was significantly stronger than the effect on intention (F = 16.11, p < 0.01) and frequency (F = 23.98, p < 0.01). This result suggests that the relationship between praise and the performance of core attributes and the performance of facilitating attribute is the strongest among all eWOM behavior–predictor combinations. Considering that praise was not predicted by platform incentives and convenience, it is safe to conclude that consumers cannot be bought because their postings are based on their perceived hotel performance, not external incentives. This result suggests that striving to improve the quality of offerings is the most direct way to produce positive comments, especially when neither monetary nor non-monetary incentives affect eWOM praise.

For eWOM intention and frequency, the performance of core attributes has the largest effect size among all predictors. The effect size of previous eWOM experience was larger than that of platform convenience, suggesting that the thoroughness of a post is related to personal habits more than to external factors. Praise, different from the other three behaviors, was not predicted by platform convenience and was the only behavior predicted by the performance of facilitating attributes. Although praise was also positively predicted by previous eWOM experience, the size of the effect was far smaller than those for the performance of core attributes and the performance of facilitating attributes. The only common predictor shared by the four behaviors was previous eWOM experience. Therefore, it is reasonable to conclude that each of the eWOM behaviors has its own unique predictors. This result supports the present study’s effort to examine eWOM behavior behaviors individually. The implication is that each eWOM behavior has its own unique dimension and the strategies for managing each behavior should be considered by behavior.

The results indicate that previous eWOM experience has a statistically significant effect on all four behaviors. However, the effects were not statistically significantly different. This result suggests that previous eWOM experience can serve as a baseline predictor for eWOM behaviors. Platform convenience had a statistically significant effect on intention, frequency, and thoroughness, which represent eWOM activity, but not praise. This result suggests that convenience can drive customers to post eWOM but has no effect on the valence of the content. Monetary and non-monetary incentives did not affect any of the behaviors. This result contradicts the common belief that people’s eWOM behaviors can be modified by economic benefits.

The results in Table 5 are consistent with Hypothesis H2 that the effect of positive performance of facilitating attributes is stronger when the performance of core attributes is positive rather than negative. The differences were statistically significant (Intention: \(\chi^2 = 13.82, p < 0.01\); Frequency: \(\chi^2 = 15.68, p < 0.01\); Thoroughness: \(\chi^2 = 8.67, p < 0.01\); Praise: \(\chi^2 = 8.34, p < 0.01\)). When the performance of core attributes is positive, the positive performance of facilitating attributes can further improve consumers’ intention to share, the frequency of sharing their experiences, and the thoroughness of the posting. When the performance of core attributes is negative, the negative performance of facilitating attributes has no effect on frequency and thoroughness. These results are consistent with Yen and Tang’s (2015) finding that consumers prefer to share positive experiences to build a positive social image. Interestingly, the positive performance of facilitating attributes decreases the intention to post eWOM when the performance of core attributes is negative. A possible explanation could be that the intended posting is negative and a positive performance of facilitating attributes mitigates the intention to post negative comments. This could also explain the lack of a statistically significant effect for the performance of facilitating attributes on intention in Table 4, where observations of positive and negative performances of core attributes were pooled together.

Praise is different from the other eWOM behaviors in that it is directly affected by the performance of core attributes and the performance of facilitating attributes. Furthermore, the effect of the performance of facilitating attributes was statistically significantly stronger when the performance of core attributes was positive instead of negative. This result means that the positive performance of facilitating attributes can increase the likelihood of positive eWOM even with a negative performance of core attributes. For the effect of platform convenience, although Table 4 shows a positive influence for intention, frequency, and thoroughness, the results in Table 5 further reveal that this positive effect exists only for the positive performance of core attributes.

Table 5

| Table 5 Multivariate Multiple Regression Comparison Result. |
|--------------|--------------|--------------|--------------|
| Intention | Frequency | Thoroughness | Positive Valence |
| Core attribute performance | + (n = 127) | - (n = 125) | + (n = 127) | - (n = 125) | + (n = 127) | - (n = 125) | + (n = 127) | - (n = 125) |
| Positive facilitating attribute | 0.592*** | -0.760** | 1.076*** | -0.395 | 0.779*** | -0.264 | 2.063*** | 0.848** |
| (0.222) | (0.300) | (0.227) | (0.304) | (0.219) | (0.285) | (0.259) | (0.343) |
| Prior eWOM experience | 0.412*** | 0.494*** | 0.354*** | 0.446*** | 0.466*** | 0.154*** | 0.283*** | 0.265*** |
| (0.100) | (0.144) | (0.103) | (0.146) | (0.099) | (0.137) | (0.117) | (0.165) |
| Monetary incentives | -0.034 | 0.041 | -0.020 | -0.168 | 0.053 | 0.095 | 0.176 | -0.139 |
| (0.101) | (0.135) | (0.104) | (0.137) | (0.100) | (0.128) | (0.118) | (0.155) |
| Non-monetary incentives | 0.044 | -0.006 | 0.112 | 0.140 | 0.046 | -0.085 | 0.028 | 0.284 |
| (0.107) | (0.139) | (0.109) | (0.141) | (0.105) | (0.132) | (0.125) | (0.159) |
| Platform convenience | 0.294*** | 0.180 | 0.274*** | 0.15 | 0.253 * | 0.182 | 0.159 | 0.044 |
| (0.083) | (0.112) | (0.085) | (0.113) | (0.082) | (0.106) | (0.097) | (0.128) |
| Intercept | 2.303*** | 2.725*** | 1.529*** | 2.522*** | 1.544*** | 3.636*** | 1.069 | 0.857 |
| (0.591) | (0.682) | (0.606) | (0.690) | (0.584) | (0.647) | (0.691) | (0.780) |
| R² | 0.231 | 0.163 | 0.281 | 0.117 | 0.278 | 0.057 | 0.389 | 0.111 |
| Adj. R² | 0.199 | 0.274 | 0.252 | 0.080 | 0.248 | 0.017 | 0.364 | 0.074 |
| F | 7.28*** | 4.62*** | 9.47*** | 3.15*** | 9.30*** | 1.42 | 15.39*** | 2.97*** |

