Trends in Electronic Word of Mouth Research : A Bibliometric Review and Analysis

Kala Mahadevan [1]

Sujata Joshi [2]

Abstract

This aim of this paper was to evaluate the research literature on electronic word of mouth (EWOM) by conducting a bibliometric analysis of research papers in the Scopus database both from a global as well as an Indian perspective. The bibliometric review and analysis were carried out using the analytical tools of the Scopus database and Biblioshiny – the shiny interface of the bibliometric tool Bibliometrix. The research literature was investigated over a period of 10 years (2009 – 2019) and analyzed trends in production of research papers, citation trends, top countries, journals, and authors contributing to literature related to EWOM. USA was the topmost contributing country based on the number of publications and citations received. We observed that significant research on EWOM has been conducted in the Asian subcontinent by China, Taiwan, and Hong Kong. The key theories used in researching the domain of electronic word of mouth included the cognitive dissonance theory, the information adoption model, elaboration likelihood model, attribution theory, and the social exchange theory. The intellectual structure of the research on electronic word of mouth was studied in order to offer fundamental insights into recent developments in this research area, which would provide researchers and academicians with a broad guideline for conducting further research in this area.

Keywords : word of mouth, electronic word of mouth, EWOM, bibliometric analysis, Bibliometrix, Biblioshiny, citation analysis, literature review

Paper Submission Date : February 10, 2020 ; Paper sent back for Revision : September 2, 2020 ; Paper Acceptance Date : December 21, 2020 ; Paper Published Online : April 10, 2021

Research has shown that one of the primary sources of new customer acquisition for businesses is through recommendations by existing customers (Ifie et al., 2018 ; Moriarty et al., 2008). Consumers typically tend to voice their reviews and sentiments about products and services to one another and proffer their opinion about their experience of using a product or service, and this is termed as word of mouth (WOM). WOM, therefore, refers to the interpersonal communications that customers have amongst themselves regarding their assessment and evaluation of a particular product/service (Westbrook, 1987). In a service environment, WOM is expected to play a much greater role than in goods due to the issues such as intangibility of services, non-standardization, and customization translating into a higher risk perception by consumers of services

[1] *PhD Research Scholar,* Symbiosis International (Deemed University), Village Lavale, Taluka, Mulshi Rd, Pune - 412 115, Maharashtra, [1] *Assistant Professor,* Dr. V.N. Bedekar Institute of Management Studies, Building No. 4, Jnanadweep, Chendani Bunder Road, Thane (W) - 400 601, Maharashtra. (Email : kalamahadevan@hotmail.com) ; ORCID iD : 0000-0002-6368-5292

[2] *Professor (Corresponding Author),* Symbiosis Institute of Digital and Telecom Management, Symbiosis International (Deemed University), Village Lavale, Taluka, Mulshi Rd, Pune - 412 115, Maharashtra. (Email : sjoshi@sidtm.edu.in) ; ORCID iD : 0000-0002-5738-8881

(Zeithaml et al., 1996). In such situations, information provided by other consumers strongly influences potential buyers (O'Cass & Carlson, 2012).

In an era of electronic commerce wherein more and more businesses are offering both products and services through the electronic route, electronic word of mouth (EWOM) has become a crucial marketing tool (Alsaggaf & Althonayan, 2018). In this fast-paced internet driven business environment, consumers use the internet to generate and distribute content and share the same with other consumers. Improvements in communications and information technologies have provided consumers with easy outlets to collaborate and communicate with other consumers ; this has resulted in a situation where the decision of a consumer to purchase a product or a service, especially those purchased electronically or online is not an independent personal decision, but is a collective decision influenced by online reviews and recommendations by other consumers (Alabdullatif & Akram, 2018).

Originality of the Research Study

Academic research in a particular domain of knowledge aims at improving the body of knowledge in that particular field over a period of time. Typical literature reviews in the field of electronic word of mouth have followed the narrative review approach which is descriptive and aims at reporting the various issues with respect to the knowledge domain.

Relatively lesser focus has been accorded to carrying out a comprehensive quantitative evaluation of the extant literature through the use of bibliometric tools so as to assess the trends in research production in EWOM, investigate key contributing authors, journals, and organizations which are active in the field of EWOM research, and thereby gain a comprehensive understanding of this knowledge domain, thus leaving a research gap to that extent. This paper seeks to make an original contribution to the research literature by providing a quantitative analysis of the research in the domain of EWOM through a bibliometric review.

Objectives of the Research Study

This paper seeks to address the above - mentioned research gap through the following objectives :

(1) To assess the overall trends in research production in the field of electronic word of mouth (EWOM).

(2) To identify the significant contributions made by authors, journals, and organizations in the knowledge domain of EWOM.

(3) To identify the key theories that provide a theoretical foundation to research in the knowledge domain of EWOM.

(4) To identify areas which offer potential research avenues.

Literature Review

Electronic Word of Mouth

Electronic word of mouth is defined as, "any positive or negative statement made by potential, actual or former customers about a product or a company, which is made available to a multitude of people and institutions via the internet" (Hennig - Thurau et al., 2004, p.39). Therefore, EWOM can be construed as an exchange of information between individuals through an online platform. Litvin et al. (2008) opined that EWOM consists of all informal communications which customers channel to other customers via internet-based technologies and typically relate

to their positive or negative experience related to usage, features, quality, and delivery of products and services. Electronic word of mouth in the form of online reviews has been found to influence online purchase decisions of customers, and in fact, consumers presume online reviews to be more credible, and hence, response of organizations to online reviews is becoming more and more a part of overall management strategies (Bhāle & Tongare, 2018).

Researchers have been actively studying the concept of EWOM over the past couple of decades largely in congruence with the internet revolution and the emergence of the smartphone, which has significantly enabled transactions in the electronic commerce arena (Kang & Sivadas, 2018). Consumers today actively subscribe to blogs, use search engines, are part of internet communities, participate in social media, and use multiple instant messaging services to gather as well as disseminate information over the internet (Chatterjee, 2001 ; Helm, 2000). EWOM is free from restrictions of time and place of interaction as the internet can be accessed on the go and has a much wider and faster reach than traditional modes (Churchill et al., 2004 ; Harrison - Walker, 2001).

Researchers in the past have examined both antecedents and consequences of electronic word of mouth. Electronic service quality has been found to have a significant linkage with electronic word of mouth. A study on telecom users in Pakistan revealed a significant linkage between electronic service quality and EWOM (Ullah et al., 2018). A study on social commerce indicated that there is a significant linkage between website quality and electronic WOM (Yusuf et al., 2018).

EWOM has been found to positively influence both business performance and customer purchase behaviour (Awad & Ragowsky, 2008 ; Duan et al., 2008). Researchers have opined that EWOM impacts other variables such as revenue growth, customer retention, and customer purchase intention (Chatterjee, 2001 ; Dwyer, 2007 ; Pavlou & Dimoka, 2006 ; Yoo et al., 2013). Similarly, Gruen et al. (2006) asserted that EWOM had a significant role in influencing customer purchase decisions as well as loyalty. EWOM has also a role to play in reducing the consumers' perceived risk in the online transactions as well as lowering of the transaction time and reducing post purchase cognitive dissonance (Khammash & Griffiths, 2011).

