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Assessing the effects of valence and reviewers’ expertise on consumers’ intention to
book and recommend a hotel

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Abstract

This study investigates the main and interaction effects of valence and reviewers’ expertise on behavioral intentions within the context of a hotel on Tripadvisor.com. A 2 (positive vs negative review valence) x 2 (high number vs low number of reviews) factorial design experiment was conducted to assess relations among the variables. The results of the statistical analyses showed a significant interaction effect between valence and the number of reviews on the intention to recommend a hotel. Moreover, significant main effects of valence on the intention to book and recommend were also found. Importantly, positive reviews tended to lead to greater intentions to book and recommend. Also, other conclusions for research and practice are formulated.

Keywords

online reviews, valence, number of reviews, main and interaction effects, behavioral intention
Introduction

The use of travel review sites has enabled potential travelers to collect and compare a large amount of information about destinations from previous travelers (Flanagin & Metzger, 2013; Lee, Benjamin, & Childs, 2020; Zach, Ma, & Fox, 2019) and decreased uncertainty when making travel decisions (Langan, Besharat, & Varki, 2016). Travelers rely on review valence (amongst other factors) when evaluating online reviews and making purchase decisions (Cantallops & Salvi, 2014).

Review valence can appear in an online review in positive, negative, or mixed form (Sharifi, 2019). However, as positive and negative reviews are two important contradictory factors, various previous studies in the area show conflicting results (Purnawirawan, Dens, & de Pelsmacker, 2014). Some scholars have argued that positive reviews are more influential in consumers’ decision-making process (East, Uncles, Romaniuk, & Lomax, 2016; Jeong & Jang, 2011), while others consider negative reviews to play a more important role in purchase decisions (Beneke, de Sousa, Mbuyu, & Wickham, 2016; Lee et al., 2009).

Next to the review valence, consumers also consider the reviewer’s expertise (Thrane, 2017) when assessing the credibility of an online review (Martin-Fuentes, Mateu, & Fernandez, 2018). Consequently, most online review sites provide cues about the expertise of reviewers that enables readers to verify the truthfulness of a review (Lee, Law, & Murphy, 2011). One of the cues that could serve as a sign of a reviewer’s expertise is the number of reviews they have produced (Jin, Bloch, & Cameron, 2002), with a higher number of reviews indicating more experience and/or a higher expertise level for the reviewer (Cheung, Luo, Ling, & Chen, 2009; Lis, 2013). Because reviews provided by experts are considered helpful (Connors, Mudambi, & Schuff, 2011) and trustworthy (Willemsen, Neijens, & Bronner, 2012), consumers pay
attention to the number of attributed reviews when evaluating a review (Purnawirawan et al., 2014).

Within the perspective of the source credibility model, the perceived level of the sender’s expertise in a communication process is a factor that could influence the effectiveness of a message delivered to the receiver (Lis, 2013). Therefore, as a communication process, the visualization of the number of reviews in an online review site can be considered an effort to enhance the impact of the message conveyed to the readers (Keh & Sun, 2018). Consequently, understanding the role of the number of reviews as a factor that could influence consumers in their decision-making process becomes necessary.

Previous studies have revealed the significant impact of valence on many variables, such as review helpfulness (Karimi & Wang, 2017), booking intention (Ruiz-Equihua, Romero, & Casaló, 2019), credibility (Kusumasondjaja, Shank, & Marchegiani, 2012), attitude and booking intention (Roozen & Raedts, 2018). As for reviewers’ expertise, it has been found to have a significant effect on credibility (Wu, Shen, Fan, & Mattila, 2017), negative emotional content (Amatulli, De Angelis, & Stoppani, 2019), and helpfulness (Siering, Muntermann, & Rajagopalan, 2018).

Within the context of an interaction effect, valence interacts significantly with star ratings and the number of reviewers in terms of credibility (Hong & Pittman, 2020), with ethnicity on purchase intention (Lin & Xu, 2017), and helpfulness on purchase probability (Kim, Maslowska, & Malthouse, 2018). Further, expertise interacts significantly with the number of friends and platform familiarity on perceived competence (Lim & Van Der Heide, 2015) and with hotel quality on negative emotional content (Amatulli et al., 2019).

