

HOW WORD-OF-MOUTH MODERATES ROOM PRICE AND HOTEL STARS FOR ONLINE HOTEL BOOKING AN EMPIRICAL INVESTIGATION WITH EXPEDIA DATA

Mohan Wang*
School of Management,
Harbin Institute of Technology
No. 92 West Dazhi Street, Nangang District, Harbin, China
mohanhit@163.com

Qi Lu
Donlinks School of Economics and Management
University of Science and Technology Beijing
No.30 Xueyuan Road, Haidian District, Beijing, China
luq@ustb.edu.cn

Robert T. Chi
Information Systems Department
College of Business Administration
California State University, Long Beach
robert.chi@csulb.edu

Wen Shi
School of Electrical Engineering and Information Science
Northeast Agricultural University
Harbin, China
Shiw@neau.edu.cn

ABSTRACT

Information cues about products influence consumer purchase decisions. Online review can enhance communication among consumers while affecting consumer perception by increasing awareness and reducing uncertainty. However, little is known on how Word-of-Mouth (WOM) and information cues interact, especially on experience goods like hotel rooms. To bridge this gap, we analyze data collected from Expedia.com and use actual booking numbers to measure sales performance instead of proxy approaches employed by previous researches. This research investigates the negative effect of WOM on information cues, namely room price and hotel star rating, to hotel online sales performance. Moreover, we confirm that room price and hotel star rating can have negative and positive impacts on hotel online booking respectively. If hotels receive positive WOM, their online sales performance is less likely to be influenced by room price and star rating. However, for hotels receiving negative WOM, their online sales performance is more likely to be influenced by room price and star rating. These findings will help researchers and industry practitioners better understand the impact of online WOM in an electronic commerce context.

Keywords: Word-of-Mouth (WOM); price; Hotel star rating; Information cue; Electronic commerce

1. Introduction

Consumer reviews can be a good proxy for Word-of-Mouth (WOM) and can influence consumers' purchase decision [Zhu 2010]. The emergence of online review platforms provides useful references for potential consumers before consumption [Chevalier & Mayzlin 2006; Hu et al. 2009; Liu 2006; Senecal & Nantel 2004]. Breaking out of the limited geographic boundaries and time span of conventional WOM, online WOM can be searched and read anywhere at any time [Liu 2006]. In addition, under some circumstances, online WOM is measurable since

* Corresponding author

consumers can score the products on these platforms [Park & Kim 2008], which provides an ideal environment for research.

Prior studies show that consumers tend to rely more on the recommendations of others when purchasing experience goods versus search goods [Park & Lee 2009; Senecal & Nantel 2004; Weathers et al. 2007], which makes WOM management especially important for hotels [Ye et al., 2009; Ye et al., 2011]. First, like other experience products, the quality of hotels cannot be determined until consumption, which makes consumers incline to seek information from WOM. Second, during the consumption process, consumers take a lot of involvement, which makes them more likely to generate WOM after consumption [Stokes & Lomax 2002]. Third, the unique features of hotel product may be affected by WOM differentiated from other experience products such as books or movies. Comparing to books and movies, even though hotel rooms is more like a perishable product, the lifeline of hotels is much longer, so reviews may be posted in less density.

Since consumers seek information to increase the awareness of product and reduce risk of purchase, they may need other intrinsic and extrinsic cues as well. Whereas extant studies have shown information cues such as product price and star rating affect consumer cognition towards product quality, empirical evidence provides little on how they may be affected by WOM and influence the sales performance in an online context, especially on experience goods like hotel rooms. This study mainly focuses on the moderating effects of online WOM on room price and hotel star rating in hotel online sales.

One challenge for most empirical research on WOM is that real-time sales data is often hard to collect. Prior studies use proxy approaches to represent sales performance [Chevalier & Mayzlin 2006; Duan, et al. 2008; Ye, et al. 2009], for example, using the number of online reviews as a proxy for the number of online booking. Using a newly introduced special function provided by Expedia website, we are able to collect actual hotel booking data from Expedia, and demonstrate the interesting effect of WOM on hotel online sales performance.