Electronic Word of Mouth Research – An Indian Perspective

India is today one of the fastest growing markets for E-commerce. According to the India Brand Equity Foundation (IBEF, 2019a), the E-commerce industry in India has seen an upward growth trend over the past few years and India is expected to become the largest e-commerce market in the world by 2034. A young population, fast increasing accessibility to the internet, and rapid increase in sales of smart phones are expected to help India's e-commerce revenues to jump from US$ 38.5 billion in 2017 to an expected US$ 200 billion by the year 2026. The "IBEF Retail Report" (July 2019b) estimated the online retail market in India to increase from around US$ 17.8 billion in 2017 to an estimated US$ 73 billion by 2022. Products such as electronics and apparel form the largest chunk of online sales.

The increasing growth of online retail has also resulted in newer forms of communication such as social media and online content usurping the role of traditional media and user generated content through electronic word of mouth, online reviews, blogs, online complaints, etc. playing an important role in the consumers' decision to purchase (Arora et al., 2018).

Prasad and Sen (2018) studied the impact of EWOM on purchase intentions of consumers in an online environment for financial products and services in the Indian market through the mediating effect of conviction. The study concluded that EWOM positively impacted the consumers' purchase intention to buy financial products and services online and conviction partially mediated the impact of EWOM on purchase intention of financial products and services. In a study to examine the credibility of EWOM on purchase intentions for electronic products through e-commerce websites and sample selected through the brand fan pages of Amazon on Facebook, a positive relationship between EWOM and purchase intentions was found with constructs such as trust and brand

image partially mediating this relationship (Rao & Rao, 2019). A study in Pune on the impact of social media as an effective marketing tool for management institutes opined that EWOM had a positive impact in creating a favorable impression which in turn mediated the relationship between EWOM and Institute branding (Shimpi, 2018).

Bibliometric Analysis

The term bibliometric analysis was initially coined by E. Wyndham Hulme in 1922 and later, in 1999, the term "Bibliometrics" was defined as, "the application of mathematics and statistical methods to books and other media of communication" (Pritchard, 1969, p. 349). Bibliometric analysis encompasses the usage of statistical and quantitative techniques to analyze and interpret various criteria related to research carried out in a particular field. Hall (2011) opined that bibliometric analysis includes an analysis of various parameters related to the research literature in a particular area of research and involves an assessment of the quantum and type of scientific contribution of research literature in a knowledge area, analyzing key contributions by authors/ researchers, publishing institutions, affiliated universities, and overall performance. Bibliometric analysis has been used to assess and assimilate the extant research carried out in a research field and has been used to understand and interpret shifts in research in the knowledge area being studied (Ho, 2008 ; Lindsey, 1980 ; Osareh, 1996).

Methodology

Literature reviews are carried out with a view to mapping and assimilating the body of extant research works in an identified area which is aimed at assessing research trends and identify future avenues for research work to be carried out in the field being studied (Tranfield et al., 2003). The methodology used for this paper is based on the structured methodology for conducting literature reviews outlined by Rowley and Slack (2004) encompassing a review of existing literature in the field, structuring and analyzing the literature, and writing out the bibliographic analysis. The methodology used to carry out the bibliometric analysis is a five-step process herein outlined.

✎ The first step involves defining and finalizing the database from which the literature is to be sourced or searched. For this study, the Scopus database was selected for sourcing the research literature on electronic word of mouth. The reason for selecting the Scopus database is that it is one of the largest databases of research literature in the field of social sciences under which the field of electronic word of mouth falls. The Scopus database also facilitates researchers in exporting the data in a standardized format and hence is extensively popular for usage by researchers in carrying out bibliometric analyses.

✎ The second step involved selection of keywords for the analysis. Accordingly, the words "electronic word of mouth," "e-word of mouth," and "EWOM" were used for the search to make the search more holistic and comprehensive. The keywords were searched in the "Title, Abstracts, and Keywords" search criteria using the "OR" string. The search was carried out in December 2019.

✎ The third step was arriving at the initial search results. The keyword-based search in the Scopus database yielded a total of 1,524 research papers.

✎ The fourth step involved refining the initial search results through a set of filters in order to arrive at a final sample set of relevant papers for analysis. The following filters were applied :

● The period selected for the bibliometric analysis was from 2009 – 2019 so as to appraise and analyze the research literature on electronic word of mouth over the past decade.

• Research papers from academic journals only were selected excluding those research papers which were published in conference proceedings, books, etc.

• The subject areas selected for the search process included business, management and accounting ; computer science ; social sciences ; economics, econometrics and finance ; psychology ; arts and humanities ; decision sciences ; engineering ; and multidisciplinary.

• Only research papers written in English language were included in the search.

• After the application of the above filters, 1,010 research papers formed the final sample set to be used for further analysis. These research papers were subsequently downloaded from the Scopus database in a Comma Separated Values (CSV) file and also as a BibTex file in order to perform further data analysis.

• In order to assess the number of papers that were from an Indian perspective, a search within results exercise with "India" as the keyword was carried out. This resulted in a sample set of 60 research papers.

✥ The final step in the methodology was to select the tool for bibliometric analysis. For the purpose of this study, the result analysis provided by the Scopus database and the bibliometric analysis provided by Biblioshiny, the shiny interface app of the bibliometric software : Bibliometrix - an R-tool for comprehensive science mapping analysis (Aria & Cuccurullo, 2017) was sought to be used. While bibliometric analysis can be carried out using various software tools available, the Scopus database itself provides a few bibliometric trends for analysis. In addition, Biblioshiny enables effective analysis through its well-integrated visualization tools and algorithms.

Analysis and Results

Initial Data Statistics

The final set of 1,010 articles was used as the sample set for the bibliometric data analysis. The initial data statistics are as outlined in Table 1.

The 1,010 articles were published in a total of 369 journals over the time period with a total of 2,149 authors who have written research papers in the area of EWOM, thus indicating notable interest in the subject. The subject of EWOM has also seen appreciable collaboration amongst researchers and academicians as the number of

Table 1. *Initial Data Statistics*

Description	Results
Research papers/ documents	1,010
Sources	367
Author keywords	2,544
Period of analysis	2009–2019
Average citations per research paper	26.17
Authors	2,149
Number of single authored papers	84
Number of multi authored papers	2,065
Research papers per author	0.47
No. of authors per paper	2.13

articles per author is only 0.47, whilst the number of authors per paper is 2.13. This fact is also vindicated by the point that there were only 84 authors who authored research papers on their own while there were 2,065 authors who collaborated to generate research papers in this field. The average citation per paper was 26.17 citations.

Trend in Research Production

Figure 1 depicts the trend in annual production of research papers related to electronic word of mouth. Research in this area was not very significant in the initial years of the last decade, however, from around 2011, the number of research papers being published began to increase. The overall compounded annual growth rate (CAGR) was around 31.2% over the period from 2009 – 2019, indicating increasing interest of researchers in this area of work.

Of the 1,010 research papers in the sample set, 60 papers featured from India. The trend in research from India based on the sample set of 60 papers is as provided in Table 2.