Interestingly, valence and reviewer expertise were also found to have a significant effect on perceived credibility (Lo & Yao, 2019). As the two variables (valence and reviewer expertise) were found to be important in online review studies, there is a need to take a step
forward to examine the impact of these two variables on behavioral intentions, especially in the context of hotel bookings. To the best of our knowledge, the impact (interaction effect) of valence when presented with the number of reviews (as a sign of reviewers’ expertise) on behavioral intentions is unknown. Accordingly, this study will investigate the possible main and interaction effects between the variables and behavioral intentions, namely the intention to book and intention to recommend, via a 2 (positive vs negative valence) x 2 (high number vs fewer reviews) factorial design.

In sum, the first objective of this study is to examine the main effects of valence and reviewers’ expertise on behavioral intentions. Second, we aim to investigate the possible interaction effects between valence and reviewers’ expertise. To meet these objectives, the overarching research question of the present study is: How do review valence and the level of reviewers’ expertise influence intentions to book and to recommend a hotel? Moreover, we also investigate the following research question: Is there an interaction effect between review valence and reviewers’ expertise on the intention to book and the intention to recommend?

Importantly, this study also expects to enrich the body of knowledge on the evaluation of online hotel reviews by taking into account the interaction effect between the two types of heuristic cues (valence and reviewers’ expertise) in the context of information processing that takes place in persuasive communication.
Literature Review

Heuristic-systematic model of information processing

According to the heuristic-systematic model of information processing, there are two possible ways for individuals to process information received in social communication processes, namely the heuristic path and systematic path (Bohner, Moskowitz, & Chaiken, 1995). The heuristic way allows individuals to process messages with limited cognitive effort and tends to rely on perceived signs and any available information that is not related to the content of the information itself (Chung, Lee, Koo, & Chung, 2017).

The model also assumes that individuals who are not motivated to process specific information tend to use this approach to process the information they receive (Xiao, Wang, & Chan-Olmsted, 2018). In contrast, the systematic way emphasizes the involvement of individuals’ abilities and motivation to process the main argument of the information (Hong & Pittman, 2020). Consequently, this pathway requires thorough information processing (Kim et al., 2018).

Within the context of online reviews, source identity, valence, a photograph of the reviewer, star rating, and the level of the reviewer’s expertise are some examples of heuristic cues of the messages conveyed (Chung et al., 2017), while the negativity and strength of the arguments are some of the factors that represent the systematic cues (Xiao et al., 2018). Importantly, the model also highlighted the possibility of concurrence between the two pathways, meaning that individuals could combine heuristic and systematic cues in processing information from online reviews (Yang, Shin, Joun, & Koo, 2017).
Valence

In a meta-analysis study about electronic word of mouth (eWOM), Cheung & Thadani (2010) applied Hovland’s classical theory about social communication. They considered review valence as a stimulus (message) in an online review that is transmitted from a sender to a receiver to get a particular response. The review valence is an important element in the online review field, especially when researchers try to reveal its influence on consumers’ decision making (Zou, Yu, & Hao, 2011).

Review valence can be defined as the general intonation of the message (a positive or negative tone) in a review (Sparks & Browning, 2011). Similarly, Kusumasondjaja et al. (2012) defined valence as the positive or negative orientation of information, while Quaschning, Pandelaere, and Vermeir (2015) considered valence as a positive or negative direction of information. A review is considered to have a negative valence when the message contains complaints or unpleasant or disparaging words about a particular experience or product, while a positive valence signifies the presence of compliments and pleasant words throughout the review (Purnawirawan, De Pelsmacker, & Dens, 2012).

Although review valence has been studied by a large number of researchers, studies investigating the topic have yielded varying results (Zou et al., 2011). In their study about valence and the eWOM effect, Park & Lee (2009) confirmed that a negative review leads to a greater general eWOM effect. Furthermore, the study concluded that the result depended on product type, where the impact of negative eWOM was found to be greater for experience goods than search goods. In contrast with the aforementioned perspectives, Pan and Chiou (2011) concluded that the impact of positive online reviews is greater for experience goods than for credence goods.

Within the context of the hotel industry, a large number of previous studies have indicated that a positive review has a more positive impact on consumer behavior than a
negative review (Vermeulen & Seegers, 2008), a significant influence on hotel booking intention (Lin & Xu, 2017; Ruiz-Equihua et al., 2019) and a positive image of the hotel (Torres & Singh, 2016).