The remainder of this paper is organized as follows. We review the related literature and develop our hypotheses in Section 2. In Section 3, we describe the data collection process and the research methodology. We then present the empirical results in Section 4 and conclude with contributions and future research directions in Section 5.

2. Literature Review and Hypotheses

2.1. Online Word-of-Mouth

Word-of-mouth communication has been served as an important source of influence for consumer behavior [Schubert & Ginsburg 2000]. Other consumers' reviews are sometimes believed to be more credible [West & Broniarczyk 1998]. Consumers tend to take other's opinions or experiences as reference before consumption, especially when the product quality is uncertain [Chen et al. 2004]. Based on Park and Lee's [2008] conclusion, reviews are especially important for consumers when purchasing experience goods than search goods. A great number of studies have emphasized the positive impact of WOM on experience product sales [Chevalier & Mayzlin 2006]. Pavlou and Gefen [2004] argue that feedback mechanism is effective only if the participants perceive that the feedback is accurate and credible. In other words, consumers may take other consumers' WOM into their decision making process when they perceive the information is true and believable.

WOM in the form of consumer reviews includes two key metrics, namely the volume of reviews and the valence of reviews [Mahajan et al. 1984; Neelamegham & Chintagunta 1999; Liu 2006]. The volume of WOM refers to the amount of communications among consumers. It is regarded as an indicator of the intensity of WOM that plays a dominant role in driving revenues [Duan et al. 2008]. Some researchers [Chen et al. 2004] argue that the volume of consumer reviews reflects the momentum of the product. More discussions may trigger consumer interests and increase awareness. Besides, a larger number of reviews may increase the objectivity and be trusted more by potential consumers.

The valence of WOM refers to rating values towards the products. It reflects the overall quality or performance of products based on a variety of consumers' preferences [Duan et al. 2008]. Since consumers take Word-of-Mouth as a relatively credible source of information, the valence of WOM has a strong effect on consumer judgment [Grewal et al. 2003]. Consumers trust sellers with many positive ratings, which are signals of superior reputation [Ba & Pavlou 2002]. And positive consumer reviews will increase consumers' perceived trustworthiness of online stores [Utz et al. 2012]. The overall rating converges to the true quality as the number of consumer reviews increases [Chen et al. 2004]. A number of previous studies [Chevalier and Mayzlin 2006; Zhu 2010] have been conducted to examine the impact of WOM valence on product sales. Some studies [Liu 2006; Duan et al. 2008] reveal that although WOM information offers significant explanatory power for the movie box office revenue, the explanatory power is mainly generated by the volume of WOM rather than the valence, emphasizing the importance of the

awareness effect of WOM. But little research focuses on the moderate effect of WOM, especially on experience goods.

For experience products such as books and movies, consumers are able to search and obtain information from friends or mass media very easily. The massive external information may reduce the influential power of WOM. However for hotels, the information source is relatively limited, which makes consumer reviews more helpful when consumers book hotels.

To measure the impact of WOM, prior research used various proxy approaches to represent product sales performance. For example, Chevalier and Mayzlin [Chevalier & Mayzlin 2003] used sales rank on amazon.com and barnesandnoble.com to reflect book sales. In the hospitality field, Ye et al. [Ye et al. 2008; 2009; 2011] introduced the number of reviews posted each month as a proxy of monthly hotel sales. Then, they conducted an offline survey of those selected hotels to validate the proxy variable. For this research, we will use the actual online booking data to capture the WOM impact, keeping information loss at a minimum.

2.2. Room Price

Based on cue utilization theory, consumers infer information from product-related attributes at first. Prior studies suggest when faced with uncertainty, consumers are more likely to rely on information cues related to quality [Völckner & Hoffmann 2007]. Before consumers make their final purchase decision, they will adjust the perceived quality of the product with information cues from multiple sources. The product quality expectation may be of multiple dimensions and product specific, such as product description [Grewal 1995].

