Navigating the landscape of e-commerce: thematic clusters, intellectual turning points, and burst patterns in online reputation management

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Abstract

Recognizing the challenges identified in the vast literature exploring the intellectual landscape of Online Reputation Management (ORM) in the realm of e-commerce, this study performs a quantitative bibliometric analysis, specifically a co-citation analysis using CiteSpace software, to find thematic clusters in a sample of 1136 papers containing 48,385 cited references. This is the first co-citation analysis of ORM literature that cluster the intellectual structure and identifies both the intellectual turning points and burst papers. The results reveal 14 distinct co-citation clusters, each representing a unique thematic structure. An in-depth analysis further characterizes the clusters, ranging from the impact of online reputation on the hospitality industry to frameworks explaining trust formation in e-commerce. Additionally, the study identifies intellectual turning points by assessing betweenness centrality, highlighting four seminal papers that have strongly influenced the field. Furthermore, burst detection analysis uncovers the temporal dynamics of research trends, showcasing the enduring influence of certain clusters and the transient nature of burst patterns. The novelty and importance of the results from the detailed burst detection analysis lie in identifying a significant evolution in research focus over time. Initially, research was concentrated on foundational studies and understanding customer behavior. It then shifted towards practical applications in specific industries, particularly in hospitality and online reviews. In recent years, the emphasis has been on integrating ORM into broader business strategies, especially within e-commerce and the collaborative economy. This research not only contributes to a deeper understanding of ORM, but also serves as a valuable guide for researchers, practitioners, and policymakers in the evolving landscape of online reputation in e-commerce.

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1 Introduction

In the digital realm, first impressions endure, shaping perceptions that influence subsequent interactions. Online Reputation Management (thereinafter, ORM) is the strategic endeavor to cultivate a positive public image for a brand, business, or individual within the online sphere [74]. Recognized as critical for success, ORM has risen to prominence in the management and ecommerce literature, attesting to its pivotal role in companies' pursuit of narrative control and digital excellence [75, 129].

A body of research has firmly established the central role of online reputation in determining the digital performance of companies across both Business To Business (B2B) and Business To Consumer (hereinafter, B2C) domains [69, 118]. Scholarly investigations have also underscored the role of trust mechanisms in fostering online reputation [13, 76–78].

While an extensive search of Scopus and Web of Science (thereinafter, WoS) databases reveals a plethora of papers on ORM, a gap exists regarding bibliometric studies, notably those employing co-citation techniques. Although some authors undertake bibliographic analyses of the published ORM research [28], the literature lacks substantive evidence regarding co-citation-based bibliometric investigations. Such investigations employing advanced techniques have the capacity to illuminate the clustering of primary research areas, identify intellectual inflection points, and detect burst patterns. Such endeavors are indispensable instruments for thoroughly comprehending the nuanced evolution and impactful trends characterizing the research landscape. This paper contributes by exploring this overlooked area.

This paper makes a significant contribution by delving into this overlooked area. Specifically, it:

(1) Provides a literature review that substantiates the gap in ORM research, particularly in the realm of bibliometric studies focusing on co-citation.
(2) Advocates for the adoption of the bibliometric method as a credible scientific approach, offering valuable insights into the subject matter.
(3) Undertakes a bibliometric analysis of ORM, enabling the clustering of primary research areas, pinpointing intellectual turning points, and uncovering burst patterns crucial for comprehensively understanding the evolution and trends shaping the research landscape.

This research not only enhances our comprehension of ORM but also provides invaluable guidance for researchers, practitioners, and policymakers navigating the evolving terrain of online reputation in e-commerce.

Following this introduction on ORM, Sect. 2 conducts the literature reviews. Section 3 describes the research methodology. Section 4 presents the empirical findings, including Subsect. 4.1 Main Research Areas in ORM, 4.2 Intellectual Turning Points in ORM, and 4.3 Burst Detection in ORM. Section 5 provides an additional discussion and Sect. 6 draws conclusions. Section 7 examines limitations and suggests directions for future research.

2 Literature review

A plethora of articles on Online Reputation Management (ORM) can be found in the existing literature: in this study, we have identified a database of 1136 papers containing 48,385 cited references, as can be consulted in Sect. 4 (Methodology). The vast majority of these papers focus on advancing the body of knowledge in ORM through theoretical and empirical studies on specific variables or the impact on various sectors. However, only a small subset of these studies concentrates on understanding the significance of ORM by collecting, organizing, and deriving conclusions about the primary research areas, intellectual turning points, and burst detection. Some of these latter authors, as discussed below, acknowledge the need to review, categorize, analyze, and draw conclusions and trends using systematic literature review and bibliometric techniques.

