

Can receiving managerial responses induce more user reviewing effort? A mixed method investigation in hotel industry

Yukuan Xu, Ph.D. Candidate

School of Management, Harbin Institute of Technology
92 West Dazhi Street, Harbin 150001, China

And

Department of Management and Marketing, The Hong Kong Polytechnic University
Hong Kong SAR, China
Email: yukuan@hit.edu.cn

Hengyun Li, Ph.D.

School of Hotel and Tourism Management, The Hong Kong Polytechnic University
Hong Kong SAR, China
Email: neilhengyun.li@polyu.edu.hk

Rob Law, Ph.D.

School of Hotel & Tourism Management, The Hong Kong Polytechnic University
Hong Kong SAR, China
E-mail: rob.law@polyu.edu.hk

Ziqiong Zhang*, Ph.D.

School of Management, Harbin Institute of Technology
92 West Dazhi Street, Harbin 150001, China
Email: ziqiong@hit.edu.cn

* Corresponding Author: Ziqiong Zhang

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Abstract:

The purpose of this study is to explore factors contributing to users' reviewing effort in the online review platform and understand the mechanism behind the effect. Based on a mixed method including secondary data analysis and experimental data analysis, the results indicate the following. (1) A user receiving more managerial responses tends to exert more reviewing effort. (2) The number of high-quality user opinions (i.e., expert reviews) for a hotel negatively moderates the influence of the number of managerial responses on user reviewing effort. (3) The sense of reciprocity mediates the influence of the number of managerial responses on future reviewing effort. (4) The mediation process is attenuated amongst users facing numerous high-quality user opinions. This study contributes to the literature of managerial response and online user engagement in the context of travel websites.

Keywords: managerial response number, high-quality user opinions, reviewing effort, sense of reciprocity

Highlights

- This study examines factors that can motivate high-quality reviews.
- A mixed-method design with econometric analysis and experiment is used.
- Receiving more managerial responses can increase future reviewing effort.
- The number of expert reviews for a hotel reduces the above positive influence.

The sense of reciprocity works as a mediator behind the relationships

1 Introduction

Online reviews are important in the context of tourism because products such as hotels are experiential goods that travellers cannot evaluate before a purchase, so they tend to rely on peers' opinions (Fang, Ye, Kucukusta & Law, 2016; Tan, Lv, Liu & Gursoy, 2018). For example, more than 60% of travellers use peer comments as reference in making travel plans (Cro & Martins, 2017; Fang et al., 2016). A hotel with more online reviews and higher ratings can gain a better reputation and more bookings (Zhao, Wang, Guo & Law, 2015; Ye, Law & Gu, 2009). However, not all reviews are the same. Some reviews are high quality, whereas others are low quality. Compared with low-quality reviews, high-quality ones are relevant and comprehensive and have accurate product-related information (Cheung & Thadani, 2012). Such reviews pose a great effect on customer purchase intention (Park, Lee & Han, 2007). Therefore, different ways that can motivate users to engage in writing high-quality reviews should be understood.

As a typical kind of public goods, online reviews allow any user to consume without exerting any effort (Liu, Schuckert & Law, 2018). This feature makes the supply of online reviews insufficient for review-based websites, such as TripAdvisor and Yelp. Thus, several studies have begun to investigate user motivations in writing product reviews (Dellarocas, Gao & Narayan, 2010; Cheung & Thadani, 2012; Liu et al., 2018). For example, the desire to help a travel service provider, the concern for other travellers, and the need for self-enjoyment can all encourage users to contribute online reviews (Yoo & Gretzel, 2008). Moreover, reciprocity is recognised as an important motivation of online review sharing (Wasko & Faraj, 2000; Bock, Zmud, Kim & Lee, 2005). Most studies examine the motivation of user engagement on generating more reviews, yet only a few studies focus on how to generate high-quality reviews from users (Liang et al., 2017).

This study attempts to explore how to motivate high-quality reviews. Managerial response is a type of two-way communication (Xie, Zhang & Zhang, 2014), which can affect traveller attitude and company performance (Sparks, So & Bradley, 2016; Proserpio & Zervas, 2017; Li, Cui & Peng, 2018; Chen, Gu, Ye & Zhu, 2019; Zhang, Li, Meng & Li, 2019). For example, frequent and speedy responses can bring a company more reviews, high ratings, and good ranking (Li et al., 2018), and detailed responses to negative reviews have a strong effect on subsequent review volume (Chen et al., 2019). However, the influence of managerial responses on user engagement toward high-quality review contribution remains unclear. For users who directly receive responses rather than observing others' responses, managerial responses may suggest a hotel's care and goodwill, which may activate users' sense of reciprocity and motivate users to pay back the related parties such as the platform (Cheung & Lee, 2012; Li, Cui & Peng, 2017). As users receive more managerial responses, they may form stronger intention to pay back the platform, which can stimulate more reviewing effort. Therefore, we propose the first research question: What is the influence of the number of managerial responses a user received on his/her future reviewing effort and what is the underlying mechanism behind this effect?

Individuals tend to find references to guide future behaviour (Plank, 2016). When a user receives managerial responses and intends to pay back the platform because of the activated sense of reciprocity (Cheung & Lee, 2012), he/she may seek for references to decide the payback

behaviour, for example, deciding how much effort to exert to subsequent reviews in this context. The platform's need is one possible reference (Cialdini, 2008). For user-generated content (UGC) platforms, high-quality user opinions can attract travellers and improve platform competitiveness. Thus, by observing different amount of high-quality user opinions on the platform, travellers may form different feelings of being needed and adjust their payback behaviour accordingly (Darley & Latané, 1968). However, to our knowledge, no prior study has investigated how noticing high-quality user opinions for a hotel work on users' subsequent reviewing effort, especially when users intend to pay back to the platform. To fill this gap, we propose the second research question: How the number of high-quality user opinions for a hotel affects the relationship between the number of managerial responses a user received and his/her future reviewing effort and what is the underlying mechanism behind this effect?

By gathering data from Qunar.com, this study aims to investigate how receiving managerial responses affects user reviewing effort and how high-quality user opinions for a hotel play a moderating influence on user effort toward review writing. In addition, this study intends to understand the underlying mechanism behind the effects through an online experiment. This mixed-method investigation contributes to the literature in three aspects. Firstly, this study is amongst the first to empirically test how user reviewing effort can be enhanced for high-quality reviews rather than simply focusing on the increase of review quantity (Liang et al., 2017), which extends the understanding of the production of UGC. Secondly, this study extends user motivations in the context of UGC platform. By adopting managerial response, an action suggests that a hotel values its users, users' sense of reciprocity may be strengthened. The implementation of an online experiment helps us further identify the existence of the sense of reciprocity behind the effect of receiving managerial responses. Thirdly, this study contributes to the literature of managerial response and online user behaviour in the context of travel websites. Managerial responses not only affect the perception and behaviour of potential users but also those who receive managerial responses from hotels (Li et al., 2017; Chen et al., 2019). This study takes an initial attempt to investigate the effect of the number of managerial responses that users receive on their future reviewing effort, as well as a hotel-level factor (the number of expert reviews for a hotel) that can moderate this effect.