Product price as a marketplace cue has been debated in marketing research with various divergent angles. Price is commonly recognized as the amount of money that consumers have to sacrifice to fulfill their demand, which plays a negative role to reduce purchase probabilities [Erickson & Johansson 1985]. Generally, consumers prefer products of relatively less cost under the same condition. In accordance with prior findings, we hypothesize:

H1: Room price is negatively related to online hotel booking.

However, consumers do not always choose products with the lowest price, even when the products are similar, since their purchase decision could be affected by other attributes besides price. The informational effect of price has been discussed in a considerable number of research efforts [Brucks et al. 2000; Rao 1988; Völckner & Hoffmann 2007]. For example, Völckner and Hoffmann [2007] found that higher price is an indicator of higher quality and it will increase the purchase probability eventually. Based on the hedonistic consumption literatures, Dubois and Laurent [1994] found that consumer purchase behavior is also related to emotional responses of using the product. When consumers pursue hedonistic fulfillment of happiness, excitement, or fun, they prefer to choose high price products. Since the hotel experience is regarded as hedonistic product, when consumers select hotels from a wide range of classes and prices, most of them are not just looking for a bed to sleep on, but planning to enjoy the day with good facility, friendly services, or a hot tub. These emotional responses can be obtained from WOM to influence their decisions. It is worthy studying how WOM may affect hotel sales and how it may interact with room price. For consumers, higher price means not only higher cost, but also higher risk. However, such risk could be reduced by WOM. By reading hotel review information, potential consumers can infer whether the quality is worth the price. Thus, we hypothesize:

H2: The relation between room price and hotel booking is moderated by WOM. Room price is less influential for hotels with positive WOM than hotels with negative WOM.

2.3. Hotel star rating

Hotel star rating is a general classification of hotel quality. In Europe and some parts of Asia, hotel star rating is governed by national tourism institution based on a series of facility and service standards. Even for hotels without a star rating, many online travel websites provide a well-designed rating system to classify their overall quality. The hotel star rating is a stable signal for good quality and is not very sensitive to changes comparing to other factors [Israeli 2002]. The hotel star rating increases consumer cognition of hotel quality. In accordance with prior findings, we hypothesize:

H3: The hotel star rating is positively related to online hotel booking.

We propose the similar moderating effect of WOM can be found on hotel star rating to hotel booking. In the hotel industry, star rating is related to reputation closely. Since seller reputation is positively related to consumer trust and identification [Keh & Xie 2009], it may spoil the explanatory power of WOM. From another perspective of consumer decision making, prior studies have shown that when consumers have to choose among well-known and less-known brands, they are more likely to regret if they pick the less-known product and it turns out to be inferior [Simonson 1992]. To avoid such regret, consumers will rely more on WOM information when selecting hotels with lower star rating. Thus, consumer review ratings may be less influential for hotels with higher star rating. We hypothesize:

H4: The relation between hotel star rating and hotel booking is moderated by WOM. Hotel star rating is less influential for hotels with higher WOM than hotels with lower WOM.

3. Research Methodology

3.1. Data Description

The data for this study is collected from Expedia.com. Expedia is a leading online travel service provider and operates localized websites for travelers in many countries. Using data collected from Expedia.com will provide a good understanding of the overall hotel industry. Unlike many other travel websites such as TripAdvisor, only those members who have booked hotel rooms through Expedia.com and finished their trip are allowed to post comments to the website. The policy ensures the authenticity and accuracy of the reviews posted, and avoid fraud and disparagement from competitors. Above all, Expedia.com makes available the number of hotel booking within the last 48 hours and other detailed hotel information on their website which are not available from other travel websites.