In this regard, Yang and Albers [134] identify 1044 articles and employ the frequently applied and cited framework of Brocke et al. [11] to select, classify, and scrutinize the 36 articles that meet the taxonomies focusing on ORM works geared toward general scholars and practitioners and that present their results conceptually and neutrally. The primary findings reveal a significant disparity in online reputation management (ORM) research between enterprises and individuals. Enterprises predominantly prioritize safeguarding their brand reputation within closed environments, whereas individuals exhibit greater concern with controlling their personal information on social media platforms. The identified research gaps underscore the necessity for comprehensive coverage of the ORM cycle, suggesting avenues for further investigation to address these shortcomings. Cioppi et al. [26] seek to synthesize business and management literature concerning online presence, online visibility, and online reputation, assessing interest in both Internet-focused marketing and broader business domains. Conducting a systematic review via content analysis of 199 articles from 1997 to 2018, the study exposes a dearth of consensus regarding definitions and measurement metrics for these constructs, while also uncovering a sequential relationship among them. This underscores the necessity for theoretical and empirical advancements to navigate the inherent complexities in this field, providing crucial insights for guiding future research endeavors. Al-Yazidi et al. [2] focus on 116 articles dated between 2010 and 2019 selected through, among others, the Group-based judgment exclusion method. Carrillo-Durán et al. [14] conducted a systematic literature review by analyzing 91 manuscripts spanning from 1984 to November 2022, adhering to PRISMA guidelines. The study delineates six categories to steer forthcoming research endeavors in the realm of personal reputation. Finally, the author suggests prioritizing qualitative and probability techniques for future studies.

On the other hand, the literature review does yield some articles that employ bibliometric techniques focused on related topics, although not specifically on Online Reputation Management, as can be verified when using the following search strategy in WoS, which provides no article whatsoever: TS = "Online Reputation Management" AND TS = "bibliometr*". For instance, Mohd Sofian et al. [83] focus on Corporate Reputation, Navarro-Beltrá et al. [88] on Digital

Reputation and Collaborative Economy, and Hamidi et al. [47] on Corporate Reputation in Industry 4.0.

In light of the literature review conducted, we can conclude that:

(1) Several cited authors acknowledge the need for a literature review to identify, organize, and categorize existing literature on ORM, and draw conclusions about trends and applications in this field.
(2) Some cited authors argue that future literature review studies should employ qualitative and probabilistic techniques.
(3) There is a gap in the literature regarding bibliometric studies, specifically those employing co-citation techniques, as no previous studies conducting a literature review specifically on ORM using bibliometric methods could be found.

Table 1 provides a summary of the main existing studies that conduct systematic literature reviews or bibliometric analyses on ORM or related topics. This table compares the type of study, objectives, methods, and contributions of each study in relation to our current research.

This article significantly advances the field of ORM by conducting a systematic literature review utilizing co-citation-based bibliometric techniques, as suggested by 2024). These advanced methods improve upon previous studies by comprehensively identifying 14 distinct thematic clusters, which provide a more detailed and nuanced understanding of ORM research areas. The study further enhances the literature by pinpointing key intellectual turning points through betweenness centrality and performing sophisticated burst detection analysis to reveal the temporal dynamics and shifts in research focus. By employing CiteSpace software, this study delivers a more rigorous and in-depth analysis, mapping the intellectual structure of ORM and uncovering the evolution and trends in the research landscape with greater precision and clarity than traditional bibliometric and systematic literature review methods.

3 Methodology

Bibliometric analysis offers a qualitative understanding of a subject of interest [4, 9, 103, 130]. A good combination of quantitative (bibliometric) and qualitative (base knowledge of the area) methods allows us to obtain a fairly complete vision of the object of study.

Bibliographic citations show a relationship between the citing author and the authors they are referencing. This connection could be a concept that influenced the author being cited or a methodology that allowed her/him to develop her/his theory. The bibliometric analysis of citations is a useful tool that augments the traditional review of bibliographical production. It also allows for closer examination of the intellectual or cognitive structure that has enabled the growth of that field of science. It reveals its origins and development, as well as the research directions that have attracted the most attention from researchers, along with potential gaps that may attract the attention of future researchers [109, 125, 140, 142].