2 Literature review and hypothesis development

2.1 Motivation of customer reviews in online community

The topic of online review communication gains increasing attention in several disciplines, such as marketing and information systems. As online review is a kind of public goods that consumers can benefit from without any cost, its contribution can be viewed as prosocial behaviour; thus, the motives of contributing reviews have begun to receive scholars' attention (Zhang & Zhu, 2011; Hennig-Thurau, Gwinner, Walsh & Gremler, 2004; Berger, 2014). The motivations of online review sharing mainly contain three types, namely, intrinsic, reputational and extrinsic motivation (Bénabou & Tirole, 2006). Intrinsic motivation, including altruism, self-enhancement and enjoyment (Kankanhalli, Tan & Wei, 2005; Yoo & Gretzel, 2008; Berger, 2014), and reputation-related motivation with regard to self-esteem, social connectedness and perceived

peer pressure can increase review sharing (Swanson, Gwinner, Larson & Janda, 2003; Picazo-Vela, Chou, Melcher & Pearson, 2010; Sun, Dong & McIntyre, 2017). The influence of extrinsic motivation, such as monetary rewards, is uncertain. Specifically, customers may perceive monetary reward as a fair exchange and contribute more reviews (Bartol & Srivastava, 2002; Pavlou & Wang, 2015). However, monetary rewards can also undermine intrinsic motivation and reduce review quantity (Hau, Kim, Lee & Kim, 2013; Sun et al., 2013).

Another type of extrinsic motivation, namely, reciprocity (Hung, Durcikova, Lai & Lin, 2011), brings benefit to social exchange (Cheung & Lee, 2012) and suggests that individuals will be kind (unkind) to those who do a favour (harm) for them (Gouldner, 1960). Reciprocity can happen among acquaintances in teams and strangers in online content (Johnson, Faraj & Kudaravalli, 2014; Lai & Chen, 2014; Wasko & Faraj, 2005; Constant, Sproull & Kiesler, 1996). Moreover, when a user received help from others, he/she may favour the users who offered help or even other people in the entire community. This phenomenon is called generalised reciprocity, that is, an individual cooperates because he/she has experienced cooperation in the past (Takahashi, 2000; Hamilton & Taborsky, 2005). Several previous studies have already focused on generalised reciprocity (Baker & Bulkley, 2014; Velez, 2015). For example, generalised reciprocity is a type of organisation civilisation behaviour (OCB), and it occurs when members help third parties since they were helped before (Baker & Bulkley, 2014). That is, members use OCB to benefit others in an organisation although the recipients may not necessarily be the ones who previously helped.

2.2 Managerial response and user effort

Managerial response refers to a company's effort to interact with and respond to its customers (Gu & Ye, 2014). It can help a company manage customer relationship and influence customer attitudes (Xie et al., 2016; Proserpio & Zervas, 2017; Chen et al., 2019). For example, responding to travellers brings a 0.12-star (Xie et al., 2016) to 0.236-star (Proserpio & Zervas, 2017) increase in hotel ratings. The positive influence of managerial response is due to its effectiveness in enhancing customer satisfaction or trust (Min, Lim & Magnini, 2015; Sparks et al., 2016) and recovering negative customer attitude (Li et al., 2018).

A recent study by Li et al. (2017) stated that managerial response is an interactive communication process with continuous, dynamic, and reciprocal features. That is, managerial responses activate travellers' sense of reciprocity. Thus, travellers who receive managerial responses may intend to do something good to pay back the hotel. Takahashi (2000) addressed that as travellers are less likely to stay in the same hotel in the near future, they tend to extend goodwill to other parties, such as the platform. This phenomenon is in accordance with the theory of generalised reciprocity in which individuals will be kind to others if they were treated nicely in the past (Gouldner, 1960; Takahashi, 2000). In addition, receiving managerial responses makes travellers feel being valued and causes higher output/input ratio than the company does based on equity theory (Oliver & Swan, 1989; Hennig-Thurau et al., 2004). To equalise the ratio, travellers also have a desire to give something in return and help the hotel/platform (Yoo & Gretzel, 2008). The platform relies on users' volunteer contributions to

increase its competitiveness, so providing reviews, especially high-quality reviews with more writing efforts, is one straightforward way to realise reciprocity and help the platform. As travellers receive more managerial responses, they may feel more attention; they may show higher tendency to reciprocate and help the platform operate its business, which can increase their effort to contribute future reviews. On this basis, we propose the following hypotheses:

H1a: A traveller who receives more managerial responses tends to allocate more effort in writing reviews.

H1b: The positive effect of receiving managerial responses on reviewing effort is mediated by the increased sense of reciprocity.

2.3 Moderating role of high-quality user opinions

In cognitive psychology, a mindset represents the cognitive process activated by a given task, and can influence an individual's belief on the task (French, 2016). For instance, in experimental tasks, with the usage of distinctive mindset manipulations, individuals will have different task performances (Armor & Taylor, 2003). The effects of mindset on individual behaviour also happen in an online environment. For instance, for an online firm, being nice to its retailers can activate their reciprocity mindset and motivate them to provide better service to maintain the firm reputation (Colton, 2012).

In our context, a user who received managerial responses may form a sense of reciprocity, thus activating his/her mindset of giving something back to the platform (Takahashi, 2000; Yoo & Gretzel, 2008). Under this mindset, the user may seek for some indicators to guide his/her paying back behaviour. The feeling of being needed is an indicator that can help individuals decide how to help or pay back others (Cialdini, 2008; Lavelle, 2010). A review-based platform needs valuable UGC to run its business; therefore, the quantity of high-quality user opinions represents the platform's essential need. With few high-quality user opinions, users will perceive that the platform has high needs and tend to pay it back by increasing reviewing effort. By contrast, if users feel that the platform does not need high-quality user opinions, they may become a bystander who refuses to help if they think that their assistance is not needed (Darley & Latané, 1968; Yan & Jian, 2017). Under the bystander effect, users may reduce their reviewing effort when facing large number of high-quality user opinions. Therefore, we propose the following research hypothesis:

H2a: A user who receives more managerial responses tends to allocate less effort in reviewing if he/she observes more high-quality user opinions for a hotel.

H2b: The alleviating effect of high-quality user opinions for a hotel is mediated by the reduced sense of reciprocity between the number of managerial responses and reviewing effort.

The research model is shown in Figure 1.

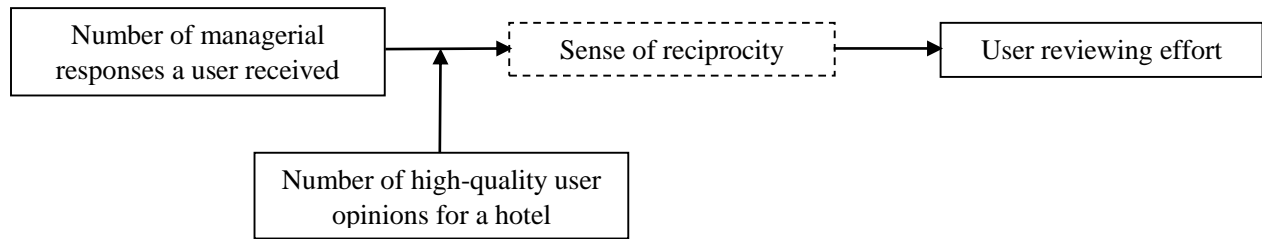


Figure 1. Research hypotheses

3 Methodology

This study adopts a mixed method by collecting secondary data from online travel platform and experimental data from Amazon Mechanical Turk. The aim of this mixed method is to increase the investigation of research questions and the understanding of results. That is, using the experimental data analysis can be helpful to identify the underlying mechanism behind the results found in secondary data analysis.

