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HOSPITALITY AND TOURISM ONLINE REVIEWS: RECENT TRENDS AND FUTURE DIRECTIONS

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ABSTRACT. In view of the increasing popularity of online reviews and their significant impact on individual buying behavior as well as on the supply side, this study reviewed and analyzed articles related to online reviews in tourism and hospitality published in academic journals between 2004 and 2013. Based on a keyword-driven search and a content analysis, 50 articles were identified as relevant and classified into five topics. The findings revealed that (a) more than half of the analyzed articles focus on hotels and apply empirical methods based on secondary data, (b) more attention has been paid to the relationship between online reviews and online buying as well as satisfaction and online management, and (c) opinion mining of online reviews, motivation to post reviews, and the role of reviews are evenly distributed. This paper also discussed significant topical and methodological trends, contributes to an overall understanding of existing research and its limitation.

KEYWORDS. Online reviews, social media, reputation management, consumer behavior, content analysis

1. INTRODUCTION

In the age of e-commerce, every industry is involved in online sales, and the hospitality and tourism industry is no exception. According to current figures, 71% of independent travel-related bookings are done online, while 36% of all package tours are booked online. Many travelers have booked a room, made an airline ticket reservation, or reserved a table at a restaurant online in recent months. Hotels, be they luxury or best value, use online travel agents (OTAs) or booking platforms, and online sales form the biggest part of their revenue (Buhalis & Law, 2008). After consumption, customers give feedback online and such online reviews have become increasingly important. They are fast, up-to-date, and available everywhere, and have become the word-of-mouth of the digital age (Kaplan & Haenlein, 2010). From the perspective of potential customers, these reviews are considered to be authentic, trustworthy, and helpful; they are also influential (Li & Hitt, 2008). Thus, online reviews play a critical role

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in the online sales of the hospitality and tourism industry, which mainly offers services and focuses on customer satisfaction. This is also the reason why potential customers spend so much time reading online reviews to assist their decision making (Zhu & Zhang, 2010). Customers like to search for objective opinions, and they prefer reviews, which are mostly delivered through large feedback platforms and consumer-centric sites, because of their independence from official or corporate content (Forman, Ghose, & Wiesenfeld, 2008).

Online reviews can be placed indifferent ways and generate powerful word-of-mouth online (Chen & Xie, 2008). A good reputation can bring a price premium, which expands the gap between online sellers and producers (Ye, Law, Gu, & Chen, 2011). The competition among online booking platforms has become so fierce that every online seller tries its best to attract potential customers. For example, an online travel agency's high credibility and security assurance contribute to online bookings. Online buyers are less likely to be worried about fraud when making an online booking with a reputable platform such as TripAdvisor. This is probably because the online reviews platform plays an important role, attracting more travelers to post and share good or bad experiences (Zhong, Leung, Law, & Wu, 2013). This voluntary behavior of customers not only provides free information to assist the decision-making process of other travelers but also encourages hospitality managers to improve their product or service quality.

This flourishing and influential application of e-commerce in hospitality and tourism has attracted academic attention since 2004 (Lee & Hu, 2004). As such, it is time to conduct a review of the research papers on hospitality and tourism online reviews, both for the academic and practical value of such an exercise, and to indicate future research opportunities. In this study, we review the academic output in this field from the first relevant paper published in 2004 to the present. To date, although the role of social media in hospitality and tourism has been widely discussed, the relative impact of each type of social media has not been examined in the extant research (Leung, Law, van Hoof, & Buhalis, 2013). To fill the gap, this study reviews targets on academic output related to online reviews, which is the most influential and popular component of social media in hospitality and tourism (Buhalis & Law, 2008; Gu & Ye, 2014). Thus, this research is original and employs two approaches. First, we review all the scientific literature related to online reviews in order to form an overview and systematic order of the topics that have emerged, the findings that have been made, and the methods that have been applied. Second, we analyze the limitations of previous research and propose directions for future research in the field, providing implications for both fellow researchers and the industry. The purpose of this study is to deliver an advanced understanding of the development of hospitality and tourism online review research and an overall perspective for future research efforts.

