Impact of online reviews on hotel booking intention: The moderating role of brand image, star category, and price

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ABSTRACT

This paper analyses the impact of online reviews on hotel booking intention. The moderating effect of brand image, star category, and price on this relationship was also tested. A quantitative approach has been followed by collecting questionnaires from a convenience sample of 432 customers who have previous experience with online booking. Results of the research revealed that reviews with positive valence do not affect booking intention, while reviews with negative valence have a strong impact. In addition, it was found that several moderators made this impact more or less severe. Brand image demonstrated a slight moderating effect due to the factor's inherent subjective nature. A moderating effect was also observed for both price importance and star category on the relationship. In conclusion, this study emphasizes the need for hotel managers to address online customer reviews, and specifically negative ones, to take advantage of promotional opportunities.

1. Introduction

The world has quickly become a smaller place over the last few years. Looking back at the introduction of the internet, when only a limited number of people could send simple and condensed files to one another, the present situation seems almost like the beginning of a futuristic utopia. The widespread application of the internet into quotidian life has empowered contemporary consumers in almost unlimited ways. Connected to the vast network of internet users, consumers are able to source the products which offer the greatest value, connect with communities of likeminded consumers, and share their opinions and purchase choices with friends and family in every corner of the globe. Consequently, an entirely new phenomenon has appeared in academic and industrial discourse. For researchers and business owners alike, an understanding of how consumers act and react to the content uploaded onto the World-Wide-Web by their peers and colleagues is becoming a subject of ever more critical concern. Despite unique exceptions (Saw, Goh, & Isa, 2015), the impact of Online Customer Reviews (OCR) on the consumption process (Cantallops, Cardona, & Matarredonda, 2013; Emir et al., 2016), consumer behavior (Bashar, 2014; Bhatnagar, 2018; Castro & Ferreira, 2018), and the performance of commercial enterprises (Floh, Koller, & Zauner, 2013) has been found to be significant with much compelling evidence. It has been remarked, given its

intangible nature (Yang, 2013), that the hotel industry is particularly sensitive to this digital manifestation of word-of-mouth (Hilbrink, 2017), whereby consumers seek to reduce the risks and confusion of purchasing by exploring the experiences of previous customers (Aznar, Sayeras, Segarra, & Claveria, 2018). Indeed, it has been found that the occupancy rate (Bhatnagar, 2018), perceived reliability (Kim, Kim, and Park (2017), and overall performance of a hotel (Phillips, Barnes, Zigan, & Schegg, 2017) are all affected by OCR, underscoring the need to equip hotel managers with more comprehensive knowledge on the impacts of OCR along with a collection of appropriate actions and responses. Given the desperate need for practical information, it is in this industry that this research seeks to make a contribution.

Without a doubt, it can be appreciated that the body of literature focusing on the subject of OCR is growing quite sizable, and a definite trend is becoming noticeable. However, the vast majority of previous studies have concentrated on the direct effects of electronic word-of-mouth, such as the orientation of reviews as positive or negative, known as Review Valence (RV), and its impact on purchase intention and sales. Yet, little investigation has been conducted in order to determine the function of moderators in this relationship. That is to say, little work exists to understand the way in which other factors, relating either to the consumer or to the product and service provider, reduce or increase the impact that RV has on customer purchase intentions. For

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example, some researchers have analyzed the characteristics of the review writers themselves by exploring their demographic nature, personality, trustworthiness, reputation, and expertise (e.g., Chan, Lam, Chow, Fong, & Law, 2017; Hilbrink, 2017; Pelsmacker, Dens, & Kolomiiets, 2018; Suchada, Watanapa, Charoenkitkarn, & Chirapornchai, 2018). In contrast, other researchers have investigated the characteristics of the review itself, focusing on elements such as the timeliness, helpfulness, quality, quantity, length, and valence (e.g., Browning, So, & Sparks, 2013; Fong, Kian, Fern, & Quan, 2018; Somohardjo, 2017). In an attempt to reconcile these differing aspects, some researchers have even compared the aspects of both reviews and review writers against one another (Hu, Liu, & Zhang, 2008; Ukpabi & Karjaluoto, 2018; Vrânceanu, 2017; Zhao, Wang, Guo, & Law, 2015; Zhong, Yang, & Zhang, 2014), yet there remains much debate as to which factors display the most influence on consumer behavior. Results from previous studies suggest that these aforementioned factors alter the degree with which OCR impact hotel room sales, and as such, speculate on the potential of numerous other factors that could similarly influence the impact of OCR. In this way, it is entirely possible that factors, unrelated to the characteristics or composition of the review, but stemming from the hotels position in the market could augment or diminish the impacts of OCR.

Without further efforts to better understand this phenomenon, hotel managers will be unable to effectively exploit the positions of their hotels or correct performance hindering issues, given their lack of awareness of the additional factors, beyond RV, that could affect hotel booking intention. As there is firm knowledge of the direct impacts of RV on hotel booking intention, but a lack of information on the moderating factors that could dampen or enhance this effect, this research approaches the subject of OCR from a novel perspective. This research has been designed to address this fundamental issue and remedy the crucial gap in knowledge that weakens hotel performance and general understanding of consumer behavior. Instead of focusing on the direct impacts of RV, the researcher has chosen to observe how these impacts are moderated by several factors that are somewhat in the control of the property manager. Accordingly, this research aims to, not only add to the existing body of literature concerning OCR, but to further provide the hotel industry with practical insights which can be used to enhance commercial efficiency when addressing OCR and the intermediary factors that can affect demand for hotel services. This is achieved by building on the work of other researchers who have strived to understand the dynamics of RV on hotel bookings, and by determining the degree with which moderators affect this impact. As such, the objectives of this paper are firstly, to clarify whether Positive Review Valence (PRV) or Negative Review Valence (NRV) demonstrate the greatest impact on hotel booking intentions, and secondly, to examine the effects of Brand Image (BI), Hotel Star Category (HSC), and Price Importance (PI) on this impact. In this way it will be possible to answer the research question "To what extent do BI, HSC, and PI moderate the impact of RV on hotel booking intention?". Research such as this becomes ever more critical as social media, Online Travel Agents (OTA), and review websites or applications gain popularity. As such platforms are beyond the control of hotel managers, a lack of knowledge on the subject of OCR will lead to ineffective decisions and responses, hindering the performance of hotel properties and brands. With better understanding of the impact of OCR and the unique factors that will affect hotel bookings, hotel properties will have the ability to better position themselves in the market, leverage OCR and customer comments to their advantage, and exploit unknown existing qualities.

2. Theoretical framework and hypotheses

2.1. Online customer reviews and purchase behavior

It is clear that much of the research concentrating on the subjects of online commerce (Hansen, Jensen, & Solgaard, 2004), consumer

behavior (Bagozzi, Wong, Abe, & Bergami, 2000; Kim, Kim, & Goh, 2011; Lo & Qu, 2015; Sheats, Middlestadt, Ona, Juarez, & Kolbe, 2013; Tajuddin, Zainol, & Sahil, 2014), and online content sharing (Branley & Covey, 2018), make use of the theory of reasoned action. Likewise, the use of this model has been identified as suitable for the current study. As mentioned by Gilal, Zhang, Paul, and Gilal (2019), the theory of reasoned action is a popular, extensively tested, theory with diverse applications. First presented over 44 years ago, Fishbein and Ajzen (1975) created the theory of reasoned action model in efforts to predict specific consumer intentions and behaviors. The model suggested that, behind the behavior of every individual, there was a number of distinct attitude's and beliefs that fueled intentions. The model is cyclical, proposing that, based on certain beliefs of the consequences of a particular behavior, individuals develop attitudes towards that behavior, such that the behavior is rewarding or punishing. Along these lines, the researcher is assuming that online reviews are strong predictors of the purchase decisions of hotel customers and, in addition, that there are factors that may affect this relationship.