For the purposes of this study, positive valence is operationalized as a positive evaluation of all aspects of the hotel presented in the experiment materials. Conversely, negative valence is operationalized as a negative evaluation of the same aspects of the hotel in the experiment materials.

**Number of reviews as a sign of reviewer’s expertise**

According to Ohanian (1990), expertise (as one of the dimensions of credibility) is the extent to which an individual is considered to have the knowledge, skills, and experience to be competent in providing accurate information to others. Correspondingly, Petty and Cacioppo argued that expertise generally refers to skills that enable a source to provide appropriate information for others (Jimmy Xie, Miao, Kuo, & Lee, 2011).

From the communication perspective, expertise (that could come from experience) is one of the factors that could determine the credibility of a communicator (Mackiewicz, 2010). Moreover, it means that the higher the expertise level of the communicator sending the message, the more credible the communicator and their message are likely to appear to the receiver, and in this case, the more likely the receiver is to be affected by the message (Lis, 2013).

As consumers are confronted with a large number of reviews from strangers in an online environment, identifying the expertise level of a reviewer can be an important task for consumers (Chung et al., 2017). When a reviewer’s expertise cannot easily be verified by a reader on a travel review website, such evaluation is normally performed by examining the past behavior of the reviewer (Weiss, Lurie, & MacInnis, 2008; Xie & So, 2018), reflected through
the number of reviews posted in the website (Liu & Park, 2015). Consequently, the number of reviews produced by a reviewer represents the reviewer’s expertise level. Within the context of this study, the number of reviews is manipulated into two general categories, namely a high number of reviews (200 reviews) and low number of reviews (1 review). A high number of reviews represents an expert reviewer, while a low number of reviews represents a non-expert reviewer.

Although considered a sign of expertise, there is no definite measure of how many reviews a reviewer must make to be considered an expert. However, previous studies in this area have used an extreme measurement ranges to distinguish experts and non-experts. Lo and Yao (2019) categorized 100 reviews as representing an expert reviewer and 10 reviews as representing a non-expert reviewer. Similarly, Hwang, Choi, and Mattila (2018), used a maximum and minimum contributor level to differentiate between expert reviewers (level 5) and non-expert reviewers (level 1).

Consumers also consider reviews provided by experts as more persuasive and reliable; consequently, they tend to rely on expert reviews when evaluating an online product/service (Hwang, Choi, & Mattila, 2018). Importantly, Willemsen et al. (2012) have distinguished between the peer review-rated experts versus self-proclaimed experts, where the peer review-rated experts are considered more credible than the self-proclaimed experts.

**Behavioral intention**

Behavioral intention is defined by Fishbein and Ajzen (1975) as a person’s tendency to execute or to perform a particular behavior. In the same way, Swan also argued that intention is a certain behavior that will be performed by an individual in the future (Lam & Hsu, 2006). Although there is a gap that cannot be ignored between intention and actual behavior, intention is still considered a good predictor for future behavior (Sheeran, 2002). Similarly, Nunkoo and
Ittoo (2013) also argue that behavioral intention is indeed considered a strong predictor of forthcoming behavior.

The present study examined a few related behavioral intention variables that could help estimate possible behaviors of tourists in their decision-making process, namely, intention to book and intention to recommend a hotel. Within the context of this study, behavioral intention is defined as the propensity of potential consumers to perform the aforementioned actions after being exposed to certain manipulated online reviews.

Considering the intangibility of the hotel industry, where consumers cannot evaluate such a product before they consume it (Yang et al., 2017), consumers tend to rely on reviews provided online by third parties (Casaló, Flavián, & Guinalíu, 2011). Furthermore, online reviews are considered credible (Stepchenkova & Zhan, 2013), and more consumers consult online reviews before making a purchase decision (Hwang et al., 2018). Likewise, according to the Pew Research Centre (2016), more than 80% of adults in the USA spend time reading online reviews before they purchase items.