Hotel booking number is affected not only by how many people actually booked the hotel but also by its accommodation capacity. Thus, when a hotel's booking number is zero, it is hard to distinguish whether no one wants to book the hotel or it is fully booked. To minimize such problem, we choose hotels in Detroit as our target data source. Detroit is a major city in Michigan, U.S., and is famous for its motor industry. It has encountered a huge population fall in the 21st century. In 2013, the total population fell to 0.68 million, lower than the half of its peak population of 1.8 million in 1950s. Detroit's economy declines accordingly and has declared bankruptcy in 2013. Detroit provides adequate hotel samples, and the recession of hotel industry will restrain the full booking situation. Therefore, we can observe more clearly how WOM interact with hotel attributes to influence hotel booking.

Expedia provides two types of room price information for each hotel: the individual room price per night on selected date and the average room price based on the lowest 3-night stay for 2 adults over the next 31 days. The individual room price is shown on the description page of a hotel, while the average room price is shown on the page of hotel search result. When consumers search for hotels, the average room price will be shown first. Due to the limitation of our crawler program, we use the average room price for analysis. Expedia also provides hotel star rating (one to five stars) information to reflect the quality of a hotel.

Figure 1: Sample of the Yellow Textbox on the Hotel Website

We observe that there are four numerical WOM elements displayed on Expedia.com webpage: the individual guest rating and review, the average Expedia guests rating, the guest recommendation rate, and the total number of reviews. The guest rating on the review page is the score a consumer gives a hotel after his/her stay. It reflects a consumer's personal preference and judgment. In addition to the individual guest rating, Expedia.com also provides the average Expedia guests rating, which is a longitude rather than the current observation of guest ratings, and can be found beside the hotel name on the hotel information webpage. When customers write reviews for a hotel, Expedia.com inquires whether they would recommend the hotel to others and use the data to calculate the overall guest recommendation rate. The guest recommendation rate provides potential customers with an interesting and meaningful angle. For example, a guest gives a low rating for a hotel due to its poor service quality, may still recommend it for its convenient location and value. Figure 1 is a sample webpage of MGM Grand Detroit on Expedia.com.

We use a crawler program to automatically download relevant information from 250 hotels daily from April 17th to August 7th, 2013. For each hotel, we collect basic information, including the hotel name, the room price, the hotel star rating, and the number of bookings in the past 48 hours. We also collect individual guest rating, the average Expedia guests rating, the guest recommendation rate, and the total number of reviews for each hotel. To be noted, prior research suggests recent reviews are more influential than earlier ones; most people only read the first webpage before making their decisions [Pavlou & Dimoka 2006]. Thus, for this research, we collect the first page of consumer reviews on each hotel webpage instead of all reviews for analysis. The descriptive statistics of the hotel information is shown in Table 1.

Table 1: Key Descriptive Statistics.

Variable	Mean	Standard Variance	Minimum	Maximum
HotelBooking	5.88	7.35	0	98
RoomPrice	679.67	276.25	227	2584
Star rating	2.63	0.61	1	4.5
ReviewNumber	139.78	154.21	2	1074
IndividualGuestRatin(Based on 1 st page)	3.75	0.72	1.4	5
ExpediaGuestsRating	3.61	0.74	0	5
GuestsRecommendRating	0.86	0.12	0.12	1

3.2. Empirical model

In order to determine the appropriate model to apply, we first check if the hotel booking, the dependent variable, is normally distributed by plotting the frequency chart as shown in Figure 2. The chart clearly shows that the hotel booking is not normally distributed, hence the multi-variable linear regression model would not be appropriate. Next, since the hotel booking is a discrete variable, it may be proper to introduce Poisson regression model. However, one premise of the Poisson regression model is that its expected value is the same as variance. In our case, as can be seen on Table 1, the variance of the hotel booking is much higher than its expected value (mean). Therefore, we rule out the Poisson regression model and implement a Negative Binomial Regression model, which relaxes the assumption that the expected value and the variance are the same. To control the unobserved hotel level individual effect, we apply a fixed effect in our model.