3.1 Methodology for online secondary data modelling

3.1.1 Research context

Our research context is Qunar.com, one of the most important travel platforms in China. Founded in May 2005, Qunar.com has covered approximately 1,030,000 hotels by the end of March 2015. Apart from the website, its mobile application has also become widely used. Specifically, by the end of September 2014, the number of active users of its mobile application was 460 million (Qunar.com, 2017).

Similar with other tourism platforms, such as Ctrip.com, Qunar.com allows hotels to respond to travellers' reviews. Previous and potential travellers can observe managerial responses under the original reviews. In addition, Qunar.com introduces an incentive mechanism, namely 'expert review', to motivate users to exert more effort in writing high-quality reviews. An expert review is evaluated by the website, and only reviews that meet the specific requirements of more than 500 characters and 3 accurate pictures have chance to be considered as expert review. An expert review is distinguished by Qunar.com and placed on top of all reviews (Zhang, Zhang & Yang, 2016; Goes, Guo & Lin, 2016). Based on its prominent position, an expert review offers an easy way for users to infer how many high-quality user opinions the platform has or needs. Similar mechanisms like Expert Blog have been adopted by platforms in other areas, such as PC industry (Luo, Gu, Zhang & Phang, 2017). As shown in Figure 2, the sample review is evaluated as an expert review and the label is shown under the review title. All potential users can view these details. This review received a managerial response from the hotel, and its writer will be notified.



Figure 2. Screenshot of a hotel review from Qunar.com

3.1.2 Data

The overarching goal of this study is to investigate the effects of receiving managerial responses and noticing hotel expert reviews on users' efforts toward writing future reviews. To fulfil this goal, we collected hotel review data from Qunar.com. The length and whether a review is an expert review or not were used to measure reviewing effort. We searched as many expert reviews as possible to balance the sample. First, we targeted cities with at least 300 hotels on Qunar.com and developed an automated agent to download all review data for these hotels. Second, we extracted all expert reviews from the above reviews. Third, we identified the user IDs of all expert reviews in the second step and collected all reviews posted by these users. Fourth, we identified hotels that were reviewed by these users and downloaded all reviews for these hotels.

Our dataset contains 3.6 million traveller reviews of 31,154 hotels across 197 cities in China. Among these reviews, 6936 travellers have one or more reviews designated as expert reviews. 68,927 reviews posted by these travellers are designed as original sample, including 33,099 expert reviews and 35,828 standard reviews.

3.1.3 Variables

The dependent variable is a user's efforts in writing a review. We used variables *TextLength*, which is the number of Chinese characters, and *IsExpert*, which identifies whether the current review is an expert review, as the measurements of a user's reviewing effort (Godes & Silva, 2012; Zhang et al., 2016). The independent variable is the number of managerial responses a user received prior to the current review, which may activate users' motives for reviewing effort. The

moderating variable is the number of expert reviews for a hotel before the current review, which represents the amount of high-quality user opinions the hotel/platform owns.

We controlled for other variables that may also influence the efforts that a user exerts into writing a review. First, the device used to post the review can influence the continece and behaviours of writing reviews, so it is included as a control variable (Zhang et al., 2016). Second, travel companion is also included as a control variable. When travelling with different companions, such as friends or families, users may show distinctive feelings and reviewing behaviours. Third, review temporal distance (i.e., generating reviews in the same month as the check-in date) and day of the week (i.e., generating reviews on weekdays) are included as control variables, as the two factors can affect users' recall of their experience and, consequently, their written review (Li, Zhang, Meng & Zhang, 2018). Prior studies have suggested the effects of these variables on users' online behaviour (Zhang et al., 2016; Murphy, Chen & Cossutta, 2016; Berezina, Bilgihan, Cobanoglu & Okumus, 2016). The descriptions of all variables are presented in Table 1.

Table 1. Variable description

Variable	Description
Dependent variable	
<i>TextLength</i>	The effort that a user puts into writing a review, measured by the length (number of Chinese characters) of the review
<i>IsExpert</i>	The effort a user puts into writing a review, measured by whether the current review is an expert review
Independent Variable	
<i>UserReplyNum</i>	Number of managerial responses a user receives prior to the current review
Moderating Variables	
<i>HotelExpertNum</i>	Number of expert reviews a hotel receives prior to the current review, which represents the platform's need for high-quality user opinions
Control variable	
<i>Device</i>	Dummy variable to denote whether a review is posted via personal computer or mobile device, with '1 = mobile device' and '0 = personal computer'
<i>Friend</i>	Dummy variable to denote whether current trip is taken with friends, with '1 = yes' and '0 = no'
<i>Couple</i>	Dummy variable to denote whether current trip is taken by a couple, with '1 = yes' and '0 = no'
<i>Family</i>	Dummy variable to denote whether current trip is a family getaway, with '1 = yes' and '0 = no'
<i>Business</i>	Dummy variable to denote whether current trip is a business trip, with '1 = yes' and '0 = no'
<i>Alone</i>	Dummy variable to denote whether current trip is a solo trip, with '1 = yes' and '0 = no'
<i>Weekday</i>	Dummy variable that equals to 1 if a review is posted on weekdays, otherwise 0
<i>Distance</i>	Dummy variable to indicate whether users generate reviews in the same month as the check-in date, with '1 = yes' and '0 = no'

3.1.4 Empirical models

OLS regressions were employed in this study to test the research hypotheses, and user fixed effects were included to control user heterogeneity. The econometric models are as follows:

$$TextLength_{ij} = \beta_{10} + \beta_{11}UserReplyNum_{ij} + \beta_{12}UserReplyNum_{ij} \times HotelExpertNum_{ij} + \beta_{13}Controls_{ij} + UserFE_j + \delta_{ij} \quad (1)$$

$$IsExpert_{ij} = \beta_{20} + \beta_{21}UserReplyNum_{ij} + \beta_{22}UserReplyNum_{ij} \times HotelExpertNum_{ij} + \beta_{23}Controls_{ij} + UserFE_j + \delta_{ij} \quad (2)$$

Our objective is to estimate the significance level of β_{11} and β_{12} (β_{21} and β_{22}). β_{11} (β_{21}) represents the direct effect of the number of managerial responses that a user received and β_{12} (β_{22}) reflects the moderating effect of the number of expert reviews for a hotel on the relationship between the number of managerial responses and user reviewing effort. $UserFE_j$ represents user fixed effects for user j , and δ_{ij} represents the error term.

3.2 Methodology for experimental design

3.2.1 Design and participants

We designed a 2 (small vs. large number of managerial responses) * 2 (small vs. large number of expert reviews) between-subjects experiment to test the underlying mechanism that could mediate the effect of the number of managerial responses and the interactive effect of managerial response and expert review on reviewing effort. This experiment was conducted on Amazon Mechanical Turk, which could access diversified participants and has been widely used for data collection in several areas (Mason & Suri, 2012; Lee, Rui & Whinston, 2019). Finally, we collected data referring to 200 valid participants in which four conditions have nearly the same sample size.