Fang, Ye, Kucukusta, and Law (2016) defined OCR as "numerical ratings and descriptive comments" provided by current and past customers which are used to express satisfaction or dissatisfaction, often submitted with opinions or recommendations, revolving around an experience with a product or service. There is very little dispute however, disregarding the direction, as to the influence of RV. In this regard, Buttle (1998) explains that RV is the orientation of the OCR, the content of which suggesting a positive or a negative experience and, by extension, a customer's approval or disapproval of a product or service. Mauri and Minazzi (2015) confirm the importance of OCR valence in their study of the Italian hotel industry. Their research provides evidence confirming the ability for both PRV and NRV to impact the purchase decisions of potential hotel guests. Exploring the effect of valence strength, Park and Nicolau (2015), in their exploration of the London and New York restaurant industries, found that extreme OCR, being those suggesting an intense dissatisfaction or severe appreciation of a particular restaurant, to be the most enjoyable and practical for consumers. Intriguingly, it was further understood that although negative OCR were found to be more helpful in forming purchase decisions, more enjoyment was experienced from positive OCR. In their study, Filieri, Raguseo, and Vitari (2018) similarly discovered the significant impact of extreme reviews, both positive and negative, on hotel booking intention, remarking how larger hotels were more greatly affected.

2.1.1. Positive review valence (PRV) and hotel booking intention

There are differences between the findings of previous studies on whether there is an impact of OCR with PRV on consumers' hotel booking intention or not. On the one hand, numerous researchers claim OCR with PRV as having the most impact on consumer attitudes. For instance, Zhong et al. (2014) who explored the Chinese market, indicated that positive OCR had a greater impact on consumer attitudes when compared to the impact of negative OCR, such that guests better responded to, and reserved rooms based on, the recommendations of positive OCR. Similarly, Somohardjo (2017) identified the impact of RV on the purchase behavior of Dutch consumers, for which positive OCR were once again discovered to have the most significant impact on customer purchase decisions.

From a business efficiency perspective, Phillips et al. (2017) discovered that hotel properties earning positive OCR on online platforms were remarked for higher levels of performance, such that occupancy rates were higher than their counterparts with notably less positive OCR. Similarly, Hilbrink (2017) noted that, in contrast to hotels which received mixed reviews, a property with a greater number of positive OCR was more effective in attracting potential customers and obtained greater room sales. Some insights into the underlying reasons behind this superior performance can be understood from the work of Chan et al. (2017) who disclose the degree to which RV impacts hotel room

demand, with persuasive evidence indicating that positive OCR encourage potential guests to make bookings.

On the other hand, other studies have found that the positive effect of OCR with PRV on booking intentions depends on the presence of certain factors. For example, as can be withdrawn from the work of Zhong et al. (2014), the effect of positive OCR may be strengthened or weakened according to the level of detail and comprehensiveness of the review. Accordingly, positive reviews that are brief or lack specifics may have no beneficial effect whatsoever. In much the same way, Sewbhieksingh (2017) mentions that positive reviews may only be beneficial if they are positive towards, and make mention of, desirable features, such as location, facilities, and service standards. As such, positive reviews that do not make mention of typically popular facilities and requirements may also fail to produce any beneficial effect. The physical appearance of the reviews themselves also appears to influence the way in which guests perceive valence. Curiously, as Browning et al. (2013) discovered, when submitting ratings rather than written reviews, guests were generally more positive. This implies that the framing and method of submission can make a property appear more attractive to consumers. Yet, even among the researchers who contend that positive OCR are more impactful than negative OCR, there appears to be some argument regarding the way in which this effect is manifested. For example, Sparks and Browning (2011) state that OCR with PRV can mitigate the impact of negative OCR on booking intentions, but only if the positive OCR are recent. Floh et al. (2013) on the other hand, conclude that OCR with PRV only impacts customer purchase intentions if the RV can be described as being between moderate and strong, implying OCR which are mildly positive bear no impact on consumer attitudes whatsoever. Accordingly, we can assume that the more important *OCR with PRV* is to customers, the greater the impact it will have on online purchase decisions. Accordingly, the following hypothesis is proposed:

H1. *OCR with PRV have a significant impact on customers' intention to book a hotel room online.*

2.1.2. Negative review valence (NRV) and hotel booking intention

Although some researchers such as Floh et al. (2013) believe that OCR with NRV bear no impact on customer purchase intentions, many other researchers suggest the contrary. For instance, Avant (2013) found that OCR with NRV posted on the social travel network Trip Advisor had a greater impact on consumer actions than positive reviews did. Within the hospitality industry, Zhao et al. (2015) provide evidence supporting the claim that OCR with NRV more significantly impact potential hotel guest actions when compared to positive OCR. Specifically, Ghosh (2018) advocates the greater impact of negative OCR on hotel stay intentions, such that a review recommending people not to book with a particular hotel will be more influential to the reader than a review expressing satisfaction or delight with a stay experience. Yang (2013) provides the rationale for this strong impact of negative OCR on consumer purchase intention. He explains that there are risks (e.g., having a dissatisfactory stay experience) and costs (e.g., opportunity, time, and financial) associated with the purchase of a hotel room online. Negative OCR is perceived as an indicator, signaling a higher likelihood that the costs will not match the desired stay experience. As such, consumers are less inclined to make a booking with a property that generates negative OCR and more likely to look for alternatives where there is less risk that the costs of booking will be matched with a dissatisfactory experience.

It should, however, be understood that, as was the case with positive OCR, there may be less obvious factors affecting the impact of negative OCR on room booking intention. In this regard, Browning et al. (2013) mention the importance of timeliness for OCR, especially in regard to negative OCR. It was found that negative OCR which had only recently been written had a more influential impact on customer booking intentions over negative OCR which were perceived as outdated. Along

similar lines, Filieri, Raguseo, and Vitari (2019) found reviews that were extremely negative to be influential, but only when the reviewer disclosed information about their identity and expertise. This suggests, as mentioned by Park and Nicolau (2015) and Chan et al. (2017), that only when consumers trust that the reviewer is somewhat similar to themselves, in demographics and personality, do their reviews hold more weight.