For hotel i at time t :

$$P(HotelBooking_{it}, HotelBooking_{i2}, \dots, HotelBooking_{it} | \sum_{t=1}^T HotelBooking_{it}) = \frac{\Gamma(1 + \sum_{t=1}^T HotelBooking_{it}) \Gamma(\sum_{t=1}^T \lambda_{it})}{\Gamma(\sum_{t=1}^T HotelBooking_{it} + \sum_{t=1}^T \lambda_{it})} \prod_{i=1}^T \frac{\Gamma(HotelBooking_{it} + \lambda_{it})}{\Gamma(1 + HotelBooking_{it}) \Gamma(\lambda_{it})} \quad (1)$$

$$\ln \lambda_{it} = \alpha_{it} + \beta_1 HotelBooking_{i(t-1)} + \beta_2 RoomPrice_{it} + \beta_3 StarRating_i + \beta_4 RoomPrice_{it} * WOM_{jit} + \beta_5 StarRating_i * WOM_{jit} + \varepsilon_{it} \quad (2)$$

In this model, the dependent variable $HotelBooking_{it}$ represents the number of online bookings hotel i receives at time t . $HotelBooking_{it}$ represents the number of online bookings hotel i receives at time $t-1$. $RoomPrice_{it}$ is the room price of hotel i at time t . Some hotels adjust their pricing strategies frequently, therefore it is essential to also capture the fluctuation of the prices and include them in our analysis. $StarRating_i$ is the star rating of hotel i assigned by the online travel agent. The lack of subscript t shows star ratings may differ among hotels but do not change overtime. Each WOM_j represents a numerical WOM such as the number of reviews, the rating, the score, and the percentage. $RoomPrice_{it} * WOM_{jit}$ and $StarRating_i * WOM_{jit}$ represent the moderating effect of WOM j on room price and star rating for hotel i at time t respectively.

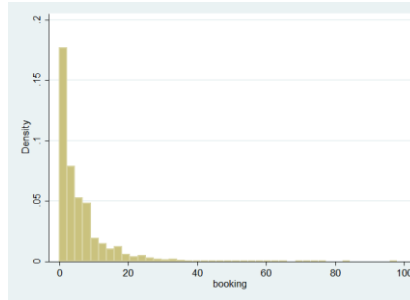


Figure 2: Distribution of hotel bookings in last 48 hours

In accordance with prior studies, we assume that when a customer visits hotel i at time t , he/she will read other customers’ reviews on the first page, and use the average ratings of these reviews for booking reference. Thus, at each time point t , we calculate the average ratings on the first page to represent the review rating.

In this research, we use the cumulative reviews [Chevalier & Mayzlin 2006] to measure the volume of WOM for each hotel, and regard the total number of reviews, the average review rating [Clemons et al. 2006], the Expedia guests rating, and the rating of guests recommendation as measurements of the valence of WOM.

4. Discussion of Results

We run one model for the WOM volume, and three models for the WOM valence. The effect of the WOM volume is presented in Table 2, while the effect of the WOM valence is shown in Table 3.

Table 2: Result of Model 1 with the WOM Volume

Variable	Model 1
Ln(RoomPrice)	-1.45(0.08)***
StarRating	2.11(0.18)***
Ln(RoomPrice)*ln(ReviewNumber)	0.18(0.01)***
StarRating*ln(ReviewNumber)	-0.37(0.03)***
Constant	4.66(0.23)***
Log Likelihood	-50291.778
LR Chi2	0.0000
Number of Obs.	22750
Number of Groups	250