**Hypotheses**

A study conducted by Purnawirawan et al. (2012) concluded that review valence significantly influences consumers’ behavioral intention. More specifically, positive reviews were proven to increase customers’ purchase intention (Jeong & Jang, 2011; Ye, Law, & Gu, 2009). On the contrary, Beneke et al. (2016) proposed that a negative review has a significant harmful effect on brand equity and purchase intention. The contradictory results above can be explained by the negativity and positivity bias. In terms of negativity, some people tend to pay more attention to negative stimuli than positive stimuli (Zhang, Craciun, & Shin, 2010), while in terms of positivity, some tend to focus on positive stimuli and judge reality favorably (Hoorens, 2014). However, in the context of a hotel, many studies have revealed that positive
online reviews of hotels were more influential on consumers’ intentions to book than negative online reviews (Lin & Xu, 2017; Ruiz-Equihua et al., 2019; Tsao et al., 2015). We, therefore, propose the following hypothesis:

H1: The positive online review valence has a greater influence on intention to book a hotel than the negative online review valence

In addition to the above behavioral intention, intention to recommend is also one of the concepts that is often used as a dependent variable in online review studies (Serra Cantallops & Salvi, 2014). Intention to recommend was found to be significantly affected by the tourist’s emotions towards a destination (Hosany & Prayag, 2013) and the reviewer’s demographic information (Su et al., 2017). Moreover, a positive review was also found as significant for the intention to recommend a product (running shoes) (Floh, Koller, & Zauner, 2013) and intention to recommend an apartment (Lee & Youn, 2009). Interestingly, Roozen & Raedts (2018) revealed that a positive evaluation of cognitive and sensory attributes of a hotel significantly influenced the intention to recommend the hotel. Accordingly, we formulate the following hypothesis:

H2: The positive online review valence has more influence on the intention to recommend a hotel than the negative online review valence.

A reviewer’s reputation for online reviews is generated by evaluating their past review activity (Lis, 2013). A study conducted by Shan (2016) also found that reputation was one of the factors that determined the reviewer’s expertise. Moreover, peer-rated expert reviewers are to be more knowledgeable (Willemesen et al., 2012) and helpful for consumers (Connors et al., 2011). As a sign of expertise, the number of reviews was found to be a significant predictor of helpfulness (Lee & Choeh, 2016; Lee et al., 2011). Nevertheless, the impact of expertise (in
the form of the number of reviews) on behavioral intentions remains unknown. Consequently, we propose the following hypotheses:

H3: The presence of a high number of reviews has a higher impact on the intention to book than the presence of fewer reviews.

H4: The presence of a high number of reviews has a higher impact on the intention to recommend than the presence of fewer reviews.

As part of the message element in the source credibility model, review valence is considered an important variable in online review studies (Lim & Van Der Heide, 2015). It was also found to be a significant predictor of behavioral intentions (Hartman, Hunt, & Childers, 2013). Furthermore, the source credibility model also introduced expertise as one of the dimensions that establish credibility in a communication process (Djafarova & Rushworth, 2017). The presence of the number of reviews as a sign of a reviewer’s expertise has proven to augment the review’s perceived credibility (Liu & Park, 2015). This feature reflects the experience and/or expertise of the reviewer, and further, could influence how a website visitor values an online review (Mackiewicz, 2010). Thus, when the review valence is displayed together with the number of reviews, the perceived credibility of online reviews could increase significantly (Erkan & Evans, 2016). Nevertheless, the impact of review valence and the number of reviews on behavioral intention remains unknown. Therefore, we propose the following hypotheses:

H5: There is a significant positive interaction effect between review valence and the number of reviews on the intention to book.

H6: There is a significant positive interaction effect between review valence and the number of reviews on the intention to recommend.
Methodology

Experiment design and materials

To test the proposed hypotheses, this study applied a factorial experiment design (2 x 2 factorial design) to investigate two factors related to valence (positive vs negative valence) and two factors related to reviewer expertise (high number vs low number of reviews). This method allowed for a study of the impact of all factors on the dependent variables (intention to book and intention to recommend). It also helped in examining the interaction effects between factors on the dependent variables.

In total, respondents read four manipulated reviews. An existing hotel review was selected randomly from a hotel review website and adjusted. For the positive review, all aspects related to the hotel were evaluated positively, while for the negative review, all aspects were evaluated negatively. Moreover, the number of reviews (higher and fewer) attributed to the same reviewer were also modified. For manipulation, we simplified the reviewer categories in the original display of Tripadvisor.com into two general categories: high number of reviews (“200 reviews”) and fewer reviews (“1 review”). The categories (200 and 1) for the number of reviews were applied based on the highest and lowest numbers of previous reviews (selected randomly) about a hotel on Tripadvisor.com located in Bali, Indonesia.