It is evident from Table 2 that research in the field of EWOM in India is nascent and picked up only from the year 2017 onwards.
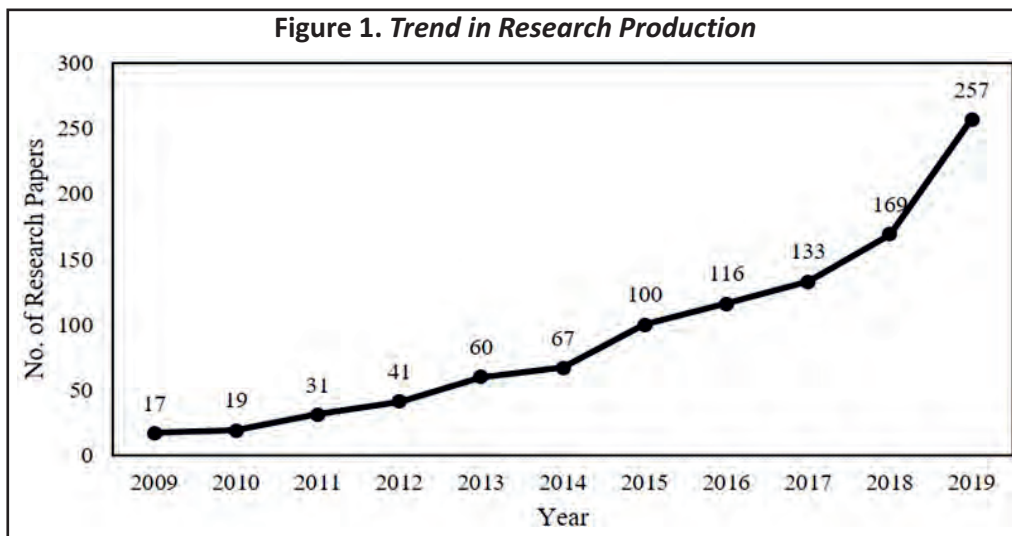

Figure 1. *Trend in Research Production*

Table 2. *Annual Trend in Research Production – Indian Perspective*

Year	No of Research Papers
2011	1
2012	0
2013	2
2014	1
2015	4
2016	5
2017	12
2018	11
2019	24

Citation Analysis

A citation analysis examines the level and the range of connectivity between pairs of research papers in the sample set of 1,010 research articles. The citation overview for the period from 2005 – 2019 as collated from the Scopus database analysis for the 1,010 documents is as given in Figure 2.

The 1,010 research papers over the period from 2009 – 2019 received a total of 26,022 citations. There is an increasing trend in the number of citations that the research papers have received over the years, indicating substantial interest in the field of electronic word of mouth by academicians and researchers.

The 60 research papers from India received a total of 1,314 citations. The paper with the highest citation was "A Survey on Opinion Mining and Sentiment Analysis : Tasks, Approaches and Applications" which received 450 citations.

Figure 3 provides the graph which indicates the citation count of articles.

Of the 1,010 research papers studied, only five received more than 500 citations with only one research paper receiving more than 1,000 citations. The highest cited paper with 1,151 citations was "Twitter Power :
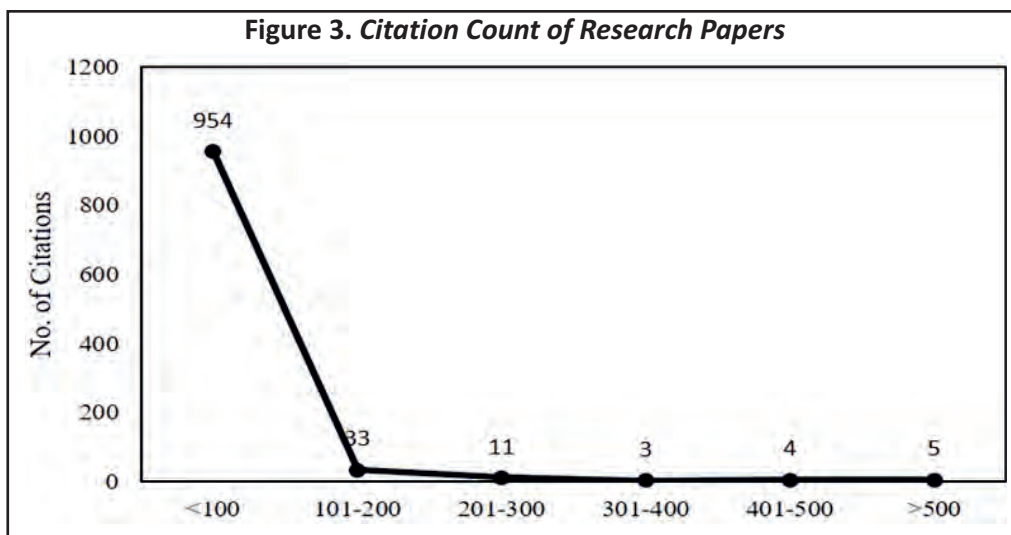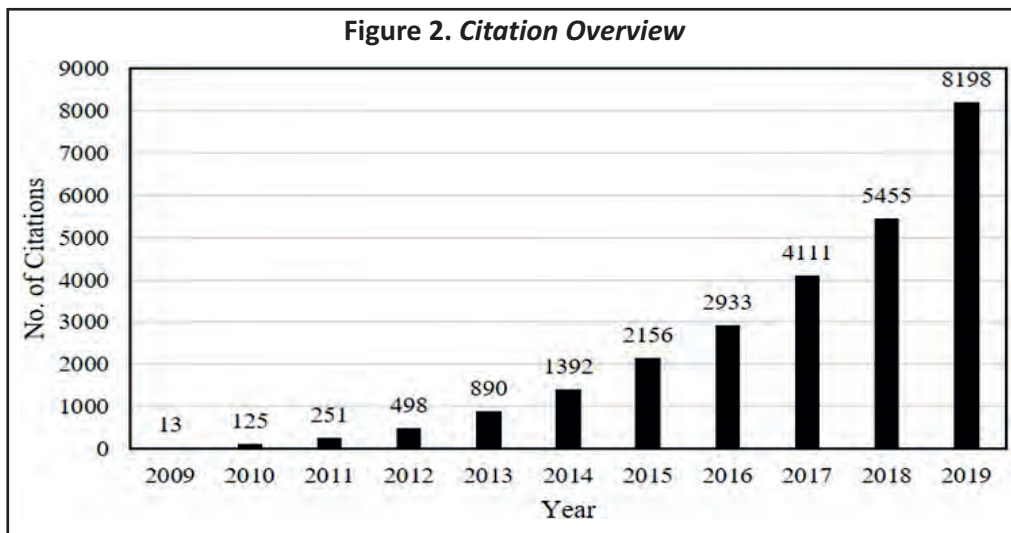

Figure 2. *Citation Overview*

Figure 3. *Citation Count of Research Papers*

Table 3. *Top 10 Research Papers Based on Citations*

Sr. No.	Title	Author/s (Year)	No. of Citations
1.	"Twitter Power : Tweets as Electronic Word of Mouth"	Jansen et al. (2009)	1,151
2.	"Determinants of Consumer Engagement in Electronic Word-of-Mouth (EWOM) in Social Networking Sites"	Chu & Kim (2011)	675
3.	"Tried and Tested : The Impact of Online Hotel Reviews on Consumer Consideration"	Vermeulen & Seegers (2009)	547
4.	"The Impact of New Media on Customer Relationships"	Hennig-Thurau et al. (2010)	539
5.	"The Impact of Online Reviews on Hotel Booking Intentions and Perception of Trust"	Sparks & Browning (2011)	533
6.	"Credibility of Electronic Word-of-Mouth : Informational and Normative Determinants of On-line Consumer Recommendations"	Cheung et al. (2009)	458
7.	"The Influence of User-Generated Content on Traveller Behaviour : An Empirical Investigation on the Effects of E-Word-of-Mouth to Hotel Online Bookings"	Ye et al. (2011)	445
8.	"A Survey on Opinion Mining and Sentiment Analysis: Tasks, Approaches and Applications"	Ravi & Ravi (2015)	450
9.	"The Impact of Electronic Word-of-Mouth Communication : A Literature Analysis and Integrative Model"	Cheung & Thadani (2012)	433
10.	"Information Direction, Website Reputation and eWOM Effect: A Moderating Role of Product Type	Park & Lee (2009)	370

Tweets as Electronic Word of Mouth" (Jansen et al., 2009). The next highest cited article with 675 citations was "Determinants of Consumer Engagement in Electronic Word of Mouth (EWOM) in Social Networking Sites" (Chu & Kim, 2011). It is to be noted that around 94% of the articles received less than 100 citations.