2. METHOD

The first step in this study was to select the databases from which to retrieve data. The data retrieval was conducted in September 2013, and repeated in March 2014, on Science Direct, EBSCOHOST, and Google Scholar, the three largest and most popular online databases/search engines. In addition, references were traced in order to discover cross citations in the published articles (Law, Qi, & Buhalis, 2010). Second, keywords for data screening were identified following Leung et al. (2013). The keywords of online reviews, and the terms "hotel," "restaurant," "destination," "hospitality," "travel," and "tourism" were used to search for online review-related articles published in academic journals. As the number of related articles was small, related papers from hospitality and tourism journals as well as journals from other disciplines were also gathered. In the third step, 50 articles published between 2004 and 2013 were determined to be relevant to this study after three rounds of data retrieval and screening. During this identification process, keywords and the abstract of each publication were analyzed to determine whether it was related to the focus of this study. The authors then reviewed the articles that had passed the

selection process. It is possible that personal bias may have affected the process. Therefore, the consensus of multiple authors, all of whom are experienced researchers in e-commerce, should have acted as a safeguard to minimize that possibility (Law, Leung, Au, & Lee, 2013). The next step was to identify the topical focus of each article. Following the analytical framework of Line and Runyan (2012), we adopted content analysis to examine the articles individually in terms of topical focus, target industry, and methodology applied. As this is the first review paper based on hospitality and tourism online reviews, no prior categories could be adopted. In a couple of cases, different results were encountered during the grouping process. Consensus on these issues was reached through in-depth discussion and analysis.

After the topical review, the authors analyzed the context in which the research was applied. This analysis not only helped in understanding the type of industry that the researchers were interested in but also identified the flourishing sector in terms of e-commerce application. The methodological review included an analysis and coding of three components: the sample source, the type of data, and the main analysis method used in each study. Further, the number of authors of each article and the number of related articles published in each journal were calculated. From the timeline, we found the number of papers increased to reach a peak in 2011. Since then the numbers dropped, which may be the result of a trend of popularity and diversity in this research field (see Figure 1).

3. TOPICAL REVIEW

Technically, the early millennium marks the beginning of online travel review platforms. Researchers were attracted by this development, especially after the founding of Expedia and the introduction of TripAdvisor. Since then, 50 related papers have been published, which can be grouped into five topical clusters based on a content analysis. These articles are related to:

(i) online reviews and online buying,
(ii) satisfaction and management,
(iii) opinion mining/sentiment analysis,
(iv) motivation, and
(v) the role of reviews.

Table 1 provides the quantities of studies coded into each topic as well as the percentage of the total that each component represents. The most researched fields are online reviews and online buying (13 instances) and satisfaction and management (13 instances); these two categories represent 52% of the total number of articles analyzed. Opinion mining/sentiment analysis ($n = 8$), motivation ($n = 8$), and the role of reviews ($n = 8$) received the same level of attention from hospitality and tourism researchers.

Table 2 summarizes the sectors that have attracted the interest of researchers, a sector being the subpart of the tourism and hospitality industry for which the major implications of a study are intended (Line & Runyan, 2012). The sectors are defined according to the categories identified by Oh, Kim, and Shin (2004). One can

FIGURE 1. Trends of Related Publications of Hospitality Review-Related Articles
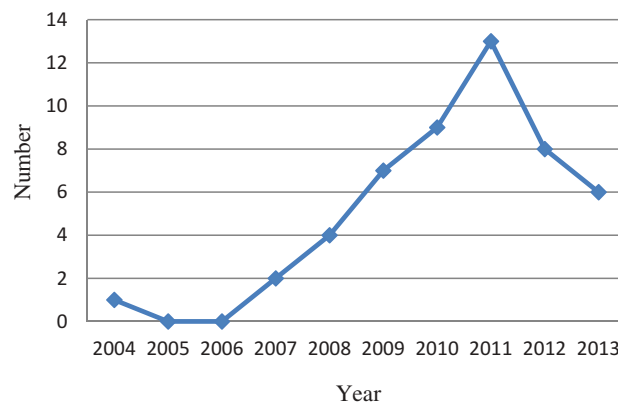
TABLE 1. Topical Clusters