The study started with the participants examining a scenario in which they wanted to travel to Bali, Indonesia, and needed information about the local hotel. To help them make their decision, they were further told to visit a well-known travel review website (namely Tripadvisor.com) and read a review (experiment material) about a hotel in Bali. The review had the look and feel of a basic review from the site and incorporated manipulations based on the key variables of the study. The materials were pretested among a student university population (n = 33).
Participants and procedure

A study conducted by Ip, Law, and Lee (2011) revealed that travel website users can be characterized as relatively young adults with higher income and higher education backgrounds. Therefore, this study focuses on these characteristics among the Dutch-speaking population in Belgium. One additional selection criterion was incorporated; the respondents were required to have travelled abroad for tourism (for at least a week) within the last 6 months. In total, 152 panel respondents were recruited through a marketing research firm in Flanders, Belgium.

Table 1 shows the characteristics of respondents; there were 73 (48%) male respondents and 79 (52%) female respondents. In addition to the respondents’ gender, the following table also describes their demographic information. Respondents were distributed equally and randomly by the online survey software to one of the four specific experimental conditions.
Table 1. Respondents’ demographic information

<table>
<thead>
<tr>
<th></th>
<th>Frequency</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Gender</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>79</td>
<td>52</td>
</tr>
<tr>
<td>Male</td>
<td>73</td>
<td>48</td>
</tr>
<tr>
<td><strong>Age</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>25 – 29</td>
<td>64</td>
<td>42.1</td>
</tr>
<tr>
<td>30 – 35</td>
<td>88</td>
<td>57.9</td>
</tr>
<tr>
<td><strong>Education</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Professional Bachelor (Short Type)</td>
<td>74</td>
<td>48.7</td>
</tr>
<tr>
<td>Academic Bachelor (Long Type)</td>
<td>10</td>
<td>6.6</td>
</tr>
<tr>
<td>Academic Master (University Education)</td>
<td>51</td>
<td>33.6</td>
</tr>
<tr>
<td>Post-graduate education (PhD)</td>
<td>17</td>
<td>11.2</td>
</tr>
<tr>
<td><strong>Occupation</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Worker (staff)</td>
<td>2</td>
<td>1.3</td>
</tr>
<tr>
<td>Clerk</td>
<td>81</td>
<td>53.3</td>
</tr>
<tr>
<td>Civil servant</td>
<td>26</td>
<td>17.1</td>
</tr>
<tr>
<td>Teaching staff</td>
<td>22</td>
<td>14.5</td>
</tr>
<tr>
<td>Middle management</td>
<td>14</td>
<td>9.2</td>
</tr>
<tr>
<td>Senior management</td>
<td>1</td>
<td>.7</td>
</tr>
<tr>
<td>Professional (Lawyer, Doctor)</td>
<td>4</td>
<td>2.6</td>
</tr>
<tr>
<td>Self-employed (farmer, entrepreneur)</td>
<td>1</td>
<td>.7</td>
</tr>
<tr>
<td>SME Manager (below 50 employees)</td>
<td>1</td>
<td>.7</td>
</tr>
</tbody>
</table>
**Measurement**

Intention to book was measured by three statements using a 7-point Likert scale adapted from Jalilvand, Samiei, Dini, and Manzari (2012); Sparks & Browning (2011); and Sparks, Perkins, and Buckley (2013). Intention to recommend was assessed by three items using a 7-point Likert scale adapted from Casaló, Flavián, and Guinalíu (2010) and Hosany & Prayag (2013). The alpha scores for the scales used in the study are .94 for intention to book and .93 for intention to recommend. Consequently, it is proper to conclude that the measurements in this study have good internal consistency.

**Results**

**Manipulation checks**

An independent samples t-test showed that the manipulation of “number of reviews” was successful ($t(150) = -7.335, p = 0.000$). The respondents exposed to a reviewer who had completed fewer reviews ($M = 3.2, SD = 1.07$) perceived the reviewer as less experienced than those exposed to a reviewer with a high number of reviews ($M = 4.6, SD = 1.34$). A similar result was obtained for review valence ($t(304) = -35.416, p = 0.000$), where respondents exposed to a positive review perceived it as more positive ($M = 5.75, SD = 0.88$) than those exposed to a negative review ($M = 1.76, SD = 1.06$).