Of the 60 papers in the sample set related to India, none of the research papers received a citation count of greater than 500 citations. The top 10 research papers based on the number of citations received are outlined in Table 3. It is interesting to note that all the top 10 papers receiving a high number of citations have been published in the last decade. This indicates that research interest in the area of electronic word of mouth has escalated over the last decade and research papers written in this period are being cited heavily by current researchers.

Top Journals

The sample set of 1,010 research papers were published in 367 different journals indexed in the Scopus database, thus indicating that the topic of electronic word of mouth is covered by a multitude of journals and enjoys wide dissemination and interest across a broad spectrum of academic journals. The top 20 journals accounting for 34.26% of the total publications are specified in Table 4. The journal – *Computers in Human Behavior* is the topmost contributing journal in the discipline of electronic word of mouth with 34 research papers over the specified time period. However, the journal contributed only to 3.37% of the total number of research papers in the sample set considered for the study.

The sample set of 60 EWOM articles which related to India and which were extracted from the Scopus

Table 4. *Top 20 Journals*

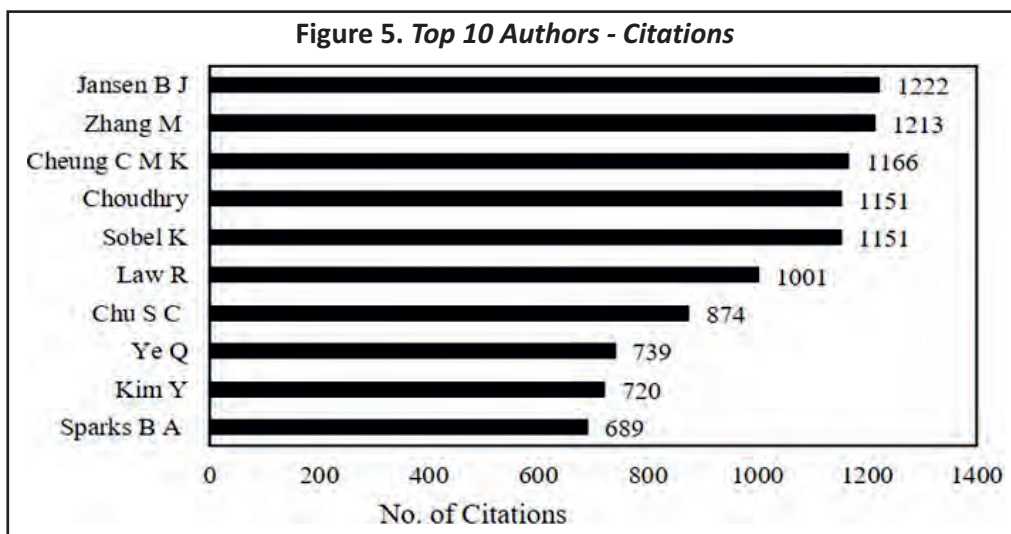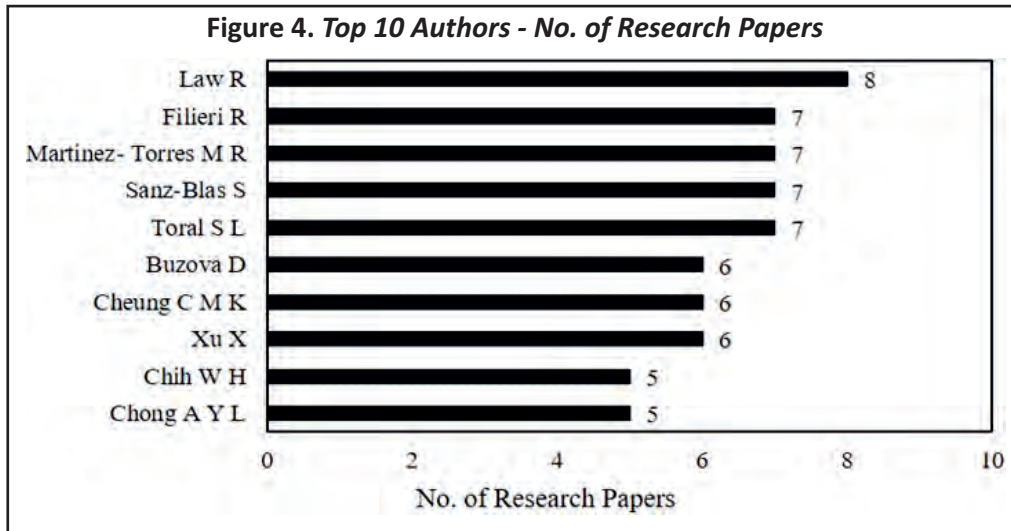| Name of Journal	No. of Papers	%
Computers in Human Behaviour	34	3.37
Internet Research	27	2.67
International Journal of Hospitality Management	26	2.57
International Journal of Advertising	24	2.38
Decision Support Systems	23	2.38
Journal of Business Research	21	2.08
Tourism Management	21	2.08
Journal of Retailing and Consumer Services	19	1.88
International Journal of Contemporary Hospitality Management	18	1.78
Sustainability (Switzerland)	17	1.68
Journal of Marketing Communications	14	1.39
Electronic Commerce Research and Applications	13	1.29
International Journal of Electronic Commerce	13	1.29
Online Information Review	13	1.29
Journal of Hospitality and Tourism Technology	12	1.19
Journal of Interactive Marketing	11	1.09
Information and Management	10	0.99
International Journal of Information Management	10	0.99
International Journal of Internet Marketing and Advertising	10	0.99
Journal of Travel and Tourism Marketing	10	0.99

database using the methodology outlined in this paper indicated that some of the key journals in terms of number of research papers relating to the research domain of electronic word of mouth which were published during the search period of 2009 – 2019 were *International Journal of Recent Technology and Engineering* (six research papers), *Marketing Intelligence and Planning* (four research papers), and *Indian Journal of Marketing* (three research papers).

Most of the research papers related to electronic word of mouth have been published in journals related to the areas of internet research, information and communications, advertising, decision making, and interactive marketing given the fact that electronic word of mouth is a form of information/communication transmitted using the internet and serves as a kind of advertising for the product/ service/ service provider and which enables consumer interaction and aids decision making on the part of the consumers.

Author Influence

Figures 4 and 5 outline the top contributing authors in research production on electronic word of mouth in the sample set both in terms of number of research articles published in Scopus indexed journals over the period from 2009 – 2019 and based on the total number of citations received by authors.