Cluster	Cluster description	N	%
Online reviews and online buying	The effect of online reviews (the number of reviews, the valence of reviews, and the ratings) on consumer purchase intention, commodity price, and online sales.	13	26
Satisfaction and management	Customer satisfaction and online complaints, and managers' online management.	13	26
Opinion mining/ sentiment analysis	The valence of online reviews (positive or negative), product/service feature extract, content analysis (word frequency).	8	16
Motivation	The motivation or the purpose of posting, reading, and sharing online reviews.	8	16
The role of reviews	The credibility and helpfulness of online reviews on e-commerce platforms.	8	16

TABLE 2. Analysis of Industry Sectors

Sectors	N	%
Hotel/Lodging	30	60
Travel/Tour	9	18
Restaurant/Foodservice	9	18
Others	2	4

clearly see that the hotel industry attracts the attention of most researchers ($n = 30$), accounting for 60% of all the papers examined. The travel ($n = 9$) and restaurant ($n = 9$) sectors are of relatively less concern, each being the focus of only 18% of the papers. In addition, two articles focus on the whole perspective of the tourism and hospitality industry. The dominant position of hotels in hospitality and the overwhelming application of e-commerce have led to the booming development of the hotel industry, and this has attracted the attention of an increasing number of academics and practitioners. In addition, along the tourism value chain, reviews are most applicable for the hospitality sector.

3.1. Online Reviews and Online Buying

The development of e-commerce has dramatically changed the way that customers search for information about, make their choice regarding, and purchase products or services (Zhu & Zhang, 2010). Customers are driven by questions such as "How can I find the best attraction?," "Where is the best restaurant?," or "Is a comfortable hotel really worth the money?" When customers try to find answers to these questions, they consult online reviews posted by other customers who have relevant experience. Here, online reviews are very important to both sellers and buyers, and so researchers focus on three aspects of online reviews: their effect on purchase intention, price, and sales.

The valence (positive or negative) of online reviews and ratings has a significant impact on potential consumers and their purchase decisions. The results show a positive correlation between hotel purchasing intention and the valence of reviews (Mauri & Minazzi, 2013; Sparks & Browning, 2011). Furthermore, high ratings can generate customer revisit intention (Miao, Kuo, & Lee, 2011; Zhang & Mao, 2012). Vermeulen and Seegers (2009) conducted an experimental study and found that positive reviews have stronger effects on lesser-known hotels. Zhang, Ye, Law, and Li (2010) and Zhang, Zhang, Wang, Law, and Li (2013) found a similar relationship between ratings of restaurants and purchase intention.

The number of reviews and the proportion of good reviews, especially the ratings, can have a great impact on hotel rates and restaurant prices as well as on related online sales. High ratings and positive word-of-mouth (WOM) can generate a price premium for hotels (Yacouel & Fleischer, 2012; Zhang, Ye, & Law, 2011). Öğüt and Onur Taş (2012) found that a higher customer rating significantly increases the online sales of hotels and that a 1% increase in online customer ratings increases sales per room by up to about 2.6% depending on the destination. Ye, Law, and Gu (2009) as well as Ye et al. (2011) found that traveler reviews have a significant impact on online sales, with a 10%

increase in traveler review ratings boosting online bookings by more than 5%. Lu, Ba, Huang, and Feng (2013) obtained comparable results for the restaurant industry based on the restaurant reviews and online orders.

Ignoring uncontrollable variables such as fake reviews and reviews' reliability, the above studies still have some limitations. First, most prior research has been conducted using the number of reviews as a proxy variable representing the real online sales of a hotel or restaurant. This is a very simplistic hypothesis and, in our view, has limited validity. Second, the results are limited in terms of sampling process and sample size. For example, some studies only used hotels in one city (e.g. Lu et al. (2013) only focused on restaurants in Shanghai), and the other studies focused on a few hundred respondents (e.g., Mauri & Minazzi (2013) only used 349 respondents). Small and biased samples may affect the conclusions of an empirical analysis and the generalized meaning of findings.