Next to the manipulation checks, the study also introduced a single question to check respondents’ familiarity with the hotel in the review; 99% of the respondents said that they had never heard the name of the hotel or stayed at the hotel. Respondents who did not comply with the requirement were excluded from the analysis. Concerning the familiarity of respondents with TripAdvisor.com, the majority of respondents (74%) reported that they had consulted TripAdvisor.com before planning a trip.
Data analysis

The results from a factorial design ANOVA confirmed a significant main effect of review valence on the intention to book ($F(1) = 7.309, p < .05$). This result also indicated that participants perceived positive review valence as having a greater impact on intention to book ($M = 3.50$, standard deviation ($SD$) = 1.08) than a negative one ($M = 3.04$, $SD = 0.97$). Accordingly, H1 was accepted. A similar result was discovered within the context of the other behavioral intention investigated in this study, confirming a significant main effect of review valence on the intention to recommend a hotel ($F(1) = 9.002, p < .05$). Furthermore, positive review valence was found to be more impactful ($M = 3.75$, $SD = 1.01$) than negative valence ($M = 3.28$, $SD = 0.96$). Therefore, H2 was supported.

Further analyses showed no significant main effect of the number of reviews on the intention to book ($F(1) = 0.610, p > .05$). Therefore, H3 was not supported. Similarly, the outcomes of the data analysis showed no significant main effect of the number of reviews ($F(1) = 0.212, p > .05$) on the intention to recommend. Consequently, H4 was rejected.

Pertaining to interaction effects, the results of the statistical analysis found varying results. As seen in figure 1, when the review is negative, a fewer number of reviews leads to a greater intention to book ($M = 3.27$, $SD = 0.83$) than a higher number of reviews ($M = 2.83$, $SD = 1.06$). Moreover, when the review is positive, a higher number of reviews leads to a greater intention book ($M = 3.59$, $SD = 1.23$) than fewer reviews ($M = 3.41$, $SD = 0.90$). However, there was no significant interaction effect between valence and the number of reviews ($F(1) = 3.418, p > .05$) on the intention to book. As a consequence, H5 was rejected.
As for the intention to recommend, a significant interaction effect between review valence and the number of reviews was revealed ($F(1) = 8.555, p < .05$). Further analysis on the interaction effect of review valence and the number of reviews on the intention to recommend (as summarizes in figure 2) indicates that when a review is positive, a higher number of reviews leads to a greater intention to recommend ($M = 3.94, SD = 1.03$) than fewer reviews ($M = 3.56, SD = 0.96$). For a negative review, a higher number of reviews leads to a lower intention to recommend ($M = 3.01, SD = 1.05$) than fewer reviews $M = 3.54, SD = 0.78$). For that reason, H6 was accepted.
Moreover, to reveal any significant differences in the intention to recommend caused by the interaction effect, a series of simple effect analyses was conducted. The result of the test (as summarized in table 2) indicated a significant difference in the intention to recommend when the participants were confronted with a negative review valence with fewer reviews than with a higher number of reviews ($p < .05$). While for the positive review, there was no significant difference in the intention to recommend for participants who were shown a low number or a high number of reviews ($p = .081$).
Table 2. Summary of simple effect analyses on the intention to recommend

<table>
<thead>
<tr>
<th>Review valence</th>
<th>Factors</th>
<th>Mean</th>
<th>Mean difference</th>
<th>Sig</th>
</tr>
</thead>
<tbody>
<tr>
<td>Positive</td>
<td>High number of reviews</td>
<td>3.949</td>
<td>.387</td>
<td>.081</td>
</tr>
<tr>
<td></td>
<td>Fewer reviews</td>
<td>3.561</td>
<td></td>
<td>.081</td>
</tr>
<tr>
<td>Negative</td>
<td>High number of reviews</td>
<td>3.018</td>
<td>.532*</td>
<td>.019</td>
</tr>
<tr>
<td></td>
<td>Fewer reviews</td>
<td>3.550</td>
<td></td>
<td>.019</td>
</tr>
</tbody>
</table>

| Number of review | High number of reviews | Positive valence | 3.949 | .931* | .000 |
|                  |                        | Negative valence | 3.018 |       | .000 |
| Fewer reviews    | Positive valence        | 3.561            | .012  |       | .958 |
|                  | Negative valence        | 3.550            |       |       | .958 |

*The mean difference is significant at the .05 level.