A perusal of Figures 4 and 5 indicates that whilst Law R is the topmost contributing author in the research domain of electronic word of mouth research, Jansen is the author with the most citations. Interestingly, four of the top 10 authors – Jansen, Zhang, Choudhry, and Sobel co-authored the research paper titled, "Twitter Power : Tweets as Electronic Word of Mouth" which is the paper with the highest number of citations in the sample set.

Figure 4. *Top 10 Authors - No. of Research Papers*

Author	No. of Research Papers
Law R	8
Filieri R	7
Martinez- Torres M R	7
Sanz-Blas S	7
Toral S L	7
Buzova D	6
Cheung C M K	6
Xu X	6
Chih W H	5
Chong A Y L	5

Figure 5. *Top 10 Authors - Citations*

Author	No. of Citations
Jansen B J	1222
Zhang M	1213
Cheung C M K	1166
Choudhry	1151
Sobel K	1151
Law R	1001
Chu S C	874
Ye Q	739
Kim Y	720
Sparks B A	689

Country and Affiliation Statistics

Figure 6 provides the country wise scientific production of research articles in the field of electronic service quality for the period under consideration for the top 10 countries.

As can be seen, USA is the topmost contributing country with 300 research papers. The Asian continent is well represented in the top 10 countries with five Asian countries being part of the top 10 countries in terms of number of research publications. Figure 7 outlines the top 10 countries which received the most citations in terms of number of citations received. Again, USA is the country with the maximum citations, more than four times the citations received by Taiwan which is in the second place. Figure 6 also indicates that India had a contribution of 60 papers to the research in the field of EWOM.

The top 10 contributing organizations with respect to the number of research papers published are as listed in Table 5. The data presented in Table 5 again underlines the significant contribution of Asian universities to research in the field of EWOM. While the University of Valencia in Spain accounted for the maximum number of
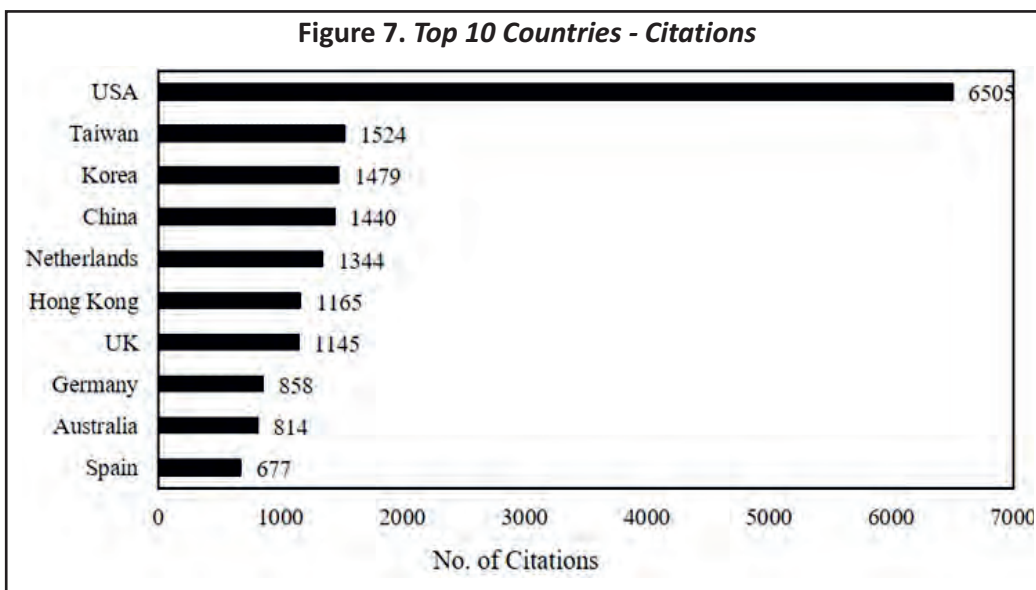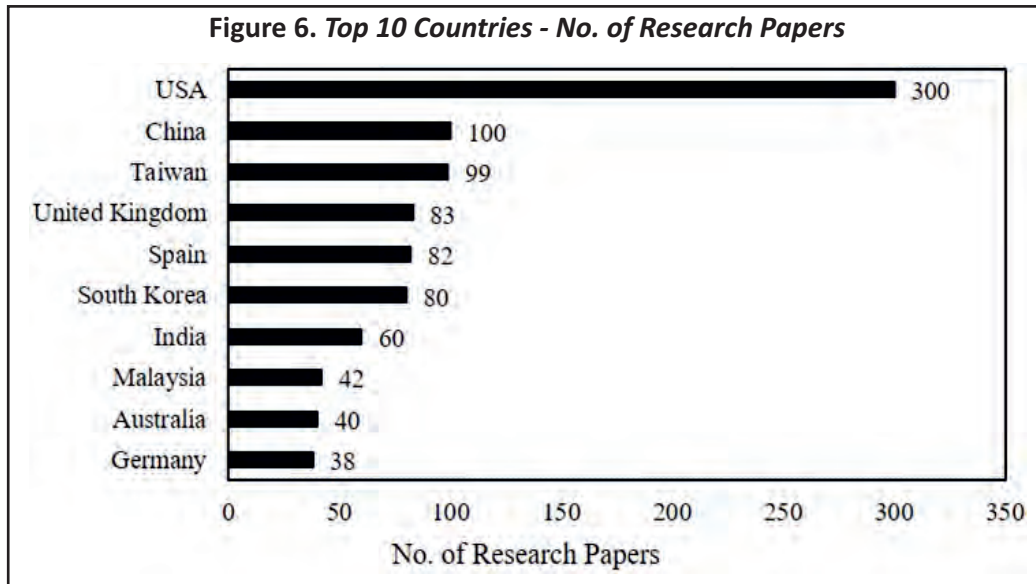
Figure 6. *Top 10 Countries - No. of Research Papers*

Country	No. of Research Papers
USA	300
China	100
Taiwan	99
United Kingdom	83
Spain	82
South Korea	80
India	60
Malaysia	42
Australia	40
Germany	38

Figure 7. *Top 10 Countries - Citations*

Country	No. of Citations
USA	6505
Taiwan	1524
Korea	1479
China	1440
Netherlands	1344
Hong Kong	1165
UK	1145
Germany	858
Australia	814
Spain	677

Table 5. *Top 10 Contributing Organizations*

Organization	Location	No. of Articles
University of Valencia	Spain	21
Hong Kong Polytechnic University	Hong Kong	17
City University of Hong Kong	Hong Kong	17
National Chengchi University	Taiwan	12
Pennsylvania University	USA	11
Universiteit van Amsterdam	Netherlands	11

Korea University	South Korea	11
National Cheng Kung University	Taiwan	11
School of Hotel and Tourism Management - Hong Kong Polytechnic University	Hong Kong	11
Beijing University of Posts and Telecommunications	China	10

Table 6. *Top Three Contributing Organizations - India*

Organization	No. of Articles
Indian Institute of Technology, Kharagpur	6
Indian Institute of Management, Kozhikode	4
Symbiosis International Deemed University	4

research papers in the sample set, there are three universities in Hong Kong and two universities in Taiwan which figure in the list of top contributing organizations. Table 6 provides the top three contributing organizations from India based on the sample set of 60 papers attributable to India.

Author Keyword Statistics

The most frequently used author keywords were analyzed through the Biblioshiny software. Table 7 provides a snapshot of the 20 most popular author keywords used by researchers in the sample set of research papers.