Table 1 Summary of the main existing studies that conduct systematic literature reviews or bibliometric analyses on ORM or related topics

References	Main study objectives	Research method	Analysis research areas	Intellectual turning points	Burst detection	Co-citation analysis
Al-Yazidi et al. [2]	Provide a deeper understanding of the current state of research on measuring reputation and influence in OSNs, specifically Twitter	Systematic literature review from 2010 to 2019, including content analysis of 199 articles using both automatic and manual search strategies in digital databases	Partial (Limited to specific Online Social Networks—OSNs)	Partial (Highlights key papers but lacks detailed centrality analysis)	No	No
Carrillo-Durán et al. [14]	Systematically review the literature on personal reputation to guide future research in communication, management, and other social science disciplines	Content analysis of 91 manuscripts from 1984 to 2022, following PRISMA guidelines. Establishes six categories for future research opportunities	Partial (Focuses on personal reputation)	Partial (Identifies key works but lacks in-depth turning point analysis)	No	No
Cioppi et al. [26]	Synthesize business and management literature on online presence, visibility, and online reputation concepts	Systematic review of 199 articles from 1997 to 2018, using content analysis to identify definitions and measurements of online presence, visibility, and reputation	Partial (Focuses on online presence and visibility)	Partial (Covers key concepts but lacks detailed turning point analysis)	No	No

Table 1 (continued)

References	Main study objectives	Research method	Analysis research areas	Intellectual turning points	Burst detection	Co-citation analysis
Yang & Albers [134]	Investigate the state of research on online reputation management (ORM) for individuals and enterprises	Systematic literature review emphasizing ORM, addressing the ability to handle large amounts of information and gaps in identification and evaluation of content	Partial (Emphasizes information management)	Partial (Highlights main papers but lacks detailed centrality analysis)	No	No
Mohd Sofian et al. [83]	Conduct a bibliometric analysis to identify trends in corporate reputation publications	Bibliometric analysis of 1807 publications from 1977 to 2020 using Scopus, Microsoft Excel, Publish or Perish (PoP), and VOSviewer. Identifies influential countries, institutions, and scholars	Yes	Partial (Cites key papers but lacks in-depth turning point analysis)	Yes	No
Navarro-Beltrá & Martínez-Polo [88]	Collect, review, and synthesize existing scientific production on digital trust and reputation in the context of collaborative consumption and the collaborative economy	Bibliometric analysis of articles published between 2004 and 2017 in Web of Science, Scopus, and Dialnet. Evaluates the quality, collaboration, and citations of the articles	Yes	Partial (Identifies trends but lacks detailed turning point analysis)	Yes	No

Table 1 (continued)

References	Main study objectives	Research method	Analysis research areas	Intellectual turning points	Burst detection	Co-citation analysis
Hamidi et al. [47]	Explore and provide insights on corporate reputation in Industry 4.0 by identifying trends in publication and research productivity	Systematic literature review and bibliometric analysis of studies from 2010 to 2022. Identifies emerging themes such as crisis communication, engagement, and credibility in I4.0	Yes	Partial (Highlights emerging themes but lacks detailed turning point analysis)	Yes	No
This study	Map the intellectual structure of ORM, identifying thematic clusters, intellectual turning points, and burst patterns	Co-citation analysis using CiteSpace on 1,136 papers and 48,385 cited references from 2010 to 2021, with detailed parameters and use of g-index (k=35)	Yes	Yes	Yes	Yes

A method known as "analysis by co-citations" allows for the acquisition of this broad perspective of a field of scientific activity [125, 140, 142]. According to Small [111–114], one of the founders of the bibliometric analysis of joint citations, this analysis involves tracking how often two works are cited together. When pairs of works are cited frequently by authors, groups of authors and works that discuss the same subject can be constructed. Co-citation analysis allows for classifying the most important articles in a scientific area. Although counting the number of citations provides an indication of the relative influence of a document, co-citation analysis goes a step further. Itlocates links between articles, reveals how they are distributed in networks, and can reveal temporal differences in influential paradigms and lines of thought [142]. From this, researchers can uncover, or at least infer, the connections that have nurtured the growth of that scientific field, uncover shifts in paradigm and lines of thought. It determines the intellectual underpinnings, and discovers the most influential or comparable studies [93, 94, 121, 140, 142].

The so-called bibliometric maps are often used in conjunction with the bibliometric analysis of co-citations. These maps help to visually report the groupings and connections that exist within the intellectual framework of a scientific domain [17, 22, 27, 42, 82, 84–86, 90]. The software CiteSpace [15, 17, 21] was used in this study to create the bibliometric map and analyze co-citations in the field of eSport research. CiteSpace has been used in several studies that examine the intellectual structure of many fields (e.g., [18, 20, 34, 108, 123, 124]), and it has features that add value. The possibility of identifying authors and works that are well cited over a specific time period and have been essential in advancing that field of study should be mentioned (burst detection and turning points).