3.2.2 Stimuli and procedures

Initially, the recruited participants from Amazon Mechanical Turk were directed to the Qualtrics survey. On the webpage of Qualtrics, participants were asked to enter their unique Mechanical Turk Worker ID. After a brief introduction of the experiment, participants were shown images referring to one of the four conditions and asked to answer questions about manipulation checks, dependent and mediating variables and demographics. Figures 3a and 3b show the example for one of four conditions that the numbers of managerial responses and expert reviews are small. We blurred several information using Adobe Photoshop filter-glass tools to reduce the influences of other hotel information, such as room price and hotel name on participants' answers.

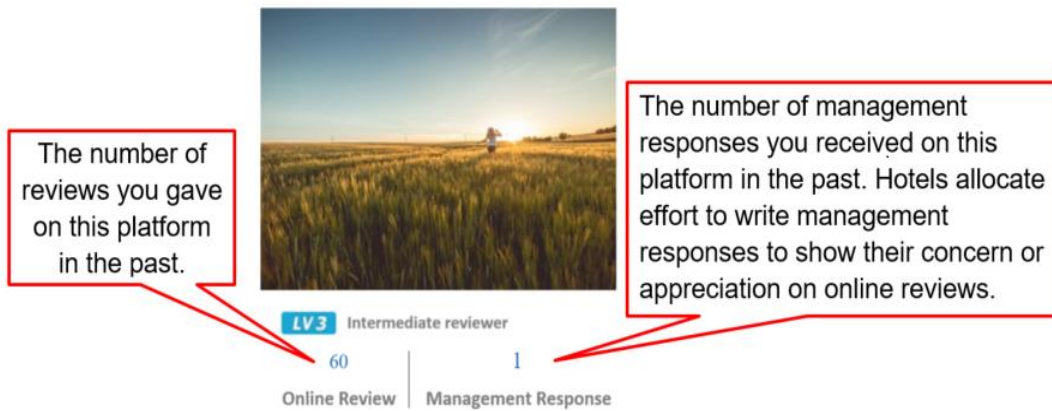


Figure 3a. Manipulation for small number of managerial responses

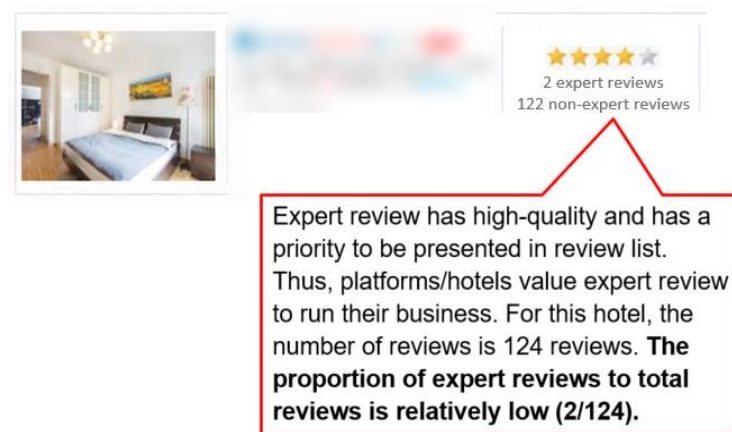


Figure 3b. Manipulation for small number of expert reviews

Following the preceding scenarios, participants were given questions related to reviewing effort and the sense of reciprocity. For the dependent variable, namely, reviewing effort, we measured it by asking two questions adapted from Lin (2008): (1) ‘I am willing to put efforts to write review for this hotel on the platform’, and (2) ‘I believe it is worthwhile for me to put efforts to write review for this hotel on the platform’. The sense of reciprocity, that is, the mediating variable, was measured using four items adapted from Väänänen et al. (2005) and Gray, Ward and Norton (2014): (1) ‘I receive support from the platform/the hotel and I want to do something in return’; (2) ‘I receive support from the platform/the hotel and I want to pay it forward to the platform/the hotel’; (3) ‘I am taken seriously by the platform/the hotel and I want to do something in return’; and (4) ‘I am taken seriously by the platform/the hotel and I want to pay it forward to the platform/the hotel’. Participants’ demographic information and their experience of writing online reviews were also collected.

4 Results

4.1 Results of online secondary data analysis

4.1.1 Statistic description and correlation analysis

Table 2 presents statistical description for the main variables used in this study after deleting missing variables. The average number of characters for each review is 504.293 and approximately 46.2% reviews are expert reviews, both of which indicate users' reviewing effort. The average number of managerial responses a user received is less than one, and the average number of expert reviews for a hotel is two, suggesting that managerial responses and expert reviews are not universal to travellers and hotels. We also conducted frequency analysis for control variables, and the results are demonstrated in Table 3. Among the 50,307 reviews, 13.56% were posted using mobile devices, and around half were written during weekdays and in the same month as the check-in date. Approximately 13.19% trips were among friends, 10.88% among couples, 11.32% among families, 23.38% are business trips, 12.25% are solo trips, and the rest are other types of trips.

Table 2. Statistic description

Variable	Obs	Mean	S.D.	Min	Max
<i>TextLength</i>	50,307	504.293	479.705	0	6,954
<i>IsExpert</i>	50,307	0.462	0.499	0	1
<i>UserReplyNum</i>	50,307	0.787	1.969	0	23
<i>HotelExpertNum</i>	50,307	2.034	4.811	0	83

Table 3. Frequency analysis

	Frequency of value 1	Ratio of value 1 (%)	Frequency of value 0	Ratio of value 0 (%)
<i>Device</i>	43,487	86.44	6,820	13.56
<i>Friend</i>	6,636	13.19	43,671	86.81
<i>Couple</i>	5,471	10.88	44,826	89.12
<i>Family</i>	5,696	11.32	44,611	88.68
<i>Business</i>	11,761	23.38	38,546	76.62
<i>Alone</i>	6,161	12.25	44,146	87.75
<i>Weekday</i>	25,305	50.30	25,002	49.70
<i>SameMonth</i>	25,205	51.10	25,102	49.90

We present the results of the correlation analysis among all variables in Table 4 to check the multicollinearity problem. As the results show, the correlation coefficients among all independent variables are relatively small, ranging from -0.219 to 0.277 , indicating that multicollinearity cannot influence the accuracy of our results.

4.1.2 Hypothesis testing

Table 5 shows the estimation results of Model (1) with the dependent variable as review length, whereas Table 6 shows the estimation results of Model (2) with the dependent variable representing whether the current review is expert review. To control for the effects of user characteristics, this study employed OLS with user fixed effect. In Tables 5 and 6, Models 1.1 and 2.1 included only independent variables, Models 1.2 and 2.2 included independent and control variables, Models 1.3 and 2.3 contained independent and moderating variables, and

Models 1.4 and 2.4 contained all variables. The estimation results show that the coefficient of *UserReplyNum* is significantly positive (coefficient = 0.318, $p < 0.01$; coefficient = 0.137, $p < 0.01$). Thus, as a user receives more managerial responses, he/she will put more effort into review writing, suggesting that Hypothesis 1a is supported. The coefficients on the interactive term (*UserReplyNum* * *HotelExpertNum*) are significantly negative (coefficient = -0.114, $p < 0.01$; coefficient = -0.051, $p < 0.01$). That is, if a user observes a hotel with more high-quality user opinions (i.e., more expert reviews), his/her increased reviewing effort motivated by managerial responses will be attenuated. Therefore, Hypothesis 2a is supported.