Some indication as to the importance of negative OCR can be found in the work of Mauri, Minazzi, and Vannacci (2017) who highlight the tendency of high-tier hotels to respond to negative OCR. Correspondingly, it is clear that the supply side of the travel market considers the valence of OCR to be worthy of attention. Along these lines, Avant (2013) indicates how responses to negative OCR on behalf of hotel managers improves the image of the hotel, and subsequently has a positive effect on purchase intentions and customer loyalty. However, there is some debate over such findings with evidence from other researchers indicating a reverse relationship. Castillo (2016), who investigated the ways in which several hotel management teams responded to negative OCR, by weighing OCR of differing levels of satisfaction against certain responses, was able to demonstrate the ineffectivity of the practice. It was revealed that, regardless of the responses offered by the management, no positive effect was received by the reader. To a more harmful degree, Mauri and Minazzi (2015) explain how responses from hotel managers to negative OCR only increased the effect of the NRV, as interference from the hotel was seen as manipulative, and as such, discouraged the intention to book from certain potential customers. Accordingly, we can assume that the more important *OCR with NRV* is to customers, the greater the impact it will have on the online purchase decisions. Hence, the following hypothesis is proposed:

H2. *OCR with NRV have a significant impact on customers' intention to book a hotel room online.*

2.2. Brand image (BI) as a moderator

Before the introduction and popularity of the internet, Biswas (1992) demonstrated how price perceptions of consumers were strongly influenced by brand image. It was concluded that consumers, in search of new products, were less concerned with the comparative price of a product if they recognized the brand. This finding was complimented with another study, which indicated that consumers who were unfamiliar with the brand of a product were more concerned with its price in comparison to other similar products (Anselmsson, Vestman Bondesson, & Johansson, 2014).

Chiang and Jang (2007) revealed that, within the contemporary hospitality industry, consumer trust is greater in hotels with established brands. From a management perspective, such findings can be considered critical, as online purchases are typically dependent on the trust that the consumer places on the provider. The importance of this statement becomes clear in the research of Inversini and Masiero (2014) who confirm that hotel properties that display a strong BI are able to achieve a greater number of sales than their weaker counterparts. Along similar lines, Lien, Wen, Huang, and Wu (2015) validate the importance of BI in improving consumer purchase intentions in the hotel industry. Their research indicated that a strong BI significantly affected the perceived value of a hotel and positively influenced the trust that guests placed in the hotel's products and services. Furthermore, they concluded that hotels with an effective BI were able to charge higher room prices, which customers expressed as justified in consideration of the brand's proportionally higher reputation.

Therefore, BI can be understood as having a direct influence on the perceived and comparative value of a hotel and can consequently be appreciated as an influencer of customer purchase intentions (Callarisa, García, Cardiff, & Roshchina, 2012). Reinforcing this statement, Ghosh (2018) illustrates how consumers with a positive attitude towards a

particular brand of hotel are more inclined to book a room with that property. Pursuing this subject, some researchers have sought to discern the relationship between BI and OCR. In this regard, Chatterjee (2001) suggests that familiarity with a particular service provider can mitigate the effects of negative OCR, such that a customer who trusts a hotel brand will have their purchase intentions little affected by negative OCR. Moreover, as stated by Zhu and Zhang (2010), consumers considering the purchase of lesser known or unpopular products are more greatly affected by the contents and RV of OCR. The findings of both Chatterjee (2001) and Zhu and Zhang (2010) imply that customer booking intentions are unaffected by OCR when popular or well-known brands are involved, and, customer booking intentions are more significantly affected by OCR when unfamiliar or unpopular brands are concerned. As such, there is strong evidence to propose BI as having a moderating role on the RV of OCR and their impact on booking intentions. Thus, the researcher proposes the following hypothesis:

H3. *The significant impact of OCR valence on customers' intention to book hotel rooms online is moderated by the importance of BI for the customers making the reservations.*

2.3. Price importance (PI) as a moderator

Typically, as exhibited by Wang, Lu, Chi, and Shi (2015), the relationship between sales and hotel room prices is such that, as room price increases, sales decrease and vice versa. Curiously however, although there is much debate, some researchers have suggested that hotel room prices may moderate the impact of online customer RV on customer booking intention. Carroll and Siguaw (2003), who comment on the transparency of the hotel process in the digital age, argue that prices affect guest satisfaction, which influence the valence of OCR, and subsequently guide customer booking intentions.

More insights into the interactions between these variables can be extracted from the work of Agušaj, Bazdan, and Lujak (2017), who draw attention to the way in which customers predict the quality of a hotel. They suggest that the perceived quality of a service is reflected by its price, such that a high price will be associated with a higher level of service, and a lower price with a lower level of service. Therefore, the moderating role of price can be appreciated, whereby consumers expect hotels with lower prices to provide lower levels of service and are, as a result, less impacted by negative OCR in their booking decisions. These findings are further supported by Chiang and Jang (2007), who reveal how low room prices reduce the perceived quality of the hotel for potential customers, but increase the perceived value, which in turn improves the intention to make a booking.

Contradicting the aforementioned relationship, some researchers such as Green and Lomanno (2012) suggest that it is in fact the OCR that determine the prices of hotel rooms. In some cases, such as in the study of Sewbhieksingh (2017), it was suggested that consumers were willing to pay more for a hotel room if the property had at least one OCR, regardless of the RV. However, it was noted that OCR focusing on the price of the hotel had no impact on customer purchase intentions. To a more extensive degree, Aznar et al. (2018) and Castro and Ferreira (2018) provide evidence that illustrates how positive OCR enables hotels to set higher room prices. Therefore, the following hypothesis is proposed:

H4. *The significant impact of OCR valence on customers' intention to book hotel rooms online is moderated by the importance of price for the customers making the reservations.*

2.4. Hotel star category (HSC) as a moderator

There is some argument in the existing literature concerning the effect of HSC in moderating the impact of OCR on hotel booking intentions. For instance, certain researchers, such as Pelsmacker et al.

(2018), maintain that the HSC of a hotel bears no moderating effect between the valence of OCR and hotel booking intentions. Differently, other researchers assert that, under certain conditions, HSC exercises some effect on hotel booking intention. In this regard, Wang et al. (2015) explain that, should a hotel's OCR be overwhelmingly negative, only then will the HSC have a strong moderating effect on customer purchase decisions.

Yang (2013) similarly suggests that HSC exhibits a moderating effect, but in specific instances only. He explains that sales in hotel properties with low HSC's are generally little affected by OCR. This confirms a moderating effect, where people are prepared for the benefits and disadvantages of staying in a lower quality establishment, and as a result, do not need OCR to reassure them of their purchase choices. However, Yang (2013) argues that properties with higher HSC's are more greatly affected by OCR, as consumers feel that the increased cost should be associated with an increased level of service. This in turn raises the fear that the level of service will not match the higher cost and augments the risk of the purchase.

In contrast, Agušaj et al. (2017) defend HSC as demonstrating a clearly observable moderating effect. Their research reveals that HSC provides consumers with experience expectations, in which each star category denotes different benefits and disadvantages. Accordingly, consumers who seek to make bookings with a 3-star hotel are little affected by NRV, as they accept that the hotel quality should be low, to reflect a lower HSC. Along similar lines, as Agušaj et al. (2017) continue, given that properties with higher HSC's are costlier, consumers tend to be less critical of their apparent shortcomings. They justify the cost of the experience with the prestige of the property, which they assume has a high HSC as the result of a high standard of quality, and do not actively search for information to disprove this assumption. Hence, the following hypothesis is proposed:

H5. *The significant impact of OCR valence on customers' intention to book a hotel room online is moderated by the preference for a certain HSC for the customers making the reservation.*

3. Methodology

3.1. Research approach

The main objective of this study is to test the direct influence of online reviews on hotel booking intention as well as to study the impact of three moderators (BI, HSC and PI) on this relationship. For these purposes an empirical approach to data collection through the distribution of questionnaires was adopted. Several previous studies, in the field of tourism in general (e.g., Gurel, Altinay, & Daniele, 2010; Ram, Björk, & Weidenfeld, 2016) and in the context of online reviews in particular (e.g., Agag & El-Masry, 2016; Ladhari & Michaud, 2015; Park & Lee, 2009), have adopted a similar approach to data collection by using questionnaires to measure both the direct impacts of OCR and the moderators that affect them.