A search in the WoS database shows that few co-citation analyses are reported in the study of online reputation and related areas that address the knowledge base—and its evolution—behind its current situation. Navarro-Beltrà & Martínez-Polo [88] used WoS, Scopus, and Dialnet databases in a bibliometric analysis of digital trust and reputation in the field of collaborative consumption and collaborative economy, but did not perform a co-citation analysis. Using WoS, Gómez-Trujillo et al. [44] mention that they used, among other methods, co-citation analysis for their study on sustainability and corporate reputation, and Palacios et al. [95] made a bibliometric analysis including co-citation of trust in the field of hospitality and tourism. Using Scopus, Mumu et al. [87] performed co-citation analysis for their study of trust in e-commerce. To date, as far as we are aware, we are the first to conduct an analysis of co-citations on online reputation to establish the intellectual structure of that topic, identify the studies that have received the most attention, the research gaps, and emerging areas of study.

With the objective of covering the research gap (the inexistence of a co-citation analysis in the field of ORM), we have used the following research procedure. In order to obtain the greatest number of documents related to online reputation, given that it is a topic that has appeared in academic literature since the 2000's (e.g.: Dellarocas, 2000), a general search was initially carried out in the Web of Science Core Collection, specifically the Science Citation Index Expanded (hereinafter, SCI-E), Social Science Citation Index (hereinafter, SSCI), and Emerging Sources Citation Index (hereinafter, ESCI) editions, for the concepts that seemed most relevant

such as "ORM (online reputation management)", "digital, online, or media reputation", "digital or online trust", "digital or online perceived value", "e-reputation", "e-trust", "online, digital, or media visibility", and "online review management". The title, abstract, keyword authors, and keyword plus of the results obtained were reviewed. We noted that there were other terms (and their variants) that could be of interest to increase the number of articles returned and we included them in the search. Likewise, some terms and expressions returned articles not related to online reputation. This was the case of the acronym ORM. The first set of documents returned showed that the acronym exists in many other fields, thereby creating considerable bibliographic noise. For this reason, the final search formula was the following.

> TS = "online reputation*" OR TS = "on line reputation*" OR TS = "digital reputation*" OR TS = "media reputation*" OR (TS = digital and TS = "reputation* management") OR ((TS = online OR TS = "on line") AND TS = "reputation* management") OR TS = "online review* management*" OR TS = "on line review* management" OR TS = "digital trust*" OR TS = "online trust*" OR TS = "on line trust*" OR TS = "online perceived valu*" OR TS = "on line perceived valu*" OR TS = e-reputation* OR TS = ereputation* OR TS = etrust* OR (TS = e-trust* not TS = "i.e., trust*") OR TS = "online visibilit*" or TS = "on line visibilit*" OR TS = "media visibilit*" OR TS = "digital visibilit*".

The definitive search was carried out on 2 June 2021, for a 2010–2021-time frame, resulting in 1136 papers containing 48,385 cited references. Our co-citation bibliometric analysis was carried out with these data, as retrieved from the search of WoS (SCIE-E, SSCI, and ESCI). This intellectual base includes not only journal articles but also books, chapters, conference proceedings, and others. Table 2 shows the parameters introduced in CiteSpace to carry out the bibliometric analysis.

The term source includes all the textual fields possible, according to the usual criteria when using CiteSpace, namely, Title, Abstract, Author Keywords, Keyword Plus that WoS provides [18, 20, 30, 51, 122]. The g-index [22, 37] pertains to the criteria used for the selection of the nodes with the objective of obtaining a network as cohesive as possible. Their clusters are sufficiently differentiated from each other and, at the same time, are sufficiently homogeneous containing similar works. The g-index, therefore, improves the h-index's possible limitations [29]. In addition, CiteSpace adds to the g-index a regulation factor (k) of the total size of the network obtained. In the case of this study, a k = 35 was selected to obtain the most appropriate network, with clusters with an appropriate silhouette, as well as a network with enough modularity. Pruning was not necessary to obtain such a network [51, 122–124].

In order to carry out a citation analysis, as mentioned above, we start from the papers cited in a set of citing papers. CiteSpace processes the co-citations between these cited papers with the aim of obtaining a reasonable network that offers the most realistic view possible of the intellectual structure of the field to be analysed. To do this, it is necessary to take into account a series of parameters such as: obtaining a network with a reasonable number of papers or nodes and a reasonable number