As regards to the direct influences of hotel expert reviews, the results demonstrate that the number of hotel expert reviews, which may trigger the competitive feeling of writing reviews for a hotel, has positive effects on reviewing effort (0.162; 0.063; 0.166; 0.066). For the control variables, the coefficients on reviewing device and trip type are positive and significant. Specifically, using mobile devices motivates users to exert more effort toward writing reviews. Business and family trips can enhance users' reviewing efforts. Reviewing time also has significant influence on user writing efforts toward the current review. If reviewing date and check-in date are in the same month, users increase their reviewing efforts; whereas users tend to reduce their reviewing efforts during weekdays compared with weekends.

Table 4. Correlation analysis of the independent variables

	1	2	3	4	5	6	7	8	9	10	11	12
<i>1.TextLength</i>	1											
<i>2.IsExpert</i>	0.655	1										
<i>3.UserReplyNum</i>	0.189	0.18	1									
<i>4.HotelExpertNum</i>	0.130	0.119	-0.030	1								
<i>5.Device</i>	0.277	0.265	0.088	0.038	1							
<i>6.Friend</i>	0.117	0.107	-0.019	0.032	0.126	1						
<i>7.Couple</i>	0.100	0.096	-0.032	0.071	0.106	-0.136	1					
<i>8.Family</i>	0.144	0.114	-0.020	0.118	0.108	-0.139	-0.125	1				
<i>9.Business</i>	0.022	0.118	0.127	-0.064	0.181	-0.215	-0.193	-0.197	1			
<i>10.Alone</i>	0.117	0.107	0.039	-0.014	0.108	-0.146	-0.130	-0.133	-0.206	1		
<i>11.Weekend</i>	-0.061	-0.059	-0.036	0.003	-0.072	-0.002	-0.008	0.003	-0.037	-0.022	1	
<i>12.SameMonth</i>	0.042	0.114	-0.002	-0.053	-0.219	-0.045	-0.026	-0.012	0.048	0.004	0.013	1

Table 5. Estimation results on review length by OLS with user fixed effects

VARIABLES	Model 1.1	Model 1.2	Model 1.3	Model 1.4
<i>UserReplyNum</i>	0.484*** (0.053)	0.261** (0.044)	0.555*** (0.053)	0.318*** (0.046)
<i>UserReplyNum* HotelExpertNum</i>			-0.151*** (0.021)	-0.114*** (0.018)
<i>HotelExpertNum</i>			0.219*** (0.013)	0.162*** (0.011)
<i>Device</i>		0.778*** (0.045)		0.777*** (0.045)
<i>Friend</i>		1.206*** (0.043)		1.186*** (0.043)
<i>Couple</i>		1.307*** (0.045)		1.275*** (0.045)
<i>Family</i>		1.218*** (0.046)		1.185*** (0.046)
<i>Business</i>		1.058*** (0.045)		1.044*** (0.045)
<i>Alone</i>		1.148*** (0.044)		1.136*** (0.044)
<i>Weekday</i>		0.032** (0.016)		0.031* (0.016)
<i>SameMonth</i>		0.270*** (0.018)		0.277*** (0.018)
Constant	5.363*** (0.018)	3.795*** (0.037)	5.231*** (0.020)	3.710*** (0.037)
User FE	Yes	Yes	Yes	Yes
Categories	6,038	6,038	6,038	6,038
Observations	50,307	50,307	50,307	50,307
F	82.69	347.45	129.34	318.59
Prob > F	0.000	0.000	0.000	0.000
R ²	0.467	0.582	0.474	0.586
Adj - R ²	0.394	0.525	0.402	0.530

Note: Coefficients are shown in the table; standard errors are reported in parentheses.

* $p < .1$, ** $p < .05$, *** $p < .01$

Table 6. Estimation results on whether a review is expert review by OLS with user fixed effects

VARIABLES	Model 2.1	Model 2.2	Model 2.3	Model 2.4
<i>UserReplyNum</i>	0.182*** (0.018)	0.110*** (0.015)	0.212*** (0.018)	0.137*** (0.014)
<i>UserReplyNum* HotelExpertNum</i>			-0.061*** (0.008)	-0.051*** (0.007)
<i>HotelExpertNum</i>			0.075*** (0.004)	0.063*** (0.004)
<i>Device</i>		0.096*** (0.013)		0.096*** (0.013)
<i>Friend</i>		0.326*** (0.015)		0.319*** (0.015)
<i>Couple</i>		0.372*** (0.016)		0.360*** (0.016)
<i>Family</i>		0.349*** (0.017)		0.336*** (0.017)
<i>Business</i>		0.313*** (0.016)		0.308*** (0.016)
<i>Alone</i>		0.320*** (0.016)		0.316*** (0.016)

		(0.016)		(0.016)
<i>Weekday</i>		0.019***		0.018***
		(0.006)		(0.006)
<i>SameMonth</i>		0.158***		0.160***
		(0.007)		(0.007)
Constant	0.400***	0.021*	0.354***	-0.012
	(0.006)	(0.011)	(0.006)	(0.011)
User FE	Yes	Yes	Yes	Yes
Categories	6,038	6,038	6,038	6,038
Observations	50,307	50,307	50,307	50,307
F	96.41	202.94	140.94	197.58
Prob > F	0.000	0.000	0.000	0.000
R ²	0.4174	0.488	0.424	0.493
Adj - R ²	0.337	0.418	0.346	0.424

Note: Coefficients are shown in the table; standard errors are reported in parentheses.

* $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$

Figure 4 illustrates the patterns of how the existing number of high-quality user opinions (i.e., expert reviews) for a hotel moderates the effects of the number of managerial responses on review length. As shown in Figure 4, when the number of hotel expert reviews is small, a user who received more managerial responses tends to allocate more reviewing effort to write a long review. By contrast, when the number of expert reviews is large, the positive effect of the number of managerial responses is weakened. Figure 5 further illustrates the patterns of how the number of hotel expert reviews moderates the effects on the possibility that current review is expert review. That is, with the existence of small number of hotel expert reviews, a user receiving more responses is more likely to generate expert review. While the positive effects of response number is reduced with large number of expert reviews.