3.2. Measures

To compile the data needed to test the hypotheses of this study, a questionnaire consisting of six constructs was designed (Appendix A). The first construct included questions related to the demographic characteristics of the participants such as gender, social status, internet usage and preferred accommodation type. The first two moderating constructs of PI and BI were measured on a five-point scale (1 = 'very unimportant', 5 = 'very important). The PI construct was assessed through a five-item scale derived from the work of Lien et al. (2015) (e.g., "The reasonability of the hotel price and the affordability of the hotel price"). Similarly, the importance of the BI construct was measured through a three-item scale adapted from the work of Lien et al. (2015) (e.g., "The reliability of the hotel brand and the reputation of

Table 1
Measures.

Measure/items	Factor loadings	Cronbach's alpha
Measure 1: Price importance (PI)		0.804
The affordability of the hotel price	0.874	
The reasonability of the hotel price	0.861	
Inexpensive price listed by the hotel	0.827	
The appropriateness of the hotel price	0.823	
The good value for the price offered by the hotel.	0.760	
Measure 2: Brand image (BI)		0.867
The attractiveness of the hotel brand	0.876	
The reliability of the hotel brand	0.871	
The reputation of the hotel brand	0.841	
Measure 3: Positive review valence (PRV)		0.818
I pay more attentions to positive reviews	0.937	
positive reviews are of more values	0.877	
I pay more attentions to hotels which have larger volume of positive reviews	0.656	
Measure 4: Negative review valence (NRV)		0.817
An abundance of positive reviews will make you dislike a hotel	0.870	
Negative reviews will terminate your booking intentions	0.822	
The volume of negative reviews is important	0.800	
Measure 5: Hotel booking intention (HBI)		0.803
Online reviews are my main information channel before I book a hotel	0.890	
Online reviews affects my intention to book a certain hotel	0.814	
I always pay close attention to hotel reviews when I book hotels	0.786	

Note: Kaiser-Meyer-Olkin *(Measure of Sampling Adequacy)* = 0.733; $\chi^2 = 15{,}852.069$, $P = .000$.

the hotel brand"). The third moderating construct was measured using a multi-categorical variable, namely "Which one of the following hotel star categories matches your preference better when you stay at hotels? (e.g., 5-star, 4-star, or 3-star hotels). Previous researchers (e.g., Cohen, Cohen, West, & Aiken, 2003; Hayes, 2018; Hayes & Darlington, 2017) confirmed the possibility of using a multi-categorical variable that includes k categories as a predictor in the regression model by coding its groups with $k - 1$ variables.

Both the RV and Hotel Booking Intention constructs were measured on a five-point scale (1 = 'strongly disagree', 5 = 'strongly agree'). The scale developed by Zhao et al. (2015) was employed to assess PRV (three items, e.g., "I pay more attention to hotels which have a larger volume of positive reviews") and NRV (three items, e.g., "Negative reviews will terminate my booking intentions"). Finally, hotel booking intention was measured using a three-item scale adapted from the work of Lien et al. (2015) (e.g., "online reviews affect my intention to book a certain hotel"). Cronbach's alpha was used to measure the reliability of all the survey constructs by assessing the internal consistency of the items (see Table 1). Reliability coefficients ranged from between 0.803 (for booking intention) to 0.867 (for BI), surpassing the cutoff level of 0.60 suggested by Hair, Anderson, Tatham, and Black (1998).

3.3. Sampling and data collection

The target population for the current study was comprised of hotel customers who made at least one online hotel reservation in the last three years, and typically considered OCR prior to making their reservations. A non-probability sampling technique was used in the data collection process because of the difficulty in specifying the target population (Gabor, 2007). Following this technique, the researcher distributed online and offline surveys through a convenience sampling method. The online survey was designed on google forms, and the

survey link and cover page were sent to customers through private messages on their social media accounts, especially through Trip Advisor. The offline survey was distributed to hotels located in four Egyptian touristic cities (Alexandria, Cairo, Hurghada, and Sharm El-Sheikh) with the coordination of the human resource departments of the hotels, and through the help of the employees working there.

To guarantee the collection of valuable information in relation to the research topic, the eligibility of the respondents needed to be approved. This was done according to the recommendations of Viswanathan (2005), whereby two questions were asked. These questions were related to the participants usage of electronic platforms in booking their hotel accommodations as well as their interest in reading online reviews about hotels before making the online reservation (e.g., did you make a hotel reservation online at least once during the last three years). The answers to these two questions were used to determine the cut off points for eliminating some respondents, such as those who had not made an online reservation before or those who were not interested in reading online reviews about hotels before making online reservations. Additionally, to ensure homogenous results, the researcher eliminated the responses of participants who chose properties with less than three stars as their preferred type of accommodation. Those who preferred other types of accommodation, such as hotel apartments and motels, were similarly excluded. In total, 493 responses were received from which 432 were qualified for inclusion in statistical analysis. The remaining 61 samples were filtered out either because they did not meet the eligibility criteria previously outlined, or because their responses were incomplete. To ensure homogeneity of the collected responses, an Independent Sample *t*-test was performed to compare the means of responses of customers who answered the online survey and those who answered the offline survey and no significant differences were detected.

3.4. Data analysis techniques

SPSS (Version 25) was used to analyze the data for this study. First, reliability analysis was performed through running Exploratory Factor Analysis (EFA) and calculating Cronbach's alpha for all the constructs. Factor loadings were calculated using, principle component analysis as the extraction method, and Promax with Kaiser normalization as the rotation method. Second, descriptive statistics were used to describe the profile of the participants. Third, enter regression method was used to test the first two hypotheses concerning the impact of OCR, whether positive or negative, on hotel booking intention. Finally, hypotheses 3–5, concerning the moderating effect of PI, BI, and HSC on the impact of OCR (whether positive or negative) on hotel booking intention, was measured using the PROCESS macro for SPSS and SAS (Version 3.2.01).

4. Results

4.1. Profile of participants

Of the 432 participants, males accounted for 57.3% while females represented 42.7%. Half of the participants were single (50%) and the other half were either married (45.3%) or of other status (4.7%). The sample represented various age groups with a higher percentage for those between 18 and 35 (55%) and a lower percentage for those above 60 years old. Around two thirds of the participants held a bachelor's degree or higher certification (72%) with the remainder engaged in the pursuit of other degrees. The majority of the participants stated that they were heavy users of the internet (73.7%) such that they were always connected, while the remaining respondents indicated that they only accessed the internet once a day on average. With respect to preferred type of stay, in order of popularity, 41% of the participants preferred to stay in 4-star hotels, followed by those who preferred to stay in 5-star properties (32%), and those who preferred to stay in 3-star hotels (27%). As for the time spent reading OCR before booking a hotel,

Table 2
Multiple regression analysis for the effect of OCR on hotel booking intention.