3.2. Satisfaction and Management

For consumers, an online review is the most common way to place a complaint, express their feelings, comment on their satisfaction, and to rate a place, service, or hotel. Turning to the supply side and to managers, online reviews represent the best channel through which to assess additional information on service delivery, quality, and customers' demand, specifically from negative reviews with low ratings as they are more likely to reflect real problems. The retrieval and analysis of this valuable information can thus significantly help managers' self-improvement (Pantelidis, 2010). It is critical for a hotel or restaurant to know about customers' dissatisfaction. The words used in high satisfaction reviews are different from those used in low satisfaction reviews. In high rating reviews, reviewers prefer certain combinations of words such as "staff," "clean," "breakfast," while "dirt," "bed," and "bathroom" appear more often in low-rating reviews (Levy, Duan, & Boo, 2013; O'Connor, 2010; Stringam & Gerdes, 2010). Empirical findings

reveal that price has a more significant impact on perceived satisfaction for upper-class luxury hotels than for lower-star hotels (Hui, Law, & Ye, 2009; Ye, Li, Wang, & Law, 2012). Jeong and Jeon (2008) noted that value is one of the key predictors for guest satisfaction, which leads to increased return intentions regardless of the location and hotel class. In addition, offering free Wi-Fi works well in terms of significantly improving guest satisfaction levels (Bulchand-Gidumal, Melián-González, & López-Valcárcel, 2011).

Online response management thus becomes more important. Managers who respond successfully to comments on electronic platforms can turn an unsatisfied customer into a loyal one (Pantelidis, 2010), while appropriate responses to reviews, especially bad reviews, can create and increase future revenue (Noone, McGuire, & Rohlfs, 2011). Meanwhile, in marketing management, eWOM ranks as the most important information source when a consumer is making a purchase decision (Litvin, Goldsmith, & Pan, 2008; Shaw, Bailey, & Williams, 2011). However, it is far from easy to generate good results simply through managing or responding to online reviews. Empirical research shows that although online responses increase the future satisfaction of complaining customers, the future satisfaction of complaining customers who do not receive responses decreases (Gu & Ye, 2014). Therefore, the question of how to improve satisfaction levels, increase revisit intention, and use appropriate strategies in responding to customers' complaints need to be discussed further.

The limitations of the above research are mainly related to two points. First, we may not know whether online reviews are telling the truth because sometimes a good review does not represent high satisfaction. Some reviewers tend to give a good review to avoid unnecessary trouble even though they have an unpleasant experience. Racherla, Connolly, and Christodoulidou (2013) found that the correlation between overall rating and ratings on individual attributes is very low, suggesting that the overall numerical ratings typically used in review systems may not be the ideal indicators of customers' perceived service

quality and satisfaction. The validity of using online reviews or ratings to measure customer satisfaction levels thus needs to be explored more closely in the future. Second, it is hard to scale, rate, or measure the effect of review management and the return on such efforts; increasing sales may be the result of a seasonal effect, spill-over effects at a destination, or other hidden aspects. The efficiency of managers' different response strategies should be studied further. For example, it is important to find out whether responding to all reviews is more fruitful and results in higher satisfaction levels than responding only to selected complaints or even not responding.

3.3. *Opinion Mining/Sentiment Analysis*

Given the sheer number of online reviews, there is a definite need to understand what a review focuses on and whether the content is positive or negative in nature. This is a rather technical exercise and is related to big data analysis. The processes are heavily dependent on algorithms and programming as well as computer processing speed. Artificial judgment has been proven time consuming, exhausting, and costly. Here, a way forward is the use of artificial intelligence and the opinion mining technique (Akehurst, 2009). Generally speaking, opinion mining has two applications: valence and feature extraction.

Valence means dividing reviews into positive and negative. Commonly, three supervised machine learning algorithms (Naive Bayes, Support Vector Machine [SVM], and the character-based N-gram model) are applied to deal with the sentiment classification of online reviews. Empirical findings have indicated that the SVM and N-gram approaches outperform the Naive Bayes approach (Ye, Zhang, & Law, 2009). In order to improve accuracy, Kang, Yoo, and Han (2012) proposed an improved Naive Bayes algorithm for sentiment analysis. Zhang, Ye, Zhang and Li (2011) also applied sentiment analysis to restaurant reviews written in Cantonese.