Furthermore, when the review was provided by a reviewer with less expertise (i.e., fewer reviews), participants exposed to negative or positive reviews showed no difference in intention to recommend the hotel ($p = .958$). However, when the review was provided by a reviewer with more expertise (i.e., high number of reviews), participants exposed to a positive review showed a significantly higher intention to recommend the hotel than participants exposed to a negative review ($p < .05$).
Table 3. Results of hypotheses testing

<table>
<thead>
<tr>
<th>Hypothesis</th>
<th>Variables</th>
<th>F</th>
<th>p  value</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>H1</td>
<td>Positive valence – Intention to book</td>
<td>7.309</td>
<td>.008*</td>
<td>Accepted</td>
</tr>
<tr>
<td>H2</td>
<td>Positive valence – Intention to recommend</td>
<td>9.002</td>
<td>.003*</td>
<td>Accepted</td>
</tr>
<tr>
<td>H3</td>
<td>Reviewer’s expertise – Intention to book</td>
<td>.610</td>
<td>.436</td>
<td>Rejected</td>
</tr>
<tr>
<td>H4</td>
<td>Reviewer’s expertise – Intention to recommend</td>
<td>.212</td>
<td>.646</td>
<td>Rejected</td>
</tr>
<tr>
<td>H5</td>
<td>Valence and Expertise – Intention to book</td>
<td>3.418</td>
<td>.066</td>
<td>Rejected</td>
</tr>
<tr>
<td>H6</td>
<td>Valence and Expertise – Intention to recommend</td>
<td>8.555</td>
<td>.004*</td>
<td>Accepted</td>
</tr>
</tbody>
</table>

*indicates $p < .05$

Discussion

This study examined the main and interaction effects of valence and number of reviews (as a cue of a reviewer’s expertise) on consumers’ behavioral intention by conducting a 2 x 2 factorial design ANOVA and further a simple effect analysis was applied to the significant interaction effect. Evaluating factors of online reviews that can influence consumers’ intentions in the hotel industry is very important, especially for hotel managers to understand how consumers react to different types of reviews. Besides, management can also take advantage of favorable reviews as a means of promotion and provide a measurable response to adverse reviews.

For the main effect, this study confirmed that intention to book and intention to recommend are significantly affected by review valence. As hypothesized, the results also showed that the positive review valence leads to a greater intention to book than the negative ones. This finding aligns with results of extensive prior research about the impact of review valence on the intention to book (East et al., 2016; Mauri & Minazzi, 2013). In addition, the greater impact of positive reviews on the intention to book is confirmed by earlier studies that
specifically assessed the impact of positive reviews on the intention to book (Cheung & Lee, 2008; Sparks & Browning, 2011).

The current study also found that intention to recommend a hotel was significantly impacted by review valence; a positive review leads to a greater intention to recommend the hotel than a negative one. Such an outcome is consistent with the results of preceding studies about the effect of review valence on individuals’ intention to recommend (Floh, Koller, & Zauner, 2013; Purnawirawan et al., 2014).

The present study also discovered that the number of reviews was not a significant variable in predicting intention to book or intention to recommend. Such results can be explained by considering one important factor related to the characteristics of respondents used in this study, namely the respondents’ expertise. The respondents in this study were relatively young, with higher personal incomes and education backgrounds, and had experience traveling abroad for tourism (for at least a week) within the last 6 months.

Considering such characteristics, it is proper to say that the respondents in this study were familiar with traveling and therefore also had relatively high experience and expertise in the travel planning process (including decision making for booking a particular hotel). This expertise further allowed them to evaluate the reviews using heuristic and systematic cues, which primarily rely on their motivation and knowledge (cognitive aspect) (Park & Kim, 2008; Roy, Datta, & Basu, 2017). Moreover, a similar study result disclosed by Chung et al. (2017) confirmed that all the heuristic cues of online reviews (including the expertise of the reviewer) are not considered influential in determining review helpfulness on Tripadvisor.

There was a significant interaction effect of review valence and reviewers’ expertise on the intention to recommend a hotel. This finding indicates that valence, together with reviewers’ expertise, influenced the respondents’ intention to recommend the hotel. As the respondents in this study had a relatively high level of familiarity with Tripadvisor, they easily
evaluated the reviewer’s expertise (using the “number of reviews” feature) and further assessed the reviews by conducting heuristic cue information processing. Thus, although the number of reviews was found to have no significant main effect on the intention to recommend, visualizing it along with review valence revealed a significant interaction effect on the intention to recommend.