*** $p < 0.005$, ** $p < 0.05$, standard errors are reported in parenthesis

Table 3: Results of Models 2-4 with the WOM Valence

Variable	Model 2	Model 3	Model 4
Ln(RoomPrice)	-0.71(0.06)***	-1.05(0.08)***	-1.01(0.12)***
StarRating	0.54(0.11)***	0.99(0.16)***	0.84(0.32)***
Ln(RoomPrice)*AverageReviewRating	0.03(0.01)**		
StarRating*AverageReviewRating	-0.07(0.03)**		
Ln(RoomPrice)*ExpediaGuestsRating		0.11(0.02)***	
StarRating*ExpediaGuestsRating		-0.21(0.04)***	
Ln(RoomPrice)*GuestsRecommendRating			0.43(0.13)***
StarRating* GuestsRecommendRating			-0.69(0.35)**
Constant	4.69(0.24)***	5.06(0.24)***	5.03(0.24)***
Log Likelihood	-50333.017	-50309.148	-50322.626
LR Chi2	0.0000	0.0000	0.0000
Number of Obs.	22750		
Number of Groups	250		

*** $p < 0.005$, ** $p < 0.05$, standard errors are reported in parenthesis

H1 investigates the negative effect of room price on hotel booking. As shown in Tables 2 and 3, all coefficients for RoomPrice in all four models are negative and significant, hence, supports H1. It shows that hotel booking will decrease when its room price increases.

H2 investigates the moderating effect of WOM on the relation between room price and hotel booking. It is supported as all the WOM coefficients are statistically significant. It shows that customers would be more willing to book higher price hotels when there exists large volume of WOM or when the WOM (guest rating) is positive.

H3, focusing on the effect of star rating, is supported by the results. It confirms and extends prior study's conclusion [Israeli 2002] that star rating is a stable signal of high quality for hotels, and such signal would lead to more hotel booking.

H4 states that WOM moderates the relation between hotel star rating and hotel booking and is also supported by the results. It indicates that customers would pay less attention on star rating provided that the hotel has enough WOM or its WOM is positive.

5. Managerial Implications

We summarize the contribution of this research as follows. First, following prior studies, we find room price acts as a negative information cue to consumer buying decision, while hotel star rating has the opposite effect. Then we introduce the moderating effect of WOM on room price and star rating in hotel online booking. To be specific, we use all non-textual WOM information showed on the webpage of Expedia.com, namely number of hotel reviews, guest rating, hotel star rating, and hotel recommendation rating. The regression results show that WOM has negative moderating effect over room price and star rating on hotel online booking. When the WOM is informative enough, consumers rely less on room price and hotel star rating to make their decision. Unlike previous researches, we contribute to the WOM research by using actual online booking data instead of proxy variables [Chevalier & Mayzlin 2006; Duan et al. 2008; Ye et al. 2009]. Using actual booking data, we are able to re-examine hotel booking with less information loss. The analytical results can help to better understand the effect of WOM and information cues on sales performance.

The findings from this research have several managerial implications. First of all, WOM has significant effect on consumers' purchase decisions. Managers should emphasize the importance of customer word-of-mouth and encourage them to post reviews. More reviews and positive comments will increase the awareness and publicity of the company and attract more attentions from potential customers. Secondly, practitioners should make proper marketing strategies to coordinate with the WOM platforms. The findings reveal that hotels with higher price or lower star rating have higher tendency to be impacted by WOM and may benefit more from allocating resources to managing online consumer reviews. Thus, firms should manage reviews well to increase potential consumers' awareness and reduce their concerns. The findings from this research can be applied to the understanding of experience goods other than hotel booking.

6. Conclusions and Future Research Directions

The objective of this research is to investigate the moderating effect of WOM on room price and star rating to hotel online sales performance. We select hotels located in Detroit as our data sample, and collect basic hotel information along with consumer reviews on Expedia.com. We extend WOM literature by using the hotel's actual booking numbers as the dependent variable, and confirm that room price and hotel star rating have negative and positive impact on hotel online booking, respectively. The results also reveal that WOM moderates the effect of room price and star rating on hotel booking negatively. The online sales performances of hotels with more or better WOM are less likely to be influenced by lower price or higher star rating. The findings from this study can benefit both researchers and practitioners in understanding consumer decision making process and in devising marketing strategies such as pricing and promotion plans.