Feature extraction means extracting related information about a product or service as well

as the topic, keywords, and concerns of the customers from a massive number of reviews. The aims of opinion mining of e-complaints are to find the most unhappy experience from customer feedback (Lee & Hu, 2004) and to mine word patterns using semantic clustering of consumer opinions from a large amount of qualitative data retrieved from online travel reviews (Capriello, Mason, Davis, & Crotts, 2013). Pekar and Ou (2008) investigated a method to recognize the relationships between subjective expressions and references to certain features of a product, while Stringam, Gerdes, and Vanleeuwen (2010) and Stringam and Gerdes (2010) studied the willingness of reviewers to recommend a hotel based on the mining of online rating data.

Studies on opinion mining face some limitations. Firstly, precision is still limited because the sentiment classification that divides reviews into positive and negative reviews is only around 70% accurate (Zhang et al., 2011). Moreover, the technique's ability to catch the real meaning of reviews is still considered not intelligent enough. Sometimes, the mining process returns just a collection of keywords which is far from any expected result. Secondly, hospitality is a global business and travelers come from all over the world, and it is difficult for opinion mining programs to handle different languages. Thus, mining options are valid only for the main and settled language of the routine: efficiency and accuracy may differ significantly from language to language. Thirdly, there is a lack of application and motivation. The academic research on opinion mining has come to a standstill in recent years for two reasons (Akehurst, 2009). The first is that the academic findings have not been applied to practice, either because they have limited practical value or because it is simply too costly to adopt such mining technology in daily business, an issue which is related to the uncertain return on investment of reputation management. Additionally, the lack of a practical application may in turn have diminished enthusiasm for academic research since this field is by its very nature practical and applied.

3.4. Motivation

Faced with the growing number of online reviews, TripAdvisor offers over 40 million traveler reviews to peruse and ranking lists for over 125,000 visitor attractions, 450,000 hotels, and 600,000 restaurants (Jeacle & Carter, 2011). It is valuable, not only from an industry viewpoint but also from an academic one, to find the answer to the questions "Who creates online reviews?" and "What is the motivation behind writing, seeking out, and sharing online reviews?" Here, the research stream is heading in the direction of consumers' psychological behavior to discover the triggers and motivations behind such activities. The empirical findings show that online travel reviewers are motivated by a desire to support the service provider by providing feedback and to push for improvements in service quality, as well as a concern for future consumers and their experiences (Yoo & Gretzel, 2008). In general, traveler personality can significantly influence perceived barriers to this feedback and content creation and the motivations to engage in consumer-generated media (CGM) creation behavior, while in general women are more motivated by the desire to help the company and men are motivated by the desire to prevent others from falling into traps (Yoo & Gretzel, 2011). Öğüta and Cezara (2012) found that higher rating and lower price increase the propensity to write reviews that and complaints over bad experiences also motivate customers to write reviews, probably bad reviews. Sparks and Browning (2010) found that customers who experience service failure tend to spread negative word-of-mouth and have the potential to influence a brand or firm's reputation. However, the motivation for posting negative word-of-mouth differs from customer to customer: for example, ranging from taking revenge to warning others (Wetzer, Zeelenberg, & Pieters, 2007). To explore the underlying motivations for and barriers to knowledge sharing and the spreading of positive reviews (Huang, Basu, & Hsu, 2010), empirical studies have been conducted in restaurants to show that a restaurant's food quality positively influences customers to spread positive eWOM. In addition, restaurant service employees who create a good experience can trigger positive eWOM motivated by the desire to support the employees and the restaurant or just to express personal positive feelings (Jeong & Jang, 2011). Furthermore, Kim, Mattila, and Baloglu (2011) found three major motivating factors for consumers to seek eWOM: convenience and quality, risk reduction, and social reassurance. Women are more likely to read reviews for the purpose of convenience, desired quality assurance, and risk reduction, while men's use of online reviews depends on their level of expertise in online booking.