Table 2 Parameters introduced in CiteSpace

Parameter	Description	Choice
(1) Timeslice	Timespan of the analysis	From 2010 to 2021 (2/6/2021)
(2) Term source	Textual fields processed	Title/abstract/author keywords/keywords plus (all)
(3) Node type	The type of network selected for the analysis	Cited reference (the networks are made up of co-cited references)
(4) Pruning	It is the process to remove excessive links systematically	None
(5) Selection criteria	The way to sample records to form the final networks	g-Index (k = 35). The g index is the largest number that equals the average number of citations of the most highly cited g publications. It solves some of the weaknesses of the h-index. k is a scaling factor introduced in Citespace to control the overall size and clarity of the resultant network

of clusters so that it is truly representative of the field, that each cluster has a reasonable number of papers or nodes, that the network has a reasonable Modularity, that the network has a reasonable Silhouette and that, if possible, it has nodes with Burst and nodes with a reasonable Centrality [15, 16, 19, 21]. In order to obtain such a network in which all these parameters are present at a reasonable level, some parameters can be modified in CiteSpace (as specified in Table 3). On this occasion, it has only been necessary to modify the regulation k factor. As can be seen in Table 3, different networks were obtained from which the most reasonable one was selected. For example, it can be observed that networks with a better Modularity or Silhouette were obtained but, taking into account other parameters (such as, for example, the number of clusters obtained, the number of nodes per cluster or the existence of nodes with Silhouette = 1), they turned out to be less reasonable networks for analysis. For this reason, the network obtained with a k = 35 was selected because it was the only one that presented a reasonable level in all the required parameters.

Ultimately, co-citation analysis (in the same way that all bibliometric analyses) has certain drawbacks, although it can be quite helpful in obtaining both quantitative and qualitative approximations of a huge number of publications. To arrive at logical conclusions, one still needs to possess a thorough understanding of the issue, a strong ability to conduct a bibliographic review, synthesize the information, and contribute to discussions with other subject matter experts [142].

4 Analysis and results

The results of the analysis are organised as follows: Sect. 4.1 deals with the clustering of the co-citation network; Sect. 4.2 has to do with the turning points of the intellectual structure; finally, Sect. 4.3 covers the burst papers of ORM intellectual structure.

4.1 Main research areas in online reputation management

Following the methodology described above, and after conducting the co-citation cluster analysis, we conclude that the network of 1136 papers containing 48,385

Table 3 Parameters of different networks

k	Nodes	Clusters (>7)	Clusters (>7–10 nodes)	Modularity Q (>0.50)	Silhouette (>0.70- <1)	Silhouette (=1)
15	403	9	No	0.7391	0.817	Yes
20	513	13	No	0.7458	0.841	Yes
25	602	16	No	0.7507	0.83	Yes
30	687	14	Yes	0.7514	0.747	Yes
35	**773**	**14**	**Yes**	**0.7504**	**0.779**	**No**
40	854	15	No	0.7599	0.827	Yes

cited references can be divided into 14 distinct co-citation clusters, each representing a unique thematic structure as shown in Table 4.

It is noteworthy that while earlier researchers may have assumed that their work contributed to a specific thematic structure, and could be clustered regarding parameters such as "title" or "keywords", the co-citation cluster analysis demonstrates that their work has been repurposed in alternative contexts. This this can lead to the emergence of new avenues for research and, subsequently, the formation of new clusters that may affect subsequent research that co-cites these works. As an example, consider cluster #1, comprising 90 cited papers ("Size"). This indicates that numerous researchers have used a combination of these 90 cited papers as a knowledge source. Hence, cluster #1 is recognized as a distinct thematic structure addressing online reputation and trust on the hospitality/tourism industry.

The selection of these 14 clusters was based on the cluster Silhouette value, as outlined by Chen et al. [21], which must fall between 0.7 and 1.0. This metric evaluates the quality of a clustering configuration by assessing cohesion and separation. Cohesion measures the similarity of an object to others within its cluster, while separation gauges the similarity of an object to its own cluster in comparison to other clusters. Notably, all 14 major clusters we identified have silhouette values exceeding 0.9 (except for cluster #2, 0.779), indicating strong homogeneity within clusters.

Additionally, we employed Newman's modularity Q to evaluate the overall network division, with values ranging from 0 to 1 [89]. High values indicate well-defined cluster boundaries, whereas low modularity values suggest a poorly structured network [19]. In our case the modularity Q value, at 0.7504, suggests a reasonably divided network with loosely coupled clusters, as shown in Fig. 1. ORM co-cite network).

To capture the core characteristics of each cluster comprehensively and strengthen the reliability of the co-citation cluster labeling process, we conducted an analysis focusing on the shared connections among researchers within each cluster, along with the citations they referred to.