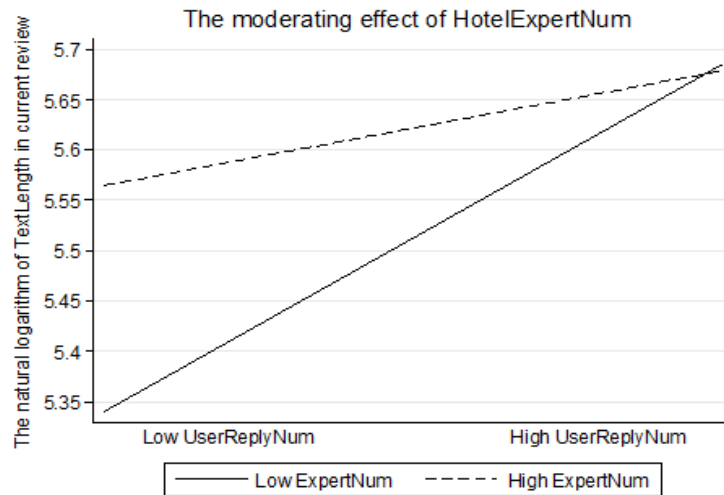


Figure 4. Interactive effect of response number and expert review on reviewing effort

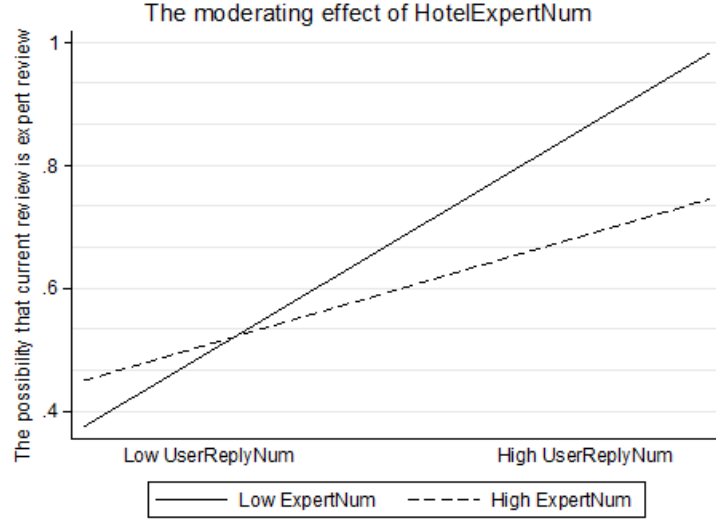


Figure 5. Interactive effect of response number and expert review on reviewing effort

4.1.3 Robustness check

We employed different methods to check the robustness of our research models. First, a Tobit regression was conducted for Model (1) and the results were shown in Table 7. Text length in online reviews is a non-negative and continuous variable, making Tobit regression an appropriate method (Tobin, 1958). Second, a logistic regression was conducted for model (2) and the results were presented in Table 8. Whether a review is an expert review or not is a binary variable, suggesting logistic regression should be employed (Cox, 1958). Compared with the above results, the coefficients in Tables 7 and 8 are quantitatively similar, suggesting that our models are robust.

Table 7. Estimation results of Tobit regression

VARIABLES	Model 3.1	Model 3.2	Model 3.3	Model 3.4
<i>UserReplyNum</i>	0.479*** (0.011)	0.341*** (0.010)	0.567*** (0.014)	0.413*** (0.012)
<i>UserReplyNum* HotelExpertNum</i>			-0.138*** (0.014)	-0.116*** (0.012)
<i>HotelExpertNum</i>			0.321*** (0.009)	0.217*** (0.008)
<i>Device</i>		1.120*** (0.020)		1.124*** (0.019)
<i>Friend</i>		1.215*** (0.020)		1.177*** (0.020)
<i>Couple</i>		1.203*** (0.021)		1.140*** (0.021)
<i>Family</i>		1.294*** (0.021)		1.213*** (0.021)
<i>Business</i>		0.832*** (0.017)		0.819*** (0.017)
<i>Alone</i>		1.133*** (0.021)		1.113*** (0.020)
<i>Weekday</i>		0.036*** (0.013)		0.037*** (0.013)
<i>SameMonth</i>		0.181*** (0.012)		0.199*** (0.012)
Constant	5.360*** (0.008)	3.568*** (0.018)	5.157*** (0.009)	3.446*** (0.019)

Observations	50,307	50,307	50,307	50,307
Log Likelihood	-91,117.791	-83,354.754	-90,452.344	-82,967.04
LR Chi ²	1,713.97	17,240.05	3,044.87	18,015.47
Prob > Chi ²	0.000	0.000	0.000	0.000

Note: Coefficients are shown in the table; standard errors are reported in parentheses.

* $p < .1$, ** $p < .05$, *** $p < .01$

Table 8. Estimation results of logistic regression

VARIABLES	Model 4.1	Model 4.2	Model 4.3	Model 4.4
<i>UserReplyNum</i>	0.779*** (0.017)	0.733*** (0.018)	0.945*** (0.021)	0.909*** (0.022)
<i>UserReplyNum*</i>			-0.250*** (0.021)	-0.280*** (0.023)
<i>HotelExpertNu</i>			0.459*** (0.013)	0.439*** (0.015)
<i>HotelExpertNum</i>				
<i>Device</i>		1.071*** (0.044)		1.092*** (0.044)
<i>Friend</i>		1.954*** (0.038)		1.918*** (0.039)
<i>Couple</i>		1.989*** (0.040)		1.905*** (0.041)
<i>Family</i>		2.049*** (0.040)		1.931*** (0.040)
<i>Business</i>		1.665*** (0.034)		1.673*** (0.035)
<i>Alone</i>		1.891*** (0.039)		1.889*** (0.040)
<i>Weekday</i>		0.113*** (0.023)		0.117*** (0.024)
<i>SameMonth</i>		0.702*** (0.021)		0.751*** (0.021)
Constant	-0.415*** (0.011)	-3.153*** (0.042)	-0.714*** (0.014)	-3.454*** (0.043)
Observations	50,307	50,307	50,307	50,307
Log pseudolikelihood	-33585.507	-28377.916	-32909.132	-27893.476
Wald Chi ²	2120.50	9694.79	3334.62	10222.29
Prob > Chi ²	0.000	0.000	0.000	0.000

Note: Coefficients are shown in the table; standard errors are reported in parentheses.

* $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$

Moreover, we conducted an additional analysis using the average length of managerial responses to replace the number of managerial responses users receive as the independent variable. The average length of managerial responses is a substitute to investigate the influence of the quality of managerial response on reviewing effort. OLS with user-fixed effect showed that the direction and significance of coefficients are similar to those using the number of managerial responses (see Appendices A and B). That is, when receiving longer managerial responses, users tend to allocate more reviewing effort. The positive effect of the length of managerial responses on reviewing effort is reduced by the number of expert reviews for a hotel.

4.2 Experimental results

We ensure the successful manipulation of the number of managerial responses and expert reviews by asking two questions: ‘In the above scenario, to what extent do you agree that you receive a large number of managerial responses?’ and ‘In the above scenario, to what extent

do you agree the hotel receives a large number of expert reviews?’ The results from t-test ($t = -13.367$, $p < 0.01$) show that the mean of the first question with large number of managerial responses (mean = 5.35, S.D = 1.201) is significantly higher compared with small number of managerial responses (mean = 2.41, S.D = 1.843); thus, the manipulation of different number of managerial responses is successful. The manipulation of different number of expert reviews is also successful given that t-test show the mean of the second question is significantly higher ($t = -8.980$, $p < 0.01$) with large number of expert reviews (mean = 4.247, S.D = 1.665) compared with small number of expert reviews (mean = 2.068, S.D = 1.762).

We initially used the experimental data to check whether direct and moderating effects still exist. The results in the first column in Table 9 are consistent with those in our main analysis. Furthermore, we investigated the mechanism behind the effects on future reviewing effort. We used the three-step method proposed by Baron and Kenny (1986). On the basis of this method, a mediating effect exists if (1) the effect of independent variable on dependent variable is significant, (2) the effect of independent variable on mediating variable is significant and (3) the effect of independent variable on dependent variable becomes insignificant or substantially smaller when adding the mediating variable in the model. The results in Table 9 show that the sense of reciprocity can fully mediate the influence of the number of managerial responses while partially mediating the interactive effect of managerial response and expert review on reviewing effort. Thus, H1b and H2b are supported.