Variables	B	Std. error	Beta	t value	*P* value
Constant	2.337	0.112		20.957	0.000
Positive review valence	0.004	0.018	0.004	0.196	0.844
Negative review valence	0.458	0.019	0.520	24.168	0.000

Note: $R^2 = 0.270$, Adjusted $R^2 = 0.269$, F = 294.352, $P < .01$.

the highest proportion of customers (39.8%) spent around 6–10 min reading reviews before booking. Regarding the importance of OCR, most respondents decided that both positive and negative OCR were of the same importance to them (68.4%), while 24.6% responded that they only cared about the negative reviews, and the lowest percentage indicated that they only cared about the positive reviews (7%). As for the number of hotel reservations per year, more than half of the respondents (56.6%) stated that they made at least two or three reservations per year, and 23.5% of the survey participants stated that they made more than five reservations per year, supporting the relativity of the sample with the study objectives.

4.2. Hypothesis testing

4.2.1. Effect of OCR on booking intention

Enter regression analysis was used to test the first two hypotheses (Table 2), namely, the impact of OCR with PRV (H1) and OCR with NRV (H2) on hotel booking intention. Results of the regression analysis did not support the first hypothesis concerning the impact of OCR with PRV on hotel booking intention ($\beta = 0.004$, $P > .05$). Therefore, H1 is rejected. Conversely, OCR with NRV was found to be a strong predictor of hotel booking intention ($\beta = 0.4584$, $P > .01$). Hence, H2 is supported.

4.2.2. Moderators' effect

As there is no direct effect from OCR with PRV on hotel booking intention, there is no need to conduct the moderation analysis against PRV as recommended by Hayes (2018). Therefore, the current study will only test the impact of the moderators on the existing relationship between OCR with NRV and hotel booking intention. For the sake of brevity, the researcher has chosen to refer to OCR with NRV as NRV.

4.2.2.1. BI (high importance versus low importance).
Results of the moderating effect of BI (H3) are shown in Table 3 and Fig. 1. The binary interaction between BI importance and NRV resulted in a small change in the relationship between NRV and hotel booking intention ($F = 203.838$, $p = .000$, $R^2 = 0.27$, R^2 change = 0.0034). In concrete, results of the conditional analysis showed that the relationship between NRV and hotel booking intention becomes stronger for customers who consider BI as a highly important factor when choosing a hotel (β increases from 0.464 to 0.522, $p < .001$), while the same relationship gets weaker for customers who consider BI as a factor of little

importance when choosing a hotel (β decreased from 0.464 to 0.407, $p < .001$). Since the effect of the moderator (BI) was tested only for the relationship between NRV and hotel booking intention, H3 is partially supported.

4.2.2.2. PI (high importance versus low importance).
For the NRV × PI interaction, displayed in Table 4 and Fig. 2, the moderated regression analysis test showed that, for the respondents, PI moderates the relationship between NRV and their hotel booking intentions ($F = 237.401$, $p = .000$, $R^2 = 3.1$, R^2 change = 0.0342). Results of the conditional analysis showed that the effect of NRV on hotel booking intention is higher when the price is less important to customers (β increases from 0.447 to 0.685, $P < .001$), while the effect is less when the price is highly important for customers (β decreases from 0.477 to 0.209, P, 0.001). Accordingly, H4 is partially supported, as the effect of the moderator (PI) was not proven for the relationship between PRV and hotel booking intentions.

4.2.2.3. HSC (4-star stayers versus 3-star stayers).
To understand the moderating effect of HSC, the upgraded PROCESS macro (Version 3.2.01) was used, and the indicator coding technique was employed (1 = 5-star hotel stayers, 2 = 4-star hotel stayers, 3 = 3-star hotel stayers). As recommended by Hayes (2018), when k = 3 the group with zeros on D1 and D2 in the output is called the reference group, which is the 5-star hotel category in this research (D1 = D2 = 0), with D1 coding the 4-star hotel stayers (D1 = 1, D2 = 0) and D2 coding the 3-star hotel stayers (D1 = 0, D2 = 1).

The moderated regression analysis test (Table 5) revealed that manipulating the HSC has a significant impact on the relationship between NRV and hotel booking intentions ($F = 181.03$, $p = .000$, $R^2 = 0.28$, R^2 change = 0.053). Moreover, the interaction effect revealed a significant difference between those who preferred to stay in 5-star hotels versus those who preferred to stay in 4-star hotels ($\beta = -1.322$, $t = -6.449$, $p < .001$). There was also a large difference between those who preferred to stay in 5-star hotels versus those who preferred to stay in 3-star hotels ($\beta = 0.9062$, $t = 4.801$, $p < .001$). Moreover, as shown in Fig. 3, the relationship between NRV and hotel booking intention varies significantly depending on the type of HSC stay preference. It is apparent that the effect of NRV on hotel booking intention is stronger for customers who prefer to stay in 4-star hotels (β increases from 0.401 to 0.758, $p < .001$) than for people who prefer to stay in 3-star hotels (β decreases from 0.401 to 0.248, $p < .001$). Hence, H5 is partially supported.

4.3. Discussion of results

Analyzing the effects of RV on hotel booking intention, OCR with NRV was found to exhibit a significant influence. In contrast, a similar impact from OCR with PRV was found to be impotent, complimenting the findings of Avant (2013) who additionally noted the increased speed with which negative OCR spreads. Yet, the underlying arguments
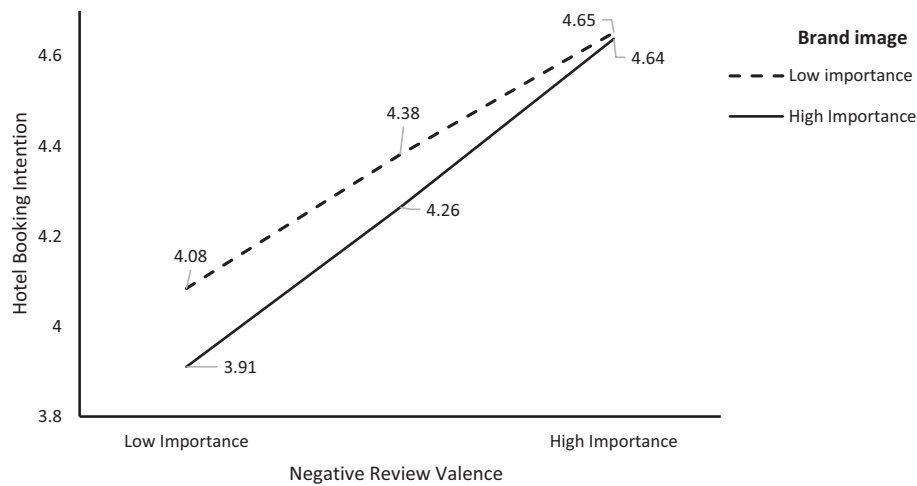
Table 3
Moderated regression analysis for NRV × BI.

	Coefficient	SE	t	p	LLCI	ULCI
Constant	4.348	0.0142	306.73	0.000	4.320	4.375
Negative review valence	0.464	0.019	24.581	0.000	0.427	0.501
Brand image	−0.045	0.019	−3.073	0.002	−0.073	−0.016
Negative review × brand	0.059	0.022	2.743	0.006	0.017	0.101
Conditional effect of negative reviews on booking intention at different values of brand image						
Low brand image importance	0.407	0.027	15.212	0.000	0.354	0.459
Moderate brand image importance	0.464	0.019	24.581	0.000	0.427	0.501
High brand image importance	0.522	0.030	17.633	0.000	0.464	0.580
R^2/ sig.	0.2775/0.000					
R^2 change/ sig.	0.0034/0.0062					

Fig. 1. NRV × BI interaction effect for hotel booking intention.