Among the articles analyzed, six are based on primary data comprising only hundreds of samples. Although questionnaire is the most direct way to obtain information on the behavior of customers, sample size should be large enough and constructed without bias in order to avoid limitations. As the motivation to post and share reviews stretches into psychology and consumer behavior, which is hard to observe and measure, the best and most efficient approach is an experiment or questionnaire through which the researcher can obtain first-hand data. However, this approach is also affected by the source and number of respondents. Respondents may come from the same region, and the samples may not be big enough for both data analysis and conclusion generalization (Iacobucci, 2010).

3.5. The Role of Reviews

What role do online reviews play within our perception of reality? Online reviews work as a medium between customers and service providers which can not only reflect satisfaction with the consumption experience but also offer valuable information to help potential consumers make decisions (Bissell, 2012; Xiang & Gretzel, 2010). It is important (a) to be aware of the role of online reviews and to have strategies in place to deal with this fast emerging medium (Dwivedi, Shibu, & Venkatesh, 2007), and (b) to understand how online reviews are used by consumers, the role they have in searching for information, and their impact on

travel behavior. All of these issues are and will continue to be important for the hospitality industry (Cox, Burgess, Sellitto, & Buultjens, 2009).

Credibility and helpfulness are very critical attributes of online reviews, especially hospitality reviews, which focus on customers' feelings and experiences. The findings show that the use of online reviews is widespread and that trust depends on the type of website on which the reviews are posted as well as on the reader's personality (Mkono, 2012; Yoo & Gretzel, 2010). Findings on the helpfulness of online reviews show that helpful reviews relate to the travel experiences of the customers who post them; experienced travelers actively post reviews and tend to give lower hotel ratings (Lee, Law, & Murphy, 2011). Moreover, consumers tend to give higher helpfulness scores to reviews that document an effective service recovery (Black & Kelley, 2009). Credibility and helpfulness are the most important aspects when potential consumers read online reviews to help them make decisions, and so consumers spend a lot of time checking whether a review is credible. Usually, bad reviews are rated as more valuable since they can help consumers avoid potential losses (Chevalier & Mayzlin, 2006).

Studies that focus on the role of reviews are usually more conceptual, inevitably lacking any attempt at empirical analysis, especially cause and effect analysis. Studies in this field usually use primary data such as questionnaires, which are costly in terms of human and financial resources. Thus, the sample size and the scope of such studies are sometimes limited. The "helpful" function has been widely used in practice as most e-commerce platforms allow readers to mark the "helpfulness" of a specific review. This function can generate valuable reviews (reviews marked helpful can play a bigger role in helping others) by readers, who are also potential customers searching for useful information to help make decisions (Mudambi & Schuff, 2010). While the credibility of online reviews is not very generalizable since it is hard to confirm whether a review is true and reflects the facts and reviews differ from individual to individual: for example, some guests may feel that a particular room is very spacious while

others may regard it as very small. Therefore, determining the credibility of online reviews is more complicated than expected.

4. METHODOLOGICAL REVIEW

Table 3 summarizes the results of the methodological analysis, including sample source, data type, and analysis method. In terms of sample source, 14 (28%) studies were obtained data from the United States, nine (18%) from China, four (8%) from the UK, 12 (24%) from international sources, and 11 (22%) used other sample sources. Of the studies that used international data, the USA and China were the most popular sources, possibly due to their relatively developed hospitality and tourism industry or the brisk travel demand of these two large countries.

In regard to data type, 12 (24%) use primary data, 33 (66%) employ secondary data, and 10% do not use any data at all as they are primarily conceptual. More than half of the studies use secondary data since most of the research required trawling reviews from e-commerce platforms and related websites in order to run an empirical or sentiment analysis. Primary data are mostly used for studying motivation

TABLE 3. Methodological Analysis

	N	%
Sample source		
USA	14	28
International	12	24
China	9	18
UK	4	8
Other	11	22
Data type		
Primary	12	24
Secondary	33	66
None	5	10
Qualitative	6	12
Quantitative	39	78
None	5	10
Method		
Empirical (Factor/Regression/ANOVA)	31	62
Content/Sentiment Analysis	9	18
Conceptual	4	8
Descriptive	4	8
Other	2	4

and satisfaction, whereas secondary data are mainly applied to investigating the impact of online reviews on sales. Articles that did not use any data focused on the role of reviews in travelers' online behavior.