Note:

* p < 0.001.
** p < 0.01.
*** p < 0.05.
5. Conclusion

This study was based on the premise that eWOM activities (i.e., intention, frequency, and thoroughness) and eWOM praise are affected differently by hotel attribute performance. The present study produced four findings to add to the eWOM literature. First, eWOM behavior is a multidimensional construct. Although some of the behaviors may be correlated, individual behaviors have their own unique predictors. Second, demographics and lodging preference do not predict eWOM behaviors. Contrary to common belief, monetary and non-monetary incentives have no effects on eWOM. The drivers of eWOM behaviors are hotel attribute performance, previous eWOM experience, and platform convenience. Third, the performance of core attributes is positively and directly related to intention, frequency, and praise, but the performance of facilitating attributes is directly related to praise only. Fourth, the performance of facilitating attributes can positively affect intention, frequency, and thoroughness only when the performance of core attributes is positive. We also found that the positive performance of facilitating attributes decreases the intention to post eWOM when the performance of core attributes is negative. A possible explanation could be that the intended posting is negative, and a positive performance of facilitating attributes could partially recover the damage done by a negative performance of core attributes.

Experts have advocated that increasing the volume of online reviews can help mitigate negative comments (Teixeira and Kornfeld, 2013), improve consumer perception (Vigil et al., 2014), and eventually, improve operational performance (Kim et al., 2015). The present findings provide managerial implications for improving online review volume and eWOM praise. For example, to increase intention and frequency, managers should improve the performance of core attributes before that of facilitating attributes because facilitating attributes work only under the positive performance of core attributes. When resources are limited, managers should prioritize technology investments that make it easy for guests to post comments and for managers to respond to comments instead of economic incentives that encourage guests to post comments. All of the analysis results point to the importance of the performance of core attributes. Managers should ensure the performance of core attributes before they divert resources to facilitating attributes, platform technology, and economic incentives to customers. Another implication is that the performance of core attributes and the performance of facilitating attributes affect praise directly. This means that consumers’ perception of the performance could be affected by their overall hotel stay experience. In managerial practice, this means that to produce positive eWOM, core and facilitating attributes matter. Managers should strive to improve not only the actual performance but also customers’ perception of the performance.

Despite the theoretical and managerial contributions, this study is not free of limitations. First, the present study focused on a midscale hotel. The results may not be applicable to other hotel segments because customer expectations and the definition of core and facilitating attributes may be different. For instance, turndown service could be a facilitating attribute at a midscale hotel but may be expected by customers as a core attribute service at a luxury hotel. Future studies should consider these limitations when designing experiments to assess the influence of hotel attributes on eWOM behaviors. This segment differentiation will enable researchers to explore additional interactions and relationships between these constructs to reflect customers’ perception of hotel attributes. The present study also focused on first-order predictors that can be directly observed or controlled by hoteliers. Second-order predictors, such as satisfaction, were not included in the model. How these first-order predictors lead to second-order predictors and eventually affect eWOM remains to be studied in future studies, which may identify the causal relation and the mediating effects among first- and second-order predictors on eWOM behaviors. Nevertheless, this study still provides new evidence that individual eWOM behaviors are multidimensional and should be managed accordingly.

Appendix A. – Survey Instrument

Section 1

Demographic Information
1. Have you stayed in a hotel in the last 6 months?
2. How old are you?
3. What is your gender?
4. What is the highest level of education you have completed?
5. What is the characteristic of your current job?

Hotel Staying Experience
6. How often do you stay in a hotel per year?
7. What is the average length of your stay?
8. What is the most common reason for you to stay in a hotel?
9. What kind of hotel do you usually choose to stay?

eWOM Experience
10. How often do you share your hotel experience through online media? (e.g. product review sites, social network sites)

Attitude – Convenience & Economic Incentives
I would write comments on online media because...
1. It is more convenient than writing to or calling the hotel.
2. ... of monetary incentives.
3. ... of non-monetary incentives (e.g., reward points, web miles).