"Electronic word of mouth" and "EWOM" are the most commonly occurring author keywords. Since this concept refers to word of mouth given online, words like "social media," "online reviews," and "social networking sites" are also used frequently. It is interesting to note that both Facebook and Twitter – the popular social networking sites appear often. Other frequently occurring keywords relate to various aspects of consumer behavior such as satisfaction, trust, purchase intentions, etc.

Table 7. *Top 20 Most Frequently Used Author Keywords*

Word	Frequency	Word	Frequency
Electronic word of mouth	309	User generated content	24
EWOM	231	Facebook	23
Social media	159	Satisfaction	23
Word of mouth	79	Source credibility	23
Online reviews	74	Twitter	23
Purchase intentions	47	Internet	20
Trust	38	Brand image	19
Consumer behaviour	29	Hotels	18
Sentiment analysis	27	Social commerce	18
Social networking sites	24	Viral marketing	18

Theoretical Frameworks Used in EWOM Research

This study has carried out a review of the dataset of 1,010 papers to identify the various theories and research frameworks used in EWOM research. The review reveals that only around 10% of the articles used a theoretical foundation for their research. It is interesting to note that there is no single theory dominating research in this field. This paper seeks to provide a snapshot of some of the theories that were used by research articles in the data set used for analysis. A complete listing and discussion of theoretical frameworks is beyond the scope of this bibliometric study.

Festinger (1957) developed the cognitive dissonance theory which has been used by researchers to justify the decision-making behavior of a consumer following a negative experience. Cognitive dissonance and disconfirmation occur when the product or service purchased, consumed, or utilized is not up to the expectations of the consumer. The information adoption theory has found usage in academic research on EWOM (Chen et al., 2014 ; Hussain et al., 2018). Sussman and Siegal (2003) posited that factors that influence people to adopt technologies can also be utilized to understand the behavior of consumers to adopt advice and thereby understand how intentions towards EWOM messages are formed. Erkan and Evans (2016) used a combination of the information adoption theory along with some components of the theory of reasoned action (TRA) to form a new extended model called the information acceptance model. This model was validated and results confirmed that factors such as quality, adoption of information, usefulness and credibility, attitude towards information, and information needs were the key factors of EWOM through social media that influenced purchase intentions of consumers. The elaboration likelihood model (ELM) of information influence has also been used in EWOM research to understand how consumers get influenced by messages that they receive. The ELM is one of the frequently used theories in research on EWOM and explains the influence and persuasive power of EWOM on individuals with low involvement as well as high involvement in the purchase process. The attribution theory outlines "how people make causal reference, what sort of references they make and what the consequences are" (Folkes, 1988, p. 548). This theory seeks to explain how consumers make inferences about the motivation that an endorser has for recommending a product (Folkes, 1988 ; Lee & Youn, 2009). Chiou et al. (2018) based their study on the attribution theory and observed that in the case of negative EWOM, consumers with a higher knowledge elicited lesser perceived credibility than consumers with lower knowledge. The social exchange theory propagated by Homans (1958) attempts to explain social interaction and the reasons for the same. This theory has been used in research literature on EWOM to explain the reasons for people to share opinions, reviews, and engage in discussions to generate EWOM.

Conclusion

This paper furnishes a structured bibliometric analysis of the research done in the domain of EWOM over the last decade. The bibliometric analysis throws light on the fact that research on electronic word of mouth has interested several academicians and researchers and most of the publications in this field are through authors in collaboration with each other. Author collaboration is clearly evident from the fact that the ratio of authors of single authored documents to that of authors of multi-authored documents is as high as 1 : 25. The analysis further indicates that there is a broad dissemination of the literature in the field as the top 20 journals account only for a little more than one-thirds of the total research papers under review.

The geographical dispersion of research has indicated that USA is the topmost contributing country both in terms of number and quality of research works published. As far as India is concerned, research in the field of EWOM has picked up over the last couple of years. India, being an emerging market for e-commerce, and the fact that online shopping as well as online transacting in areas like banking, tourism, etc. have been gaining momentum

further point to the importance that electronic word of mouth would have on consumer behavioral intentions such as purchase intentions, site revisits, etc. and, therefore, more research in this field should be encouraged by academic institutions in India.

This paper provides direction to researchers and academicians to help them identify emerging research trends in the field of electronic word of mouth and also explore avenues where future research is possible. It provides an insight into the knowledge structure of electronic word of mouth literature.

Implications

Theoretical Implications

A bibliometric analysis is a quantitative analysis of the research literature in a domain of knowledge over a period of time. In addition to providing various metrics of analysis with respect to EWOM, this study has outlined the key theories and frameworks that have been used by researchers in the domain of EWOM research over the past decade based on the dataset that was used for the bibliometric study. This would provide new researchers with a guideline on the theories that can provide a foundation for their research on EWOM.

Managerial Implications

The study has implications for managers and marketers of businesses which are operating in online environments or those who operate in both online and offline environments as they would be able to identify the key contributors to the research in this domain. A detailed study of the research papers of these key contributing authors would help marketers to understand current trends in EWOM and also the impact of EWOM on consumer behavior. With the increasing presence of online digital mediums and social media platforms, consumers today have an easy platform to provide detailed reviews about their satisfaction with a particular product/service or service provider as well as vent their frustration at their dissatisfaction thereof.

The impact of online consumer reviews on purchase intentions has caught the interest of academic researchers as well as the business community. Online marketers and e-commerce businesses should aim at developing robust and effective EWOM systems in order to facilitate the sharing of knowledge and opinions amongst consumers. Marketers can effectively use EWOM to their advantage by encouraging customers to post their reviews and devising quick response systems to tackle negative reviews.

Limitations of the Study and Scope for Further Research

One possible limitation of the study is that it has accessed research papers only from the Scopus database ; researchers in the future may try to include other databases as well. Another possible limitation could be that citation data and trends are highly dynamic and may be subject to variation in the future.

Overall, the research on electronic word of mouth worldwide is growing at a reasonably fast pace. This study attempts to provide an inclusive and comprehensive assessment of the research done to date. However, there is still significant room for development of research in this area and some of the gaps identified from the bibliometric analysis through a perusal of the abstracts of the research papers in the sample set are as listed below :

✥ Research into EWOM typically has focused on understanding why consumers seek EWOM and look out for online reviews. A common-sense response to the above query is that consumers are rational beings and they seek information in order to maximize their potential economic and/ or social utility during the purchasing process. However, there has been little research on whether the propensity to seek online reviews and feedback varies

across socioeconomic groups and thus whether demographics play a role in the consumer's decision to seek EWOM. In emerging markets like India where there are considerable differences in terms of consumer heterogeneity, studies which aim at demarcating consumer behavior with respect to seeking electronic reviews on the basis of the different heterogenic groups of consumers could be very useful and hence could offer potential for future research.

↳ The cultural impact of EWOM is another potential area for research as previous research has indicated that culture affects the decision making process of the consumer as well as the information seeking mechanisms (Mangold & Smith, 2012). This issue also has ramifications for markets like India where there is tremendous cultural diversity across consumers from different regions of the country.

↳ While research has focused on how consumers interpret EWOM information in terms of accepting the views posted online, a potential area of research could focus on what are the underlying principles behind how a consumer makes a decision on whether to accept or reject an electronic word of mouth communication.