We conclude by addressing the limitations of our study, and discussing future research directions. Firstly, we shall collect more cities' data for longer time period in order to factor possible city and seasonal influences on the study. Secondly, we have used only numerical WOM data in this study. However, textual WOM data may include information related to not only hotels' actual quality of facility and service, but also the differentiation between perceived and actual experience. Besides, the textual comments from customers may also contain emotions and other valuable information that cannot be expressed or quantified by numeric ratings. Content analysis techniques could be applied to measure such effects in the future research.

Acknowledgment

This research is partially supported by NKBRPC (2014CB340506) and NSFC (71490724, 71225003).

REFERENCES

Akshay, R.R. and K.B. Monroe. "The Moderating Effect of Prior Knowledge on Cue Utilization in Product Evaluations," *Journal of Consumer Research*, Vol. 15, No. 2: 253-264, 1988.

- Ba, S. and P.A. Pavlou. "Evidence of the Effect of Trust Building Technology in Electronic Markets: Price Premiums and Buyer Behavior," *MIS Quarterly*, Vol. 26, No. 3: 243-268, 2002.
- Brucks, M., V.A. Zeithaml and G. Naylor. "Price and Brand Name as Indicators of Quality Dimensions for Consumer Durables," *Journal of the Academy of Marketing Science*, Vol. 28, No. 3: 359-374, 2000.
- Chen, P.Y., S.Y. Wu and J. Yoon. "The Impact of Online Recommendations and Consumer Feedback on Sales," *International Conference on Information Systems*, Charlottesville, Virginia, 2004.
- Chevalier, J.A. and D. Mayzlin. "The Effect of Word of Mouth on Sales: Online Book Reviews," *Journal of Marketing Research*, Vol. 43, No. 3: 345-354, 2006.
- Clemons, E.K., G. Gao and L.M. Hitt. "When Online Reviews Meet Hyperdifferentiation: A Study of the Craft Beer Industry," *Journal of Management Information Systems*, Vol. 23, No. 2: 149-171, 2006.
- Duan, W., B. Gu and A.B. Whinston. "Do Online Reviews Matter? An Empirical Investigation of Panel Data," *Decision Support Systems*, Vol. 45, No. 4: 1007-1016, 2008.
- Duan, W., B. Gu and A.B. Whinston. "The Dynamics of Online Word-of-Mouth and Product Sales: An Empirical Investigation of the Movie Industry," *Journal of Retailing*, Vol. 84, No. 2: 233-242, 2008.
- Dubois, B. and G. Laurent. "Attitudes toward the Concept of Luxury: An Exploratory Analysis," *Asia Pacific Advances in Consumer Research*, Vol. 1, No. 2: 271-278, 1994.
- Erickson, G.M. and J. K. Johansson. "The Role of Price in Multi-Attribute Product Evaluations," *Journal of Consumer Research*, Vol. 12, No. 2: 195-199, 1985.
- Grewal, D. "Product Quality Expectations: Towards an Understanding of Their Antecedents and Consequences," *Journal of Business and Psychology*, Vol. 9, No. 3: 225-240, 1995.
- Grewal, R., T.W. Cline and A. Davies. "Early-Entrant Advantage, Word-of-Mouth Communication, Brand Similarity, and the Consumer Decision-Making Process," *Journal of Consumer Psychology*, Vol. 13, No. 3: 187-197, 2003.
- Hu, N., J. Zhang and P. Pavlou. "Why Do Online Product Reviews Have a J-Shaped Distribution? Overcoming Biases in Online Word-of-Mouth Communication," *Communication of the ACM – A view of Parallel Computing*, Vol. 52, No. 10: 144-147, 2009.
- Israeli, A.A. "Star Rating and Corporate Affiliation: Their Influence on Room Price and Performance of Hotels in Israel," *Hospitality Management*, Vol. 21, No. 4: 405-424, 2002.