Cluster #1 ("Hospitality") examines the impact of online reputation and trust on the hospitality/tourism industry. Specifically, it explores how online reputation is built, managed, and leveraged by businesses and consumers to make better decisions. The studies in this cluster examine different aspects of online reputation such as customer ratings [65, 91], reviews [63], social media [64, 115], [141], sentiment analysis [79, 135], electronic Word-Of-Mouth (thereinafter, eWOM) [116], and third-party intermediaries such as online travel agents [133]. They investigate how these factors affect various outcomes such as hotel sales [136], prices [98], hotel performance and revenue management [58], and customer perceptions of service quality and value [3]. Thus, this cluster of research scrutinizes the multifaceted landscape of online reputation, dissecting customer ratings, reviews, social media engagements, sentiment analysis, electronic word-of-mouth, and the influence of third-party agents like online travel platforms. By comprehensively examining these dimensions, businesses can glean invaluable insights into the intricate dynamics of their online reputation and its profound impact on critical performance metrics. For instance, understanding how customer ratings and reviews influence hotel sales and pricing strategies enables businesses to tailor their approaches for maximum

Table 4 Main research areas in ORM

Cluster	Size	Silhouette	Mean (year)	Label	Description
1	90	0.902	2012	Hospitality	Online reputation and trust on the hospitality/tourism industry
2	74	0.779	2015	Trust-Hotel	Specifically trust in the hotel industry
3	64	0.971	2007	Marketplaces	Trust and reputation in marketplaces
4	61	0.964	2009	Intangible asset	Trust as an intangible asset in the context of electronic services
5	59	0.921	2016	e-Commerce	Trust in the context of e-commerce and its implications
6	51	0.922	2014	Business Operations	How reputation affects online business operations
7	44	0.905	2016	Collaborative economy	The influence of reputation on marketplaces, particularly those associated with the collaborative economy
8	42	0.966	2006	Frameworks	Different frameworks to explain Trust and its formation
9	27	0.971	2012	Maintain trust	Guidance for e-commerce firms on how to build and maintain trust among their customers
10	21	0.953	2012	Online reviews	The impact of online reviews on consumer behavior
11	20	0.981	2007	Customer behavior	Effects of trust on customer behavior
12	16	0.997	2017	Healthcare	Online reputation in the healthcare industry
13	11	0.988	2016	Perceptions	The link between public reputation perceptions, which are influenced by online activities and consumer engagement, and shareholder value
14	9	0.992	2008	Evolution	The complex nature of trust formation, evolution, and determinants in different contexts

Silhouette: quality of a clustering configuration [105], suggested parameters > 0.7 [21]
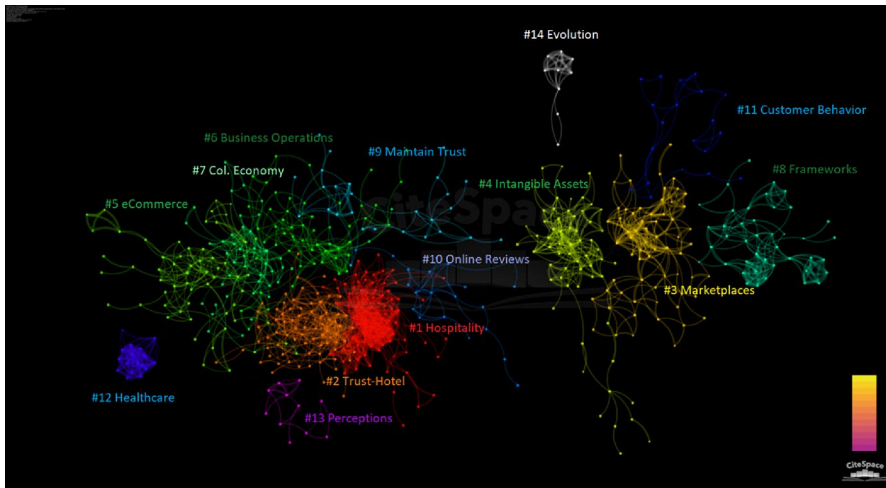
Fig. 1 ORM co-cite network

effectiveness. Furthermore, insights garnered from sentiment analysis and electronic word-of-mouth can inform strategies for enhancing service quality and customer satisfaction. Embracing proactive strategies to manage online reputation, such as promptly addressing negative feedback and cultivating positive engagements on social media, is essential for sustaining a favorable brand image. Moreover, establishing collaborative partnerships with online travel agents can amplify a business's online visibility and reputation, thereby driving greater customer trust and loyalty. Ultimately, by leveraging the insights gleaned from this research cluster, businesses can navigate the digital landscape with confidence, bolstering their competitive edge and fostering long-term success in the hospitality and tourism sector.