Authors' Contribution

Dr. Sujata Joshi conceived the idea to undertake the bibliometric analysis. Kala Mahadevan developed the methodology, extracted research papers of high repute from the Scopus database, filtered the papers based on keywords and other criteria, and generated the final data set for the study. The data analysis was conducted jointly by Kala Mahadevan and Dr. Sujata Joshi. Kala Mahadevan wrote the manuscript in consultation with Dr. Sujata Joshi.

Conflict of Interest

The authors certify that they have no affiliations with or involvement in any organization or entity with any financial interest, or non-financial interest in the subject matter, or materials discussed in this manuscript.

Funding Acknowledgment

The authors received no financial support for the research, authorship, and/or for the publication of this article.

References

Alabdullatif, A. A., & Akram, M. S. (2018). Exploring the impact of electronic word of mouth and property characteristics on customers' online booking decision. *TEM Journal, 7*(2), 411 – 420. https://www.ceeol.com/search/article-detail?id=664769

Alsaggaf, M. A., & Althonayan, A. (2018). An empirical investigation of customer intentions influenced by service quality using the mediation of emotional and cognitive responses. *Journal of Enterprise Information Management, 31*(1), 194 – 223. https://doi.org/10.1108/JEIM-04-2017-0048

Aria, M., & Cuccurullo, C. (2017). bibliometrix : An R-tool for comprehensive science mapping analysis. *Journal of Informetrics, 11*(4), 959 – 975. https://doi.org/10.1016/j.joi.2017.08.007

Arora, T., Agarwal, B., & Kumar, A. (2018). A study of millennials' preferences for social media advertising in Delhi NCR. *Indian Journal of Marketing, 48*(10), 34–51. https://doi.org/10.17010/ijom/2018/v48/i10/132334

Awad, N. F., & Ragowsky, A. (2008). Establishing trust in electronic commerce through online word of mouth : An examination across genders. *Journal of Management Information Systems, 24*(4), 101–121. https://doi.org/10.2753/MIS0742-1222240404

Bhāle, S., & Tongare, K. (2018). A conceptual model of helpfulness of online reviews in a blink. *Indian Journal of Marketing, 48*(2), 7–22. https://doi.org/10.17010/ijom/2018/v48/i2/121331

Chatterjee, P. (2001). Online reviews : Do consumers use them ? *SSRN.* https://ssrn.com/abstract=900158

Chen, C. - W., Chen, W. - C., & Chen, W. - K. (2014). Understanding the effects of eWOM on cosmetic consumer behavioral intention. *International Journal of Electronic Commerce Studies, 5*(1), 97–102. http://dx.doi.org/10.7903/ijecs.1030

Cheung, C. M., & Thadani, D. R. (2012). The impact of electronic word-of-mouth communication : A literature analysis and integrative model. *Decision Support Systems, 54*(1), 461–470. https://doi.org/10.1016/j.dss.2012.06.008

Cheung, M. Y., Luo, C., Sia, C. L., & Chen, H. (2009). Credibility of electronic word-of-mouth : Informational and normative determinants of online consumer recommendations. *International Journal of Electronic Commerce, 13*(4), 9–38. https://doi.org/10.2753/JEC1086-4415130402

Chiou, J. - S., Hsiao, C. - C., & Chiu, T. - Y. (2018). The credibility and attribution of online reviews : Differences between high and low product knowledge consumers. *Online Information Review, 42*(5), 630–646. https://doi.org/10.1108/OIR-06-2017-0197

Chu, S. - C., & Kim, Y. (2011). Determinants of consumer engagement in electronic word-of-mouth (eWOM) in social networking sites. *International Journal of Advertising, 30*(1), 47–75. https://doi.org/10.2501/IJA-30-1-047-075

Churchill, E., Girgensohn, A., Nelson, L., & Lee, A. (2004). Blending digital and physical spaces for ubiquitous community participation. *Communications of the ACM, 47*(2), 38–44. https://doi.org/10.1145/966389.966413

Duan, W., Gu, B., & Whinston, A. B. (2008). Do online reviews matter ? – An empirical investigation of panel data. *Decision Support Systems, 45*(4), 1007–1016. https://doi.org/10.1016/j.dss.2008.04.001

Dwyer, P. (2007). Measuring the value of electronic word of mouth and its impact in consumer communities. *Journal of Interactive Marketing, 21*(2), 63–79. https://doi.org/10.1002/dir.20078

Erkan, I., & Evans, C. (2016). The influence of eWOM in social media on consumers' purchase intentions : An extended approach to information adoption. *Computers in Human Behavior, 61,* 47–55. https://doi.org/10.1016/j.chb.2016.03.003

Festinger, L. (1957). *A theory of cognitive dissonance* (Vol. 2). Stanford University Press.

Folkes, V. S. (1988). Recent attribution research in consumer behavior : A review and new directions. *Journal of Consumer Research, 14*(4), 548–565.

Gruen, T. W., Osmonbekov, T., & Czaplewski, A. J. (2006). eWOM : The impact of customer-to-customer online know-how exchange on customer value and loyalty. *Journal of Business Research, 59*(4), 449 – 456. https://doi.org/10.1016/j.jbusres.2005.10.004

Hall, C. M. (2011). Publish and perish ? Bibliometric analysis, journal ranking and the assessment of research quality in tourism. *Tourism Management, 32*(1), 16 – 27. https://doi.org/10.1016/j.tourman.2010.07.001

Harrison - Walker, L. J. (2001). The measurement of word-of-mouth communication and an investigation of service quality and customer commitment as potential antecedents. *Journal of Service Research, 4*(1), 60–75. https://doi.org/10.1177/109467050141006

Helm, S. (2000). Viral marketing - establishing customer relationships by 'word-of-mouse'. *Electronic Markets, 10*(3), 158 – 161. https://doi.org/10.1080/10196780050177053

Hennig-Thurau, T., Gwinner, K. P., Walsh, G., & Gremler, D. D. (2004). Electronic word-of-mouth via consumer-opinion platforms : What motivates consumers to articulate themselves on the internet ? *Journal of Interactive Marketing, 18*(1), 38 – 52. https://doi.org/10.1002/dir.10073

Hennig-Thurau, T., Malthouse, E. C., Friege, C., Gensler, S., Lobschat, L., Rangaswamy, A., & Skiera, B. (2010). The impact of new media on customer relationships. *Journal of Service Research, 13*(3), 311 – 330. https://doi.org/10.1177/1094670510375460

Ho, Y. - S. (2008). Bibliometric analysis of biosorption technology in water treatment research from 1991 to 2004. *International Journal of Environment and Pollution, 34*(1–4), 1–13. https://doi.org/10.1504/IJEP.2008.020778

Homans, G. C. (1958). Social behavior as exchange. *American Journal of Sociology, 63*(6), 597–606. https://doi.org/10.1086/222355

Hussain, S., Guangju, W., Jafar, R. M. S., Ilyas, Z., Mustafa, G., & Jianzhou, Y. (2018). Consumers' online information adoption behavior : Motives and antecedents of electronic word of mouth communications. *Computers in Human Behavior, 80,* 22–32. https://doi.org/10.1016/j.chb.2017.09.019

Ifie, K., Simintiras, A. C., Dwivedi, Y., & Mavridou, V. (2018). How service quality and outcome confidence drive pre-outcome word-of-mouth. *Journal of Retailing and Consumer Services, 44,* 214–221. https://doi.org/10.1016/j.jretconser.2018.07.002

India Brand Equity Foundation. (2019a.). *E-commerce report.* https://www.ibef.org/download/E-Commerce-July-2019.pdf