Table 4
Moderated regression analysis for NRV × PI.

|	Coefficient	SE	t	p	LLCI	ULCI
Constant	4.3317	0.0140	309.75	0.000	4.304	4.359
Negative review valence	0.447	0.016	24.216	0.000	0.411	0.483
Price	0.0604	0.0248	2.4368	0.014	0.0118	0.1091
Negative review × price	−0.3438	0.039	−8.8776	0.000	−0.420	−0.268
Conditional effect of negative reviews on booking intention at different values of price						
Low price importance	0.685	0.032	21.358	0.000	0.622	0.748
Moderate price importance	0.447	0.016	24.216	0.000	0.411	0.483
High price importance	0.209	0.033	6.317	0.000	0.144	0.274
R^2/ sig.	*0.309/0.000*					
R^2 change/ sig.	*0.0342/0.000*					
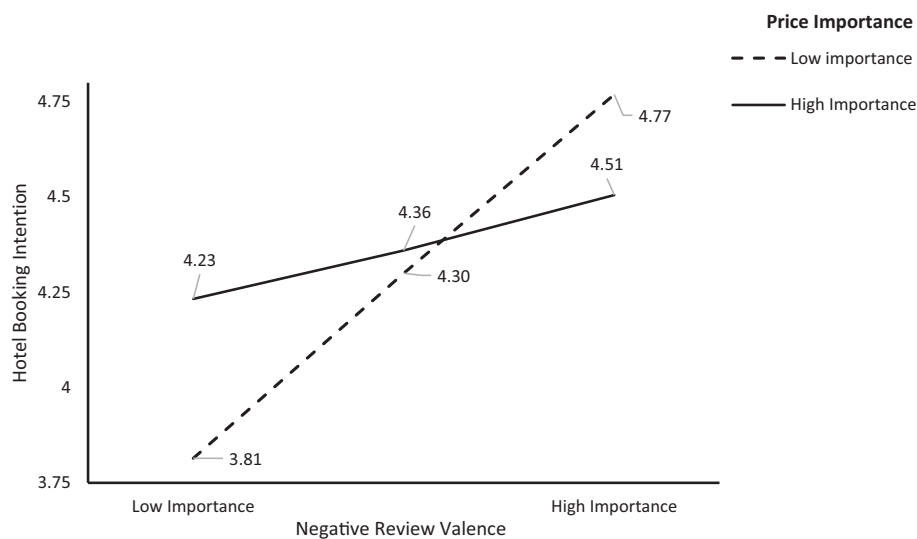
Fig. 2. NRV × PI effect for hotel booking intention.

to rationalize the inclination that potential hotel guests have towards OCR with NRV, rather than PRV, remain to be clarified. Ghosh (2018), who identified analogous findings concerning RV, attributed consumer preference for OCR with NRV to "The Theory of Negativity Bias". Accordingly, consumers favor negative information due to its perceived analytical tone, which is considered more relevant, detailed, and focused than positive information. Differently, Zhao et al. (2015) associated the predisposition of consumers towards NRV to the heightened risks of purchase arising from the intangibility of the hotel product.

Unifying these two interpretations, it can be understood that consumers, when intending to make hotel bookings, actively search for OCR which highlight why they might dislike a particular hotel, rather than focusing on the endorsing commentary.

In speculation, consumers may consider PRV irrelevant as it merely discloses a hotel's fulfilment of its basic obligations, achieved by maintaining a commonly accepted standard level of service, which consumers believe should be ordinary practice. However, as addressed by Hu et al. (2008) and Hilbrink (2017), the disparate impacts of

Table 5
Moderated regression analysis for NRV × HSC.

	Coefficient	SE	t	p	LLCI	ULCI
Constant	2.389	0.139	17.162	0.000	2.116	2.662
Negative review valence	0.401	0.032	12.717	0.000	0.339	0.463
5 & 4 Star	−1.322	0.205	−6.449	0.000	−1.724	−0.920
5 & 3 Star	0.906	0.189	4.801	0.000	0.536	1.277
Negative review × (5 & 4 star)	0.357	0.046	7.839	0.000	0.268	0.447
Negative review × (5 & 3 star)	−0.153	0.044	−3.476	0.001	−0.240	0.067
Conditional effect of negative reviews on booking intention at different star categories						
Five star hotels (reference group)	0.401	0.032	12.717	0.000	0.339	0.463
Four star hotels	0.758	0.033	23.055	0.000	0.694	0.823
Three star hotels	0.248	0.031	8.023	0.000	0.187	0.308
R^2/sig.	0.3628/0.000					
R^2 change/sig.	0.0533/0.000					

positive and negative RV are more likely related to the notion of trustworthiness. A recurring topic in the literature, the issue of OCR trustworthiness was further raised by the respondents of the current study. One participant stated that "(positive) reviews can't be trusted, as many of the property's employees write fake reviews", exposing how consumers are convinced that hotel managers manipulate the reviews for the benefit of their properties. Thus, consumers consider OCR with PRV to be an extension of a hotel's marketing activities and not a reflection of the actual stay experience, to which they respond with caution and wariness.

Another participant explained that "Positive reviews can't be trusted as they tend to be written by loyal customers who only mention the positive elements of a hotel and fail to mention the many negative ones". This latter statement implies that positive OCR are untrustworthy as the review writers themselves have personal biases which affect their impartiality. Whether a review writer promotes a property due to a satisfactory experience or inherent bias, it should be understood that they may have needs and wants that are entirely unaligned with those of others. As such, any reviews that they write, may be perceived as irrelevant or untrustworthy to review readers. Comparatively, negative OCR is presumed to be damaging to a hotel, and the fabrication of negative OCR from hotel managers would appear to be illogical and counterproductive. Furthermore, OCR which highlight a property's shortcomings mentions aspects which readers easily empathize with, regardless of the writer's possible partiality to a particular property. Therefore, it can confidently be stated that, OCR with NRV are impactful on hotel booking intentions as they are regarded to be trustworthy by potential hotel guests. In contrast, the lack of influence from OCR with PRV can be attributed to the low levels of

trustworthiness which consumers attribute to them.

The moderating effect of PI, which can be described as strong, is confirmed by observing Fig. 2. As had been anticipated, for those respondents who indicated price as important, hotel booking intention remained relatively resilient to NRV. This affirmed the work of Carroll and Siguaw (2003) who explained that price sensitive consumers judged the suitability of a hotel and its services solely based on the advertised price. This explanation suggested that, once consumers had determined the price they were willing to spend on a hotel booking, they would only search for properties that met that particular price criteria, disregarding any ancillary information. Therefore, as the price of the booking is the only, or most critical, factor of consideration, these consumers are unaffected by OCR which are treated as irrelevant, since commentary focusing on service delivery, quality, or hotel features do not affect the price. Alternatively, a resistance to the impacts of NRV could be attributed to consumer expectations as argued by Agušaj et al. (2017). Consumers accept that room prices reflect service quality proportionally, such that low prices produce low quality experiences. As such, they are unaffected by OCR which redundantly confirm these expectations. However, these explanations are only valid for those who are severely, or fundamentally, price sensitive and may not accurately expose the common behavior of consumers in general who typically make purchase decisions based on a variety of factors.