In Cluster #2 ("Hotel") the authors provide valuable insights into the importance of online reputation and trust in the hotel industry, highlighting the need for hotels to manage online reviews and responses effectively to improve their performance and reputation. The papers cover a range of topics related to the business value of consumer reviews and management responses to hotel performance [68, 101, 132], the influence of eWOM [107], the perceptions and evaluations of prospective customers toward an online negative review and any accompanying hotel response [57, 117], the effects of consumer-autogenerated content [39, 41] especially the content posted on social media, such as Facebook and others [62]. For academics, marketing, and e-commerce executives, these insights underscore the critical role of online reputation management in shaping consumer perceptions and influencing their decisions. It highlights the necessity for hotels to actively monitor and engage with online reviews and feedback to maintain a positive brand image. Understanding how consumer-generated content, including social media posts, influences brand perception can inform strategic marketing initiatives aimed at enhancing brand reputation and customer satisfaction. Furthermore, the research suggests that effective management of online reviews and responses can have a direct impact on hotel performance

metrics such as occupancy rates, revenue, and customer loyalty. Marketing executives can leverage these findings to develop targeted strategies for reputation management, customer engagement, and brand communication, ultimately driving positive business outcomes.

In Cluster #3 ("Marketplaces") the concept of trust and reputation in Marketplaces is studied. The authors examine different aspects and provide valuable insights into the topic of online reputation and trust. They highlight the importance of trust and reputation systems in decision support for internet-mediated service provision, the role of trust and perceived risk in consumers' electronic commerce purchasing decisions [1, 52]. Additionally, the researchers examine the effectiveness of internet marketers' efforts to cultivate consumer trust through web signals and discuss the context-specific nature of trust in e-commerce [23].They investigate, how online consumers develop their initial trust and purchase intentions [54], propose a model of e-government trust [6], explore the role of trust in e-commerce relational exchange [96], and analyze how different types of feedback influence trust in online marketplaces [66]. These findings offer practical insights for marketing executives aiming to enhance consumer trust and drive business success. By understanding the pivotal role of trust and reputation systems, executives can prioritize investments in platforms that prioritize these elements, fostering consumer confidence and loyalty. Additionally, recognizing the contextual nature of trust in e-commerce environments allows executives to tailor marketing strategies to address specific consumer concerns and preferences. Insights into the formation of initial trust and purchase intentions provide actionable guidance for designing compelling marketing campaigns and user experiences that inspire confidence and drive conversions.

Cluster #4 ("Intangible Asset") contributes to our understanding of Trust as an intangible asset in the context of electronic services. The authors of this cluster demonstrate the complexity of the concept of trust in this area and highlight the importance of continued research in several ways. For example, Beldad et al. [7] provide a comprehensive overview of research on the antecedents of trust in electronic services. Hu et al. [49] run an experimental design that explores causal relationships between different seal functions and consumers' trust. Finally, Kim et al. [55] conduct an empirical study that provides insights into the real-world effects of website design on trust formation. This cluster illuminates trust as a vital intangible asset within the realm of electronic services. It accentuates the intricate nature of trust and highlights the continuous requirement for research. By comprehending the factors influencing trust in electronic services, investigating the causal links between seal functions and consumer trust, and analyzing how website design impacts trust formation in real-world scenarios, marketing executives can strategically nurture trust to bolster consumer confidence, cultivate brand loyalty, and facilitate sustainable business growth in the fiercely competitive digital environment.

Authors in Cluster #5 ("e-Commerce") investigate different aspects of trust in the context of e-commerce and their implications for theory, practice, and future research. Kim and Peterson [59] focus on the role of online trust in B2C e-commerce and its relationship with antecedents and consequences such as perceived privacy, service quality, loyalty, and repeat purchase intention. Oliveira et al. [92] define and empirically test the three main dimensions of trust (competence, integrity, and

benevolence) and their influence on overall trust of consumers. Other authors [48, 71] investigate the impact of social presence factors grounded in social technologies on trusting beliefs and online purchase behaviors in the context of social commerce, which is a new evolution of e-commerce that combines commercial and social activities. For e-commerce professionals, these insights into the pivotal role of online trust in B2C e-commerce, along with its connection to factors like privacy perception, service quality, loyalty, and repurchase intention, emphasize the necessity of establishing a robust online reputation, delivering exceptional service, and safeguarding customer privacy. Furthermore, integrating social technologies into e-commerce strategies can bolster consumer trust and encourage active engagement on the platform, leading to higher conversions and sustainable business expansion.