Finally, the methods applied for each article were analyzed. In general, quantitative studies were more dominant, representing 78% of all articles. Only 12% used a qualitative approach. Our analysis shows that empirical techniques such as factor analysis, multiple regression, or the analysis of variance, are the most frequently employed methods, present in more than 60% of the literature reviewed, followed by content/sentiment analysis (18%), by applying machine learning techniques like Naive Bayes and SVM as well as content analysis. However, the use of conceptual and descriptive methods is very limited. A data-driven pattern is the most common structure as many researchers prefer using secondary data or applying empirical approaches to test or explore theoretical assumptions (Leung et al., 2013). Others used the method to develop

their theory and offer managerial implications based on their findings.

Among the 50 articles reviewed, 19 have two authors (38%), 18 have three (36%) and eight have more than four (16%). Only five papers have a single author (10%). Table 4 shows that multiple authorship is more common than single authorship; the most common number of authors being two or three. multiple authorship seems to be a common practice in tourism and hospitality research in the interest of efficiency, research facilitation, distribution of workload, and maximization of publication rewards (Law et al., 2013).

Table 5 shows the 23 journals that have published papers on online hospitality and

TABLE 4. Number of Authors

Number of authors	1	2	3	4	5
N	5	19	18	7	1
%	10	38	36	14	2

TABLE 5. Titles of Journals

Name of Journal	n	%	Hospitality Journal Yes/No
Journal of Hospitality Marketing & Management	9	18	Y
International Journal of Hospitality Management	7	14	Y
Tourism Management	5	10	Y
Cornell Hospitality Quarterly	3	6	Y
Expert Systems with Applications	3	6	N
Journal of Travel & Tourism Marketing	3	6	Y
Information Technology & Tourism	2	4	Y
Computers in Human Behavior	2	4	N
International Journal of Contemporary Hospitality Management	2	4	Y
Information Systems Research	1	2	N
International Journal of Cultural Studies	1	2	N
Journal of Business Research	1	2	N
Journal of Hospitality & Tourism Research	1	2	Y
Journal of Hospitality and Tourism Technology	1	2	Y
Journal of Quality Assurance in Hospitality & Tourism	1	2	Y
Journal of Revenue & Pricing Management	1	2	N
Journal of Travel Research	1	2	Y
Journal of Vacation Marketing	1	2	Y
Procedia-Social and Behavioral Sciences	1	2	N
Productions and Operations Management	1	2	N
Psychology & Marketing	1	2	N
Service Business	1	2	N
Service Industries Journal	1	2	N
Total	50	100	12/11

Note: Y indicates that the journal is a hospitality/tourism journal, N indicates that it is not.

tourism reviews. Twelve are hospitality and tourism journals. The distribution of the articles is heterogeneous. The most frequent journals are *Journal of Hospitality Marketing & Management* (*n* = 9), *International Journal of Hospitality Management* (*n* = 7), and *Tourism Management* (*n* = 5).

5. DISCUSSION AND IMPLICATIONS

It is apparent that hospitality and tourism studies on online reviews have taken a keen interest in the relationship between online reviews and online buying behavior. The impact of online reviews on online sales and consumer decision making are the most researched areas due to their importance to hospitality and tourism. Most of these articles have a fairly strong industry focus, primarily the hotel industry, and offer sound practical suggestions and implications based on their findings. Another popular field is customer satisfaction and the management of online reviews, which is related to online sales. Investigating the implications concerning the use of artificial intelligence technology on opinion mining/sentiment analysis of online reviews was popular for a time. However, this hot trend vanished due to a lack of innovative methods. The methods applied in this field are alike and this makes it difficult to move forward unless a revolutionary method appears. The motivations for posting, reading, and sharing reviews as well as the role of reviews on e-commerce platforms have been relatively less studied. Data sources from the USA and China are the most popular, and secondary data retrieved from e-commerce platforms are well employed to make empirical analysis and text mining.