The reality of the average situation is more clearly revealed by one respondent who commented "I always look for the cheapest price first. Then I look at the reviews of the last few months. I can always pay a little bit more for a place where I will be comfortable and where I will have more amenities". Therefore, though price is the primary factor when considering a hotel booking, price sensitive consumers still
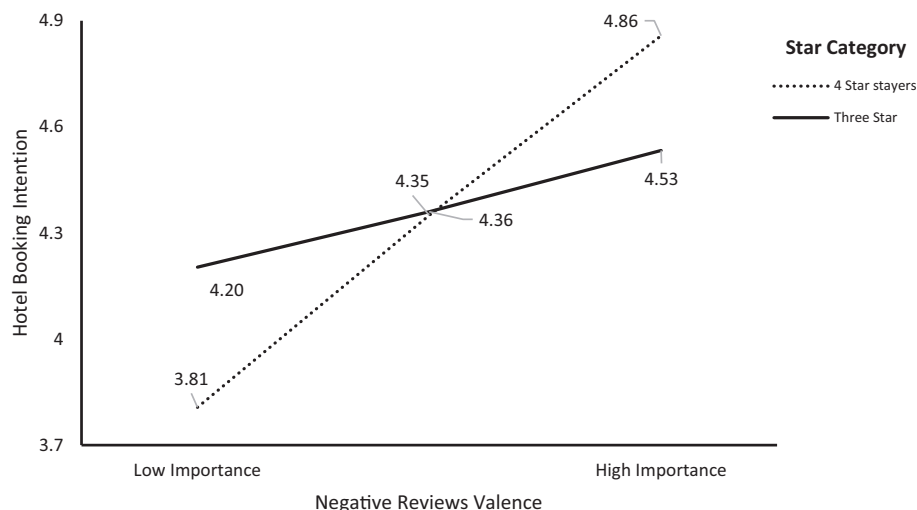

Fig. 3. NRV × HSC interaction effect for hotel booking intention.

appreciate OCR as a tool to enhance decision making abilities. In this way, it could be more accurately argued that price sensitive consumers determine an acceptable price range, collect the hotels that fall within this price range, and then make use of OCR to identify the most suitable property. The most suitable property being the one which best reflects their willingness to pay, and adequately meets, to a less crucial degree, their personal preferences. The willingness to pay is determined according to analytical decisions that depend on what the consumer can afford, and represents a tangible sum bearing an opportunity cost. Though there exists an expectation of services based on price, the suitability of hotels is confirmed through the identification of properties that exhibit the best value for money, being the properties that provide the best service when compared to other establishments within a certain price range. This argument better interprets the pattern of price sensitive respondents in Fig. 2, by accounting for the slight increase in hotel booking intention linked with the greater importance of NRV.

Investigating the moderating influences of brands, Chatterjee (2001) and Vermeulen and Seegers (2009) had previously mentioned how familiar hotel brands could be less sensitive to the effects of RV. This implied that consumers who had brand preferences would be less influenced by OCR in their purchase decisions. In the current study, the researcher attempted to discern the moderating effect of BI, being composed of the perceived attractiveness, reliability, and reputation of a hotel brand. Respondents were requested to give their opinions on hotel brands in general, including those unfamiliar to them, leading to an outcome unlike that of the moderating effect of brand familiarity. The results did reveal a definite moderating effect, as observed in Fig. 1, though it was manifested in such a way that, those respondents who described BI as important were more sensitive to NRV than those of differing perspectives concerning BI.

These findings are more clearly understood in the following way. Consumers who indicated price as important made purchase decisions based on their willingness to pay. This willingness to pay was rather inflexible, rationally justified, and related to the numerical figure of the price, which could be linked to a tangible amount of money. Accordingly, PI exerted a moderating effect that resisted the effects of NRV. In contrast, consumers who regarded BI as important formed their purchase decisions based on individual personal preferences using emotional judgement. These preferences were highly subjective to the hotels intangible qualities and could not be rationally explained. As there were no opportunities, before purchase, to sample the experience of the brand, these consumers, by necessity, relied on word-of-mouth to form decisions. Moreover, factors such as reputation are, by inherent nature, dependent on the opinions of other consumers and critics, and therefore knowledge of a brands reputation must be sourced from word-of-mouth.

Therefore, for those consumers who valued BI, OCR were fundamental instruments in shaping purchase decisions. This rationalization is reinforced using one of the respondent's comments which explains that "The most important thing when making a reservation in any hotel, is the assurance that the hotel will provide new services for their guests regardless of the price". It can therefore be appreciated that, these consumers have no rational anchor, such as a price amount, to base decisions on, and can only determine the suitability of a brand by exploring the experiences of previous customers or critics. Accordingly, the increased sensitivity to NRV displayed by this group of consumers should be accepted as logical.

Curiously, HSC displayed a moderating effect which was both resilient and sensitive to NRV. As illustrated in Fig. 3, consumers who preferred 3-star hotels were little affected by NRV, and consumers who preferred 4-star hotels were greatly affected by NRV. The explanations rationalizing such contradictory effects regarding moderating influence echo those of PI and BI. For the consumers who indicated a preference for 3-star hotels, resilience to NRV could be associated to a low expectation of service, as mentioned by Agušaj et al. (2017). Consumers with a preference for properties with lower HSC's anticipated the

service quality of such hotels, which conform in regards of image and facilities, to be low, reflecting the lower ranking. Therefore, it can be appreciated that this group of consumers expected a stay experience in a 3-star hotel to include some negative aspects or discomforts, and thus generate OCR with NRV in consequence. As NRV redundantly reaffirms the expectations of these consumers, it has a neutral effect on their booking intention. Furthermore, the decision to book with a hotel of lower HSC was justified by the perceived logical benefits of that property, as determined by the individual themselves, with considerations such as the value for money received, the convenience of the location, or the availability of rooms. These other factors reduce the risk of purchase, such that the potential for a dissatisfactory experience is associated with a minimal opportunity cost. Accordingly, as the lower service quality of the hotel has been anticipated and weighed against other more influential factors, NRV bears little impact on the booking intention of consumers who prefer 3-star hotels.

In comparison, the sensitivity to NRV of consumers who preferred 4-star properties could be linked to a higher expectation of service quality from such hotels, which are typically distinct from one another regarding image, facilities, and style. As this group of consumers expected properties within this range of HSC to generate positive OCR, the presence of negative OCR served as a shocking indicator of the degree to which the property was underperforming and undeserving of its higher ranking. Furthermore, as properties of higher HSC's leverage their intangible qualities, such as ambience, mood, and prestige, to attract customers, individual consumers are required to make purchase decisions based on their personal emotional needs. As the suitability of the hotel requires the consumer to weigh the qualities of the hotel subjectively, NRV exerts a strong influence over the consumer, given the difficulty in measuring abstract factors without word-of-mouth. As such, it can be recognized that booking a 4-star hotel property involves a higher risk of purchase, such that the potential for a dissatisfactory experience is associated with a significant opportunity cost, where the emotional needs of a consumer can't be disregarded in favor of the booking price, the hotel location, or the availability of rooms. Therefore, as there is a need to verify the higher service quality of a hotel, and as there are few other sources from which to determine the subjective suitability of a property, NRV exercises a powerful impact for consumers who prefer 4-star properties.