India Brand Equity Foundation. (2019b.). *Retail report.* https://www.ibef.org/download/Retail-July-2019.pdf

Jansen, B. J., Zhang, M., Sobel, K., & Chowdury, A. (2009). Twitter power : Tweets as electronic word of mouth. *Journal of the American Society for Information Science and Technology, 60*(11), 2169 – 2188. https://doi.org/10.1002/asi.21149

Kang, B., & Sivadas, E. (2018). Corporate social responsibility and word-of-mouth intentions. *Indian Journal of Marketing, 48*(4), 7 – 20. https://doi.org/10.17010/ijom/2018/v48/i4/122622

Khammash, M., & Griffiths, G. H. (2011). 'Arrivederci CIAO. com, Buongiorno Bing. com'– Electronic word-of-mouth (eWOM), antecedences and consequences. *International Journal of Information Management, 31*(1), 82 – 87. https://doi.org/10.1016/j.ijinfomgt.2010.10.005

Lee, M., & Youn, S. (2009). Electronic word of mouth (eWOM) : How eWOM platforms influence consumer product judgement. *International Journal of Advertising, 28*(3), 473–499. https://doi.org/10.2501/S0265048709200709

Lindsey, D. (1980). Production and citation measures in the sociology of science : The problem of multiple authorship. *Social Studies of Science, 10*(2), 145–162. https://doi.org/10.1177/030631278001000202

Litvin, S. W., Goldsmith, R. E., & Pan, B. (2008). Electronic word-of-mouth in hospitality and tourism management. *Tourism Management, 29*(3), 458–468. https://doi.org/10.1016/j.tourman.2007.05.011

Mangold, W. G., & Smith, K. T. (2012). Selling to millennials with online reviews. *Business Horizons, 55*(2), 141–153. https://doi.org/10.1016/j.bushor.2011.11.001

Moriarty, J., Jones, R., Rowley, J., & Kupiec-Teahan, B. (2008). Marketing in small hotels : A qualitative study. *Marketing Intelligence & Planning, 26*(3), 293–315. https://doi.org/10.1108/02634500810871348

O'Cass, A., & Carlson, J. (2012). An e-retailing assessment of perceived website-service innovativeness : Implications for website quality evaluations, trust, loyalty and word of mouth. *Australasian Marketing Journal (AMJ), 20*(1), 28–36. https://doi.org/ 10.1016/j.ausmj.2011.10.012

Osareh, F. (1996). Bibliometrics, citation analysis and co-citation analysis: A review of literature I. *Libri, 46*(3), 149–158. https://doi.org/10.1515/libr.1996.46.3.149

Park, C., & Lee, T. M. (2009). Information direction, website reputation and eWOM effect : A moderating role of product type. *Journal of Business Research, 62*(1), 61–67. https://doi.org/10.1016/j.jbusres.2007.11.017

Pavlou, P. A., & Dimoka, A. (2006). The nature and role of feedback text comments in online marketplaces : Implications for trust building, price premiums, and seller differentiation. *Information Systems Research, 17*(4), 392–414. https://doi.org/10.1287/isre.1060.0106

Prasad, S., & Sen, S. (2018). Role of conviction in the impact of electronic word of mouth on purchase intention for financial products and services. *Indian Journal of Marketing, 48*(1), 47–60. https://doi.org/10.17010/ijom/2018/v48/i1/120735

Pritchard, A. (1969). Statistical bibliography or bibliometrics. *Journal of Documentation, 25*(4), 348–349.

Rao, K. S., & Rao, B. (2019). Examining eWOM credibility - Consumer purchase intention relationship in Facebook : A mediation analysis. *Indian Journal of Marketing, 49*(8), 7–22. https://doi.org/10.17010/ijom/2019/v49/i8/146169

Ravi, K., & Ravi, V. (2015). A survey on opinion mining and sentiment analysis : Tasks, approaches and applications. *Knowledge-Based Systems, 89,* 14–46. https://doi.org/10.1016/j.knosys.2015.06.015

Rowley, J., & Slack, F. (2004). Conducting a literature review. *Management Research News, 27*(6), 31–39. https://doi.org/10.1108/01409170410784185

Shimpi, S. S. (2018). Social media as an effective marketing tool : An empirical study. *Indian Journal of Marketing, 48*(7), 36–50. https://doi.org/10.17010/ijom/2018/v48/i7/129725

Sparks, B. A., & Browning, V. (2011). The impact of online reviews on hotel booking intentions and perception of trust. *Tourism Management, 32*(6), 1310–1323. https://doi.org/10.1016/j.tourman.2010.12.011

Sussman, S. W., & Siegal, W. S. (2003). Informational influence in organizations : An integrated approach to knowledge adoption. *Information Systems Research, 14*(1), 47–65. https://doi.org/10.1287/isre.14.1.47.14767

Tranfield, D., Denyer, D., & Smart, P. (2003). Towards a methodology for developing evidence - informed management knowledge by means of systematic review. *British Journal of Management, 14*(3), 207 – 222. https://doi.org/10.1111/1467-8551.00375

Ullah, N., Ranjha, M. H., & Rehan, M. (2018). The impact of after sale service and service quality on word of mouth, mediating role of customer satisfaction. *International Journal of Services and Operations Management, 31*(4), 494 – 512. https://doi.org/10.1504/IJSOM.2018.096170

Vermeulen, I. E., & Seegers, D. (2009). Tried and tested : The impact of online hotel reviews on consumer consideration. *Tourism Management, 30*(1), 123 – 127. https://doi.org/10.1016/j.tourman.2008.04.008

Westbrook, R. A. (1987). Product/consumption-based affective responses and postpurchase processes. *Journal of Marketing Research, 24*(3), 258 – 270. https://doi.org/10.1177/002224378702400302

Ye, Q., Law, R., Gu, B., & Chen, W. (2011). The influence of user-generated content on traveller behavior : An empirical investigation on the effects of e-word-of-mouth to hotel online bookings. *Computers in Human Behavior, 27*(2), 634 – 639. https://doi.org/10.1016/j.chb.2010.04.014

Yoo, C. W., Sanders, G. L., & Moon, J. (2013). Exploring the effect of e-WOM participation on e-Loyalty in e-commerce. *Decision Support Systems, 55*(3), 669 – 678. https://doi.org/10.1016/j.dss.2013.02.001

Yusuf, A. S., Che Hussin, A. R., & Busalim, A. H. (2018). Influence of e-WOM engagement on consumer purchase intention in social commerce. *Journal of Services Marketing, 32*(4), 493–504. https://doi.org/10.1108/JSM-01-2017-0031

Zeithaml, V. A., Berry, L. L., & Parasuraman, A. (1996). The behavioral consequences of service quality. *Journal of Marketing, 60*(2), 31 – 46. https://doi.org/10.1177%2F002224299606000203

About the Authors

Kala Mahadevan is a Research Scholar with Symbiosis International (Deemed University), Pune, Maharashtra, India and Assistant Professor at Dr. V.N. Bedekar Institute of Management Studies, Thane, Maharashtra, India. Her areas of interest include marketing, consumer behavior, retail management, and integrated marketing communications.

Dr. Sujata Joshi is a Professor of Marketing and Strategy with an experience of 26 plus years. She is currently working with Symbiosis Institute of Digital & Telecom Management, Symbiosis International (Deemed University). Her research areas include consumer behaviour, branding, customer engagement, customer experience, and strategy.