From the perspective of consumers, checking online reviews is regarded as an indispensable process when buying online. Later, online reviews are regenerated by these online buyers expressing their satisfaction or complaining. Through this cycle, online reviews become more popular and influential on the platform, actually work as the most important role between buyers and sellers. From the perspective of suppliers, an online reputation created mainly by customers' online reviews represents their core competitiveness by which to attract potential customers and secure more online sales. Online management, as a marketing strategy, was rapidly accepted and expanded over time. Leung, Law, and Lee (2011) found that more than half of the hotels studied in Hong Kong still had not adopted social media management. According to the statistics at the end of 2013, however, more than 70% (102) of the 145 hotels in Hong Kong with more than 100 reviews on TripAdvisor had adopted online response management. The awareness and practice of online management is the result of the most influential aspect of online reviews, especially bad reviews that spread negative word-of-mouth. Poor reviews, on the one hand, lead to reputation damage for suppliers; on the other, they also offer opportunities for suppliers to make improvements.

Meanwhile, this study fills the gap indicated by Leung et al. (2013): that the extant literature does not examine the impact of each type of social media on travelers' purchase decisions. Not only have we focused on the impact of online reviews on online purchases, but we have also classified all the related articles into five topics and offer an overall understanding for both industry practice and academic study.

6. CONCLUSIONS

By reviewing and analyzing the content of 50 related articles in terms of research topic, contribution, and limitations, sample sources, data types, and analysis methods, this study contributes to the literature by clearly answering the research question "What have hospitality and tourism researchers done with regard to the use of online reviews?" In practical terms, this article will help industry practitioners and academic researchers in attaining a better understanding of the relationship between online reviews and online buying behavior, and how to deal with online complaints and improve customer satisfaction. The study also reveals what can be mined through massive databases of online reviews posted by customers, what motives customers to post reviews, and the role played by online

reviews on e-commerce platforms. In brief, online reviews appear to be a strategic tool that plays an important role in hospitality and tourism management, especially in promotion, online sales, and reputation management. We expect that in reading this study scholars will be able to gain a clear understanding of what previous researchers have done on hospitality and tourism online reviews, and the limitations of current research. We also believe that this contribution will enable managers to gain an overview of the main findings of recent research focusing on online reviews, and that this will inspire them to think about adapting or improving their e-commerce strategy. Based on the limitations of extant studies and the current operating state, we propose some directions for future research as follows.

Firstly, more valid and reasonable proxy variables should be found to measure online sales since the real sales of each hotel or restaurant are commercial a secret that researchers cannot obtain, while in academic studies online sales are frequently required. The number of online reviews is always regarded as the amount of online sales in previous studies, which is a very inaccurate assumption.

Secondly, research on the method by which to scale the performance of online management needs to be conducted in order to reveal whether and where online management really works and to what extent the supplier gains profit from it. The effect of reviews management needs to be quantified, thus allowing managers to decide whether and to what extent it is necessary to engage in reviews management.

Thirdly, increasing the accuracy and efficiency of opinion mining and sentiment analysis by advancing the methods applied or designing a completely new approach seems necessary to boost the applicability of artificial intelligence to online reviews. Data mining may be more important than sentiment analysis, which classifies reviews into positive or negative, because most hospitality and tourism-related review functions operate together with ratings which directly reflect sentiment and are more accurate since they are quantified. Data mining can make up the quantitative part and may find product defects or service failures among numerous online reviews.

Fourthly, combining both theory building and empirical study in the exploration of psychological behavior when focusing on motivation research or on discovering cultural differences in online reviews or ratings also seems to be a promising line for future research. For example, if the findings show that oriental customers value service quality more than occidental customers, hotels may use discriminatory levels of service passion: more enthusiastic towards Eastern guests, and business as usual for Westerners.

A major limitation of this study is that our framework may be not impeccable and may need to be improved. Since online reviewing is a relatively new phenomenon in academic research, there are only 50 related articles, which is a small number for classification. However, the authors are confident that more articles will be published in the future. Another limitation is that the authors focused solely on English-language articles in academic journals, neglecting articles in other languages and articles in books or conference proceedings. Further examination of Chinese articles, which have been proliferating rapidly, should be conducted in the future (Zhong et al., 2013).

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