Furthermore, the results of the simple effect analysis also revealed that for the negative review, there was a significant difference between fewer reviews and a high number of reviews on the intention to recommend. A negative review from a reviewer with fewer reviews leads to a higher intention to recommend than one from a reviewer with a high number of reviews. The condition indicated that the respondents exposed to the negative review were also influenced by the expertise level of the reviewer. Thus, despite being exposed to negative reviews, having fewer reviews still stimulates most respondents to recommend the hotel. On the contrary, when a negative review is provided by an expert reviewer, most respondents tend to believe it, and subsequently, their intention to recommend the hotel was lower.

Correspondingly, the result of the simple effect analysis also revealed that when the expertise level of the reviewer was high, a significant difference appeared between positive and negative reviews on the intention to recommend. A high level of reviewer expertise in a positive review leads to a greater intention to recommend than a high level of expertise with a more negative review. These results are in line with previous studies that found a significant interaction effect between review valence and reviewer expertise on perceived credibility (Lo & Yao, 2019), language style and reviewer expertise on attitude and intention to book (Wu et al., 2017), and review valence and reviewer expertise on the intention to buy (Plotkina & Munzel, 2016).
Conclusion, limitations, and recommendations

Overall, this study established that compared to reviewers’ expertise, review valence (especially positive reviews) played the most important role in affecting behavioral intention variables related to online reviews. Review valence was proven to affect respondents’ intention to book a hotel. More specifically, positive reviews were found to be more influential than negative ones. This study also found that review valence was an important factor that could influence the intention to recommend a hotel. In the context of negative reviews, the presence of a high number of reviews, indicating the reviewer’s expertise, could lower the intention to recommend a hotel. Importantly, the study also introduced the importance of the number of reviews as a variable that could interact with review valence in affecting intention to recommend.

Theoretically, the current study extended and updated the research on the impact and interaction effects of two types of heuristic cues on behavioral intentions within the context of experiential products, namely hotel bookings. In doing so, this study tested the extent to which reviewers’ expertise moderates the effect of negative and positive reviews of a hotel. It also supports prior academic literature concerning the impact of positive reviews on behavioral intentions related to a hotel.

Practically, results from this study imply that the visualization of reviewer expertise (in terms of the number of reviews) along with positive reviews on a travel review site could enhance the behavioral intentions of the receivers. Such a result also indicates that the number of reviews as a sign of a reviewer’s expertise on TripAdvisor can be an important feature for tourists in evaluating reviews provided on the platform. Consequently, a review site administrator needs to make sure that the feature is displayed attractively along with other features in posted reviews.
Since online reviews were perceived as a credible information source by potential consumers, hotel managers could use reviews that contain positive evaluations from those with a high number of reviews and use the characteristics as promotion material. Responses from hotel management are vital in anticipating the impact of negative reviews presented by expert reviewers. Thus, the hotel managers should pay attention and respond in a personalized or generic way to negative reviews provided by experts in an attempt to influence the negative impact on others’ intentions to recommend the hotel.

In addition to these results, the present study is also characterized by some limitations that could be addressed in future studies. First, this study used a relatively homogenous population of participants (in terms of age, education, and socioeconomic status) from one country. This restricts the applicability of the main and interaction effects of valence and expertise on the intention to book and recommend a hotel within a broader international context. Therefore, testing the same variables used in this study among respondents from diverse socioeconomic background and various nationalities will be useful to increase the generalizability of the results.

Second, further studies should take into account consumers with various levels of expertise and try to establish whether intention to book and recommend a hotel differs significantly between groups of respondents. Finally, the categorization of the expertise level in this experiment was somewhat extreme, leaving out many numbers in between (e.g., 20, 100, and 150). Future studies could use a different grouping strategy to identify the impact of various levels of expertise on consumers’ intentions to book and recommend a hotel.

Third, it would also be interesting to check the impact of different travel review sites on the eWOM-related variables examined in this study. In other words, future studies should examine whether the use of different travel review sites could influence results, as there may
be differences in individuals’ experiences with these sites and their trust in the presented reviews.

Declaration of interest

No potential conflict of interest was reported by the authors.

References