- Keh, H.T. and Y. Xie. "Corporate Reputation and Customer Behavioral Intentions: The Roles of Trust, Identification and Commitment," *Industrial Marketing Management*, Vol. 38, No. 7: 732-742, 2009.
- Liu, Y. "Word-of-Mouth for Movies: Its Dynamics and Impact on Box Office Receipts," *Journal of Marketing Research*, Vol. 70, No. 3: 74-89, 2006.
- Mahajan, V., E. Muller and R.A. Krein. "Introduction Strategy for New Products with Positive and Negative Word-of-Mouth," *Management Science*, Vol. 30, No. 12: 1389-1404, 1984.
- Neelamegham, R. and P. Chintagunta. "A Bayesian Model to Forecast New Product Performance in Domestic and International Markets," *Marketing Science*, Vol. 18, No. 2: 115-136, 1999.
- Park, C. and T.M. Lee. "Information Direction, Website Reputation and Ewom Effect: A Moderating Role of Product Type," *Journal of Business Research*, Vol. 62, No. 1: 61-67, 2009.
- Park, D.H. and S. Kim. "The Effects of Consumer Knowledge on Message Processing of Electronic Word of Mouth Via Online Consumer Reviews," *Electronic Commerce Research and Application*, Vol. 7, No. 4: 399-410, 2008.
- Pavlou, P.A., and A. Dimoka. "The Nature and Role of Feedback Text Comments in Online Marketplaces: Implications for Trust Buildings, Price Premiums, and Seller Differentiation," *Information Systems Research*, Vol. 17, No. 4: 392-414, 2006.
- Pavlou, P.A. and D. Gefen. "Building Effective Online Marketplaces with Institution-Based Trust," *Information Systems Research*, Vol. 15, No. 1: 37-59, 2004.
- Schubert, P. and M. Ginsburg. "Virtual Communities of Transaction: The Role of Personalization in Electronic Commerce," *Electronic Markets*, Vol. 10, No. 1: 45-55, 2000.
- Senecal, S. and J. Nantel. "The Influence of Online Product Recommendations on Consumers' Online Choices," *Journal of Retailing*, Vol. 80, No. 2: 159-169, 2004.
- Simonson, I. "The Influence of Anticipating Regret and Responsibility on Purchase Decisions," *Journal of Consumer Research*: 105-118, 1992.
- Stokes, D. and W. Lomax. "Taking Control of Word-of-Mouth Marketing: The Case of an Entrepreneurial Hotelier," *Journal of Small Business and Enterprise Development*, Vol. 9, No. 4: 349-357, 2002.
- Utz, S., P. Kerh Hof and J. v. d. Bos. "Consumer Rule: How Consumer Reviews Influence Perceived Trustworthiness of Online Stores," *Electronic Commerce Research and Applications*, Vol. 11, No. 1: 49-58, 2012.

- Völkner, F. and J. Hoffmann. "The Price-Perceived Quality Relationship: A Meta-Analytic Review and Assessment of Its Determinants," *Marketing Letters*, Vol. 18, No. 3: 181-196, 2007.
- Weathers, D., S. Sharma and S. L. Wood. "Effects of Online Communication Practices on Consumer Perceptions of Performance Uncertainty for Search and Experience Goods," *Journal of Retailing*, Vol. 83, No. 4: 393-401, 2007.
- West, P. M. and S. M. Broniarczyk. "Integrating Multiple Opinions: The Role of Aspiration Level on Consumer Response to Critic Consensus," *Journal of Consumer Research*, Vol. 25, No. 1: 38-51, 1998.
- Ye, Q., R. Law and B. Gu. "The Impact of Online User Reviews on Hotel Room Sales," *International Journal of Hospitality Management*, Vol. 28, No. 1: 180-182, 2009.
- Zhu, F. "Impact of Online Consumer Reviews on Sales: The Moderating Role of Product and Consumer Characteristics," *Journal of Marketing*, Vol. 7, No. 4: 133-148, 2010.