Table 9. Estimation results of the mediation effect using three-step method

VARIABLES	Model 3.1	Model 3.2	Model 3.3
<i>Large_ReplyNum</i>	0.790** (0.303)	1.774** (0.278)	0.209 (0.319)
<i>Large_ExpertNum</i>	0.069 (0.306)	0.484* (0.281)	-0.089 (0.295)
<i>Large_ReplyNum * Large_ExpertNum</i>	-1.421*** (0.434)	-1.492*** (0.398)	-0.932** (0.430)
<i>Reciprocity</i>			0.328*** (0.076)
<i>Experience</i>	-0.366*** (0.112)	-0.351*** (0.102)	-0.251** (0.110)
<i>Gender</i>	0.314 (0.223)	-0.366* (0.204)	0.434** (0.215)
<i>Age</i>	0.001 (0.011)	-0.004 (0.010)	0.002 (0.010)
<i>Education</i>	0.203 (0.176)	-0.100 (0.162)	0.236 (0.169)
<i>Marriage</i>	-0.071 (0.243)	0.415* (0.222)	-0.207 (0.234)
<i>Income</i>	-0.031 (0.065)	0.004 (0.059)	-0.032 (0.062)
Constant	4.798*** (0.661)	4.887*** (0.607)	3.197*** (0.733)
Observations	200	200	200
R-squared	0.102	0.210	0.178
F	3.5***	6.86***	5.32***

Note: In Models 3.1 and 3.3, the dependent variable is *RevEffort*. In Model 3.2, the dependent variable is *Reciprocity*. Coefficients are shown in the table; standard errors are reported in parentheses.

* $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$

Although the three-step method by Baron and Kenny (1986) has been widely used, scholars have begun to doubt this method, and a more reasonable method called bootstrap was proposed (Hayes & Preacher, 2014). Thus, we conducted a bootstrap analysis to estimate the mediating effect with 5,000 samples (Preacher, Rucker & Hayes, 2007; SPSS Process Macro Model 4). We used the number of managerial responses (large vs. small) as the independent variable, the sense of reciprocity as the mediator and reviewing effort as the dependent variable. The covariates are the same as the control variables in Table 9. The results show a significant indirect effect of the sense of reciprocity between the number of managerial responses and reviewing effort (0.403; 95% confidence interval [CI]: 0.219, 0.605). That is, the existence of numerous responses increase the sense of reciprocity, through which reviewing effort improves. Thus, H1b is further supported. Then, we conducted a bootstrap analysis to estimate the moderated mediation with 5,000 samples (SPSS Process Macro Model 8). The number of expert reviews (large vs. small) was used as the moderator, except for the mediator, independent and dependent variable. The results confirm a significant indirect effect of the interaction item between managerial response and expert review on reviewing effort (−0.489; 95% CI: −0.893, −0.185). That is, the reduction of the interactive effect of managerial response and expert review on reviewing effort is significant when adding the sense of reciprocity. Thus, the sense of reciprocity mediates the interactive effect. Therefore, H2b is further supported.

5 Discussions and implications

5.1 Discussions

Based on a dataset of 68,927 reviews from Qunar.com, this study empirically examined whether receiving managerial responses can motivate users to allocate more reviewing effort and explored how the existing number of expert reviews for a hotel moderates the effect of the number of managerial responses. In addition, an online experiment verified the existence of an underlying mechanism, namely, the sense of reciprocity. In general, this study reached the following conclusions:

First, travellers who receive more managerial responses will invest more effort into writing their subsequent reviews. That is, they will write long text, and their reviews will be more likely to be evaluated as expert review. On the basis of the concept of reciprocity (Gouldner, 1960; Takahashi, 2000), travellers tend to use reviewing effort to pay back involved parties, such as the platform because they received managerial responses and were treated nicely in the past. By running an online experiment, we confirmed that the sense of reciprocity works as an underlying mechanism between receiving managerial responses and user reviewing effort.

Second, although travellers who receive more managerial responses tend to allocate more reviewing efforts, this positive relationship is weakened by the number of expert reviews for a hotel. That is, as the number of expert reviews for a hotel increases, the reviewing effort induced by managerial responses tends to decrease. When travellers receive managerial responses, their sense of reciprocity may be activated and they will seek for some references to guide them to pay back the platform (Yoo & Gretzel, 2008). The feeling of being needed is an indicator (Lavelle, 2010). If the platform has low needs of high-quality user opinions represented by numerous expert reviews, then travellers may become bystanders and reduce reviewing effort (Darley & Latané, 1968). When the platform has high needs of high-quality user opinions (indicated by small number of expert reviews), the intention to do something

good becomes strong, which motivates reviewing effort. The experimental results further suggest that the sense of reciprocity mediates the interactive effects of managerial responses and expert reviews on reviewing effort.

5.2 Theoretical implications

Online reviews are important in helping users make decisions (Zhang et al., 2016). A number of online review and booking websites have taken strategies to encourage users to continuously contribute reviews, especially high-quality reviews, because these reviews can attract potential users and increase website competitiveness (Liu, Schuckert & Law, 2016). This study intends to investigate what can motivate users to contribute high-quality reviews on a travel website. The findings provide theoretical and managerial implications for existing literature and the tourism industry.

First, this study contributes to the existing literature by focusing on an important issue, that is, how to enhance review quality instead of review quantity. Online review is important and has gain great attentions from previous scholars (Zhu & Zhang, 2010; Zhang et al., 2016). Several studies have examined strategies that can motivate users to contribute reviews and found that the design of helpful votes and monetary incentive can strengthen users' extrinsic motivations and stimulate reviews (Tang, Gu & Whinston, 2012; Liu & Park, 2015). Review quality is also essential to the development of a platform; however, the manner in which high-quality reviews can be motivated is rarely studied (Liang et al., 2017). Leveraging the design on Qunar.com, which allows managerial responses and assesses expert reviews, this study is one of the first attempts to investigate the generation of high-quality reviews by identifying a positive effect of the number of managerial response users receive and a negatively moderating influence of the number of expert reviews for a hotel on reviewing effort.

Secondly, this study extends theory and concept of user motivations for knowledge contribution in the context of online UGC websites. Prior studies have investigated different motives for users to write online reviews; for example, enhancing users' intrinsic motivations, including the need for self-enhancement and altruism, can encourage users to generate online reviews (Yoo & Gretzel, 2008; Cheung & Lee, 2012; Li, Wang, Meng & Zhang, 2018). However, few studies have focused on determining the factors that can activate these motivations. This study illuminates the determinants of user motivation by highlighting that the sense of reciprocity may be triggered as a user receives more responses (Cheung & Lee, 2012). However, by observing numerous expert reviews for a hotel, users may perceive that help has been offered and further help is not needed based on bystander effect, thus, decreasing his/her motivation and reviewing effort (Darley & Latané, 1968; Fromkin & Snyder, 1980). Through an online experiment, we verify that the activation of users' sense of reciprocity is by receiving managerial responses. However, with the existence of numerous expert reviews for a hotel, the sense of reciprocity decreases, which decreases the effort towards future review. Therefore, the results from mixed methods extend the knowledge of user motivation theory to online UGC context by suggesting that receiving managerial responses can activate user motivation (i.e. the sense of reciprocity).