Section 2

Negative Core Attribute + Positive Facilitating Attribute
You approached the front desk to check-in. The front desk employee was not there. You had to wait for assistance and when the front desk clerk showed up, it took him awhile to retrieve your reservation. The paperwork and keys for you were not prepared in advance and you had to wait again. He apologized for the inconvenience and proposed to prepare a breakfast-on-the-go bag in case you would be leaving early the next morning. You said okay and agreed to the breakfast-on-the-go proposed by the staff.

Walking through the lobby you could not help noticing the lobby and other public areas had a rather outdated ambiance and were not well maintained. Entering your room you noticed the room door did not have a security latch. The room smelled musty. It was not vacuumed well. There were crumbs and pieces of paper on the floor. The room was dusty. Some items in the room were put in the wrong places.

On the working table in the room you noticed several complimentary snacks: a bottle of water, a chocolate bar, and a couple of baked cookies. The package of snacks was in good condition and back baked cookies tasted fresh. You also found a complimentary CD on the side table for relaxation. When you tried to play the CD, you really enjoyed the music and felt relaxed and soothing. The next morning when you checked out, the clerk gave you the breakfast-on-the-go bag as promised.

Negative Core Attribute + Negative Facilitating Attribute
You approached the front desk to check-in. The front desk employee was not there. You had to wait for assistance and when the front desk clerk showed up, it took him awhile to retrieve your reservation. The paperwork and keys for you were not prepared in advance and you had to wait again. He apologized for the inconvenience and proposed to prepare a breakfast-on-the-go bag in case you would be leaving early the next morning. You said okay and agreed to the breakfast-on-the-go proposed by the clerk.

Walking through the lobby you could not help noticing the lobby and other public areas had a rather outdated ambiance and were not well maintained. Entering your room you noticed the room door did not have a security latch. The room smelled musty. It was not vacuumed well. There were crumbs and pieces of paper on the floor. The room was dusty. Some items in the room were put in the wrong places.

On the working table in your room you noticed a complimentary bottle of water and a chocolate bar. When you took a closer look at...
them, you noticed the expiration date on the bottle had passed and the chocolate bar package was damaged. You also found a complimentary CD on the side table for relaxation. When you tried to play the CD, the CD player is not working. The next morning when you checked out, the breakfast-on-the-go bag was not available and you had to wait 15 min.

**Positive Core Attribute + Positive Facilitating Attribute**

You approached the front desk to check-in. The front desk employee welcomed you, processed your paperwork in a matter of seconds, and gave you your room keys. Then the clerk asked if you needed any assistance or had any questions and directed you to your room. In addition, he proposed to prepare a breakfast-on-the-go bag in case you would be leaving early the next morning and you agreed.

Walking through the lobby you could not help noticing the lobby and other public areas were attractively designed and were well-maintained. Entering your room you noticed the room door had a security latch. The room smelled fresh. The carpet was vacuumed. There was no dust on the furniture. All items in the room were nicely arranged.

On the working table in the room you noticed several complimentary snacks: a bottle of water, a chocolate bar, and a couple of baked cookies. The package of snacks was in good condition and baked cookies tasted fresh. You also found a complimentary CD on the side table for relaxation. When you tried to play the CD, you really enjoyed the music and felt relaxed and soothing. The next morning when you checked out, the staff gave you the breakfast-on-the-go bag as promised.

**Positive Core Attribute + Negative Facilitating Attribute**

You approached the front desk to check-in. The front desk employee welcomed you, processed your paperwork in a matter of seconds, and gave you your room keys. Then the clerk asked if you needed any assistance or had any questions and directed you to your room. In addition, he proposed to prepare a breakfast-on-the-go bag in case you would be leaving early the next morning and you agreed.

Walking through the lobby you could not help noticing the lobby and other public areas were attractively designed and were well-maintained. Entering your room you noticed the room door had a security latch. The room smelled fresh. The carpet was vacuumed. There was no dust on the furniture. All items in the room were nicely arranged.

On the working table in your room you noticed a complimentary bottle of water and a chocolate bar. When you took a closer look at them, you noticed the expiration date on the bottle had passed and the chocolate bar package was damaged. You also found a complimentary CD on the side table for relaxation. When you tried to play the CD, the CD player is not working. The next morning when you checked out, the breakfast-on-the-go bag was not available and you had to wait 15 min.

**Section 3**

**eWOM behavior:** Please imagine that you experienced the above scenario. How much do you agree or disagree with each of the following statements? (1 strongly disagree – 7 strongly agree)

14. **(Intention)** I would mention this hotel to others through online platforms (e.g. TripAdvisor or Facebook).

15. **(Frequency)** I would mention this hotel more frequently than other hotels I have stayed in my online posting (e.g. TripAdvisor or Facebook).

16. **(Thoroughness)** When I mention this hotel online, I would talk about the hotel in great detail.

17. **(Praise)** I have only good things to post online about this hotel.

**References**