5. Practical implications

The data and analysis presented within this study have capacities for application in industrial discussions and contemporary hotel management operations. An important implication is the high impact of NRV on hotel booking intention, which underscores the necessity for hotel managers to respond to negative OCR quickly and effectively. Avant (2013) had suggested that even ineffective responses from hotel managers, being those that address customer dissatisfactions inadequately or incompetently, resulted in more desirable outcomes for the hotel property as opposed to ignoring or disregarding negative OCR. The urgency of these responses is highlighted by Browning et al. (2013) who note that favorable outcomes from hotel management responses are largely dependent on the rapidity with which the management addresses online customer concerns. Furthermore, both Avant (2013) and Hilbrink (2017) explained how responses from hotel managers could alleviate the displeasure of dissatisfied customers by communicating a genuine concern for service failures. These communications could serve to enhance a hotel property's reputation and trustworthiness, and open a new channel through which promotional activities could be performed. Awareness of the effective format and content of these responses is understood through the work of Castillo (2016). Effective responses should avoid being defensive, in which the hotel management denies responsibility and tries to reduce or redirect blame for service failure. Instead, the property manager should be accommodative, by accepting accountability and seeking to make amends

through some form of compensation.

However, the importance of trustworthiness should be considered when managing OCR. Therefore, it is advised that hotel properties maintain a presence, and be active in, third party websites that focus on reviewing and rating hotel services. For the greatest effect, the websites should be chosen based on their reliability as determined by consumers. Though, as opposed to communicating through the property's official media channels only, this implies the hotel would lose control over the display of OCR. Yet, such attempts to reach out to past and potential customers on neutral platforms, reduce the public's suspicion of any manipulation from the hotel management. Furthermore, as negative OCR is likely to spread extensively and rapidly beyond the official platforms anyways, active participation with third party websites allows the hotel to exercise a higher level of damage control.

This study has also highlighted a number of factors that influence the effect of NRV on hotel booking intention. This provides hotel managers with some insight, depending on the position of their hotels, on how best to respond to OCR and promote their properties. Firstly, given the resilience of price sensitive consumers towards NRV, should a property generate higher than average levels of negative OCR, reducing the price could maintain the hotel's booking levels and allow the property's survival while the manager addresses the cause of the negative OCR. Secondly, given the sensitivity to NRV of consumers who value BI, it is critical that the management of a property maintains a relationship with its past customers by responding frequently to OCR, both positive and negative. These responses should deliver the impression of sincerity and genuine concern for the hotel's customers, while demonstrating an enthusiasm for accepting guest requests. This encourages potential customers to consider the hotel brand sympathetically and informs them of the hotels ability to meet their emotional needs. Lastly, hotel properties should be aware of their HSC and behave accordingly. Hotels of lower rankings should promote themselves as being of the same standard and level of service as their competitors, thereby attracting those consumers who are comfortable with, and actively seek, properties of those quality levels. Though such hotels need to focus less on OCR, they need to be sure to match the expectations of their customers, who have a preference for certain standards of service delivery. Higher tier hotels, on the other hand, need to consistently address OCR for their properties, and be ready to respond to negative OCR quickly and effectively. In this way they can develop strong links with their past and potential customers and easily connect with them on an emotional level.

6. Conclusion

This study has produced valuable knowledge for the academic and industrial discussions relating to the impacts of OCR on commercial performance. The confirmative findings of this study are best summarized with one of the comments provided by the survey respondents, who explains "For me, word of mouth is the most valuable consideration when making a hotel room booking. So, I always check online reviews before I commit to a hotel". Acknowledging the significance of this statement, it is clear that OCR have become critical factors in the tourism and hospitality sectors, occupying a near commonplace position in the purchasing habits of consumers. The popularity of OCR as a tool in the mainstream consumption of hotel services can be interpreted from other respondent comments which advocate OCR as facilitating choices quickly and effortlessly, while further empowering customers towards gaining the attention and responses of hotel managers following dissatisfactory experiences.

The data collected and presented herein support the arguments of preceding researchers, such as Bashar (2014) and Emir et al. (2016), who maintain OCR as exerting an unmistakable influence on hotel booking intention, a subject which academics and industry stakeholders continue to debate to this day. Such work provides additional arguments to conclude these disagreements and ultimately discern the true

nature of OCR and their impacts. As with many other research works, the author of the current study predicted and demonstrated how additional factors could alter the relationship between OCR and purchase intention. As such, a significant hurdle has been overcome, from which the conversation concerning OCR can move beyond the identification of vague impacts, and be directed towards a clearer and more well-defined understanding of the effects of OCR in specific situations or under certain conditions. Moreover, the findings presented herein not only enhance the knowledge of OCR from a theoretical perspective but allow relevant recommendations for practical application to be submitted, an essential exercise during the rapidly changing paradigm between hotel properties and customers.

In summary, though booking intentions appear to be quite complex, being affected and impacted by a variety of different factors, this research has demonstrated why hotel managers should be concerned with NRV and not PRV. The former, which is found to influence booking intention significantly, itself is moderated by other intermediary elements, notably BI, PI, and HSC. Practitioners need to be wary of these factors and identify the ways in which their businesses will be affected, as well as behaving in fashions that extract the full benefit of the positions of their hotels. Lastly, as similarly discussed by Castillo (2016), this research demonstrates how the reluctance with which hotel managers are addressing the challenges and opportunities of OCR will lead to poor commercial performance in the future. The greatest highlight of the current study is the need for hotel managers to dedicate the necessary resources and attention towards reacting to and exploiting OCR, treating it as a vehicle for improving customer relationships and attracting new guests.

7. Limitations and future research

Though the current study has augmented the body of literature surrounding the subject of OCR, its limitations should be explained. As the study exclusively investigated the hotel industry, determination of the findings as universal is impossible without the application of the research in other sectors. It can be appreciated, by comparing the current study to that of Somohardjo (2017), that consumers may be differently influenced by OCR in the context of other service providers, even within the hospitality sector. Furthermore, the current study limited the testing of moderation effects to BI, PI, and HSC only, neglecting the other factors which may similarly alter the impact of NRV on hotel booking intention. Though the author restricted the study to these factors by cost and logistical necessity, the existence of other factors and their different relationships was well understood from researchers such as Sparks and Browning (2011), Lien et al. (2015), and Aznar et al. (2018). Lastly, it should be understood that the predictor for the model was RV in isolation. Alone, RV accounted for 27% of the impact on hotel booking intention as per the regression analysis, indicating the existence of other factors influencing hotel booking intention which have yet to be explored.

These limitations should be addressed and overcome in future research endeavors. Retesting the same hypotheses across other service industries will provide greater insight into the scope and scale to which the findings of the current study are applicable. However, as can be extracted through a comparison of the current study with the work of Phillips et al. (2017), Chan et al. (2017) and Hilbrink (2017), consistency of findings with the current study may well depend on the maintenance of the research model and survey delivery. Furthermore, to broaden the understanding of moderators and their role in influencing the impact of OCR on hotel booking intention, other factors such as loyalty, loyalty programs, reliability of online platforms, and previous experience with OCR and review platforms need to be extensively explored. The final factor for future research consideration should be the investigation of other predictors towards hotel booking intention to account for the remaining 73% not accounted for in the model of the current research. Such predictors could include factors related to OCR

such as the amount, recency, and relevance of reviews, or auxiliary factors such as the hotel location, hotel facilities, brand familiarity, or online presence of the property.

Appendix A. Supplementary data

Supplementary data to this article can be found online at https://doi.org/10.1016/j.tmp.2019.100604.

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