Third, this study contributes to literature on managerial response and online user behaviour in the context of travel websites. Prior studies suggest that managerial response can reduce information asymmetry, show hotels' effort and please potential customers who notice the

responses (Min et al., 2015; Li et al., 2017). Hence, how managerial responses work on users whose reviews acquire replies remain unclear. Therefore, this study is amongst the initial ones to test the effect of managerial response (i.e. an indication of hotels' care towards customer relationship; Xie et al., 2016), on involved users' behaviour who receive management responses rather than on potential users' behaviour. Analysing dataset from Qunar.com, this study confirms that users will increase subsequent reviewing effort after receiving more managerial responses. Scholars have found that given different hotel characteristics, such as hotel class (luxury vs. economic hotels), the effect of managerial responses may be different (Xie, Kwok & Wang, 2017; Li et al., 2017). However, the influence of more hotel features needs further exploration. This study investigates how a special hotel feature (i.e. the number of expert reviews), which is assigned by the platform, moderates the influence of managerial responses. The significant results extend the existing literature on managerial response by finding that managerial responses exhibit different efficacy to increase user reviewing effort given the existence of different numbers of expert reviews for a hotel.

5.3 Managerial implications

This study also provides practical implications for UGC websites, especially for travel-related websites. Websites should pay attention to functional designs to compete with other websites and thus increase hotel sales on the platform. Active user engagements indicated by high-quality reviews can attract many customers and bring sales. Therefore, we suggest travel review websites/ecommerce platforms to help hotels gain high-quality reviews and increase the competitiveness amongst hotels.

The findings indicate that managerial responses can benefit the hotels themselves and the platforms by encouraging high-quality reviews and attracting potential travellers. Therefore, we suggest UGC platforms to implement policies (i.e., offering rewards) to motivate hotels to respond more frequently to customers' online reviews. For example, platforms can reward hotels that generate a certain number of managerial responses with a better ranking in search results or give these hotels advertising discount. These strategies can motivate more managerial responses and encourage more high-quality reviews, which may benefit the platforms in the long run.

The results also show that when travellers receive managerial responses and form a sense of reciprocity, they may treat the number of expert reviews as the platform's need to decide the reciprocal behaviour (i.e. reviewing effort). With numerous expert reviews, travellers may become bystanders and reduce their effort towards subsequent reviews. Therefore, we suggest targeting strategies to travellers receiving numerous managerial responses. In the written stage of reviews, the platform can choose when to highlight the number of expert reviews. Specifically, when a hotel has few expert reviews, the platform can emphasise its lack of high-quality user opinions to strengthen the sense of reciprocity. If a hotel has a relatively large number of expert reviews, the platform can distract customers' attention by presenting other information, such as the percentage of user recommendation rather than the number of expert reviews. Consequently, the platform can alleviate the negative effects of numerous expert reviews and strengthen the positive effects of few expert reviews for users who received large number of managerial responses before. Although for travellers receiving

smaller number of managerial responses, stimulating other motivations, such as self-enhancement and enjoyment, may be more helpful.

5.4 Limitations and future studies

This study is not without limitations. This study finds that receiving more managerial responses can increase a user's reviewing effort. However, a managerial response with different features (i.e., different contents or speed) may pose distinctive impacts. For example, managerial responses with an apologetic or assuring tone may be more beneficial to stimulate a user's reciprocity mindset. Responses with general language or high similarity with other responses may reduce users' trust and pleasant feelings because customers may perceive these responses as autonomic messages. Thus, we will use text-mining techniques as our next step to analyse the content of managerial responses and test what content can trigger users' sharing motivation and work more efficiently to increase reviewing effort. In addition, several platforms allow firms, such as hotels, to utilise managerial responses. Future study can test the results using data from other platforms, especially those from other cultures, such as Expedia and Booking. In this manner, the result generalisation can be enhanced, and the effect of culture can be identified.

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Appendix A. Results on review length using response length

VARIABLES	Model 3.1	Model 3.2	Model 3.3	Model 3.4
<i>UserReplyLength</i>	0.086*** (0.009)	0.042*** (0.008)	0.106*** (0.010)	0.057*** (0.008)
<i>UserReplyLength*</i>			-0.037*** (0.005)	-0.027*** (0.004)
<i>HotelExpertNum</i>			0.228*** (0.013)	0.166*** (0.011)
<i>Device</i>		0.768*** (0.046)		0.767*** (0.046)
<i>Friend</i>		1.224*** (0.045)		1.205*** (0.045)
<i>Couple</i>		1.327*** (0.046)		1.294*** (0.046)
<i>Family</i>		1.235*** (0.047)		1.202*** (0.047)
<i>Business</i>		1.079*** (0.048)		1.064*** (0.047)
<i>Alone</i>		1.168*** (0.047)		1.156*** (0.047)
<i>Weekday</i>		0.032** (0.016)		0.031* (0.016)
<i>SameMonth</i>		0.276*** (0.018)		0.283*** (0.018)
Constant	5.401*** (0.014)	3.814*** (0.036)	5.263*** (0.016)	3.726*** (0.036)
User FE	Yes	Yes	Yes	Yes
Categories	6038	6038	6038	6038
Observations	50,307	50,307	50,307	50,307
F	81.92	337.21	129.83	306.79
Prob > F	0.000	0.000	0.000	0.000
R ²	0.463	0.581	0.470	0.585
Adj - R ²	0.390	0.524	0.398	0.528

Note: Coefficients are shown in the table; standard errors are reported in parentheses.

* $p < .1$, ** $p < .05$, *** $p < .01$

Appendix B. Results on whether a review is expert review using response length

VARIABLES	Model 4.1	Model 4.2	Model 4.3	Model 4.4
<i>UserReplyLength</i>	0.032*** (0.003)	0.018*** (0.003)	0.040*** (0.003)	0.025*** (0.003)
<i>UserReplyLength*</i>			-0.015*** (0.002)	-0.013*** (0.002)
<i>HotelExpertNum</i>			0.078*** (0.005)	0.066*** (0.004)
<i>HotelExpertNum</i>				
<i>Device</i>		0.092*** (0.013)		0.091*** (0.013)
<i>Friend</i>		0.334*** (0.016)		0.327*** (0.016)
<i>Couple</i>		0.380*** (0.017)		0.368*** (0.017)
<i>Family</i>		0.356*** (0.018)		0.344*** (0.018)
<i>Business</i>		0.322*** (0.017)		0.316*** (0.017)
<i>Alone</i>		0.329*** (0.017)		0.324*** (0.017)
<i>Weekday</i>		0.019*** (0.006)		0.018*** (0.006)
<i>SameMonth</i>		0.160*** (0.007)		0.162*** (0.007)
Constant	0.414*** (0.005)	0.029*** (0.011)	0.367*** (0.005)	-0.006 (0.011)
User FE	Yes	Yes	Yes	Yes
Categories	6038	6038	6038	6038
Observations	50,307	50,307	50,307	50,307
F	96.70	207.74	138.78	194.47
Prob > F	0.000	0.000	0.000	0.000
R ²	0.412	0.485	0.419	0.491
Adj - R ²	0.332	0.381	0.340	0.421

Note: Coefficients are shown in the table; standard errors are reported in parentheses.

* $p < .1$, ** $p < .05$, *** $p < .01$