Cluster #6 ("Business Operations") examines various aspects of how reputation impacts online business operations and provides valuable insights for enhancing customer loyalty, preventing review fraud, establishing trust, and utilizing websites as a marketing tool, particularly in the hotel industry. The topics discussed most often include the factors that influence customer behavior in e-commerce [8, 25], the credibility of online reviews [72], and the effects of website quality on online booking intentions [131]. For practitioners, this cluster highlights the importance of understanding how reputation impacts online business operations and provides valuable insights for enhancing customer loyalty, preventing review fraud, establishing trust, and utilizing websites as a marketing tool, especially in the hotel industry. The most discussed topics include the factors influencing customer behavior in e-commerce, the credibility of online reviews, and the effects of website quality on online booking intentions. This suggests that marketing executives can benefit by focusing on aspects such as improving the user experience on the website, actively managing reviews, and implementing strategies to build and maintain a strong online reputation, which in turn can lead to increased customer loyalty and bookings. Additionally, attention to these issues can help mitigate the risk of review fraud and strengthen customer trust in the brand.

Cluster #7 ("Collaborative Economy") is devoted to investigating the influence of reputation on marketplaces, especially those associated with the collaborative economy, such as AirBNB. Researchers approach this topic from a variety of angles. For instance, Hamari et al. [46] conduct quantitative analyses to evaluate the effects on the housing market, while Zervas et al. [139] delve deeply into the impact on the hotel industry, also employing quantitative analysis. Finally, Ert et al. [38] center on consumer decision-making and the role of personal photos in the sharing economy, but in this case, the author utilizes experimental methods. This cluster provides, for academics and practitioners, valuable insights into the impact of reputation on marketplaces, particularly those associated with the collaborative economy. By understanding how reputation influences consumer behavior and marketplace dynamics, marketing executives can develop strategies to enhance trust, improve customer experiences, positioning in the competitive landscape, and drive growth in collaborative marketplaces.

Cluster #8 ("Frameworks") is characterized by an interest in studying different Frameworks to explain Trust and its formation as an inherent and primary component of online reputation. It highlights the importance of institutions and seeks to

identify mechanisms to increase trust in online transactions. Authors within this cluster propose diverse models and frameworks that elucidate the concept of trust from different perspectives, employing various primary variables such as relational concepts, satisfaction, and loyalty [100], self-efficacy, controllability, and technology adoption [99], trust considering social, economic, and technological perspectives [50]. Additionally, factors like perceived information asymmetry, fears of seller opportunism, information privacy/security concerns, product diagnosticity, and social presence are also explored [73]. By examining various frameworks proposed by researchers, executives can identify actionable strategies to build trust with customers in online transactions. Insights into relational concepts, satisfaction, and loyalty highlight the importance of fostering positive relationships with customers through personalized interactions and exceptional service experiences. Additionally, understanding factors like self-efficacy, controllability, and technology adoption can guide executives in optimizing user interfaces and online platforms to enhance trust and usability. Incorporating social, economic, and technological perspectives into trust-building strategies enables executives to develop comprehensive approaches that resonate with diverse consumer segments. Moreover, insights into mitigating risks such as information asymmetry and privacy concerns empower executives to proactively address potential barriers to trust and reputation management.

Cluster #9 ("Maintain Trust") contributes to a better understanding of the role of online reputation and trust in e-commerce transactions and provides guidance for e-commerce firms on how to build and maintain trust among their customers. All authors in this cluster utilize empirical methods to examine different aspects of how online reputation and trust can be influenced by a variety of factors. For instance, research explores e-commerce institutional mechanisms [40], privacy assurance [70], social networking sites [56], trusting beliefs [137], and impersonal exchanges and neurological processes [36]. For marketing executives, these insights underscore the importance of proactively managing and preserving trust with customers in the digital realm. Understanding the specific mechanisms and factors that influence trust allows executives to tailor strategies that address customer concerns effectively. By prioritizing privacy assurances, fostering positive interactions on social networking sites, and reinforcing trusting beliefs, executives can cultivate a robust foundation of trust with their customer base. Furthermore, some of the empirical evidence presented in this cluster may serve as a valuable resource for evidence-based decision-making. Executives can utilize this data to inform the development of targeted trust-building initiatives that resonate with their target audience.

Cluster #10 ("Online Reviews") contributes to a better understanding of the impact of online reviews on consumer behavior and provides valuable insights and implications for marketers and decision-makers on different aspects of digital businesses. Cui et al. [31] examine the effect of online reviews on new product sales, Utz et al. [126] investigate the impact of online store reviews on consumer trust, De Maeyer [32] provides a literature review of the relationship between online consumer reviews and sales, and Van Noort and Willemsen [128] examine the effects of webcare interventions in response to negative eWOM. This cluster, offer actionable strategies for marketing and e-commerce executives to leverage online reviews effectively. Understanding how online reviews influence consumer trust and purchasing

decisions enables executives to tailor marketing strategies effectively, optimizing brand perception and driving sales. Moreover, executives can utilize platforms like online review websites strategically to amplify positive reviews, address negative feedback promptly, and enhance overall brand reputation. Proactive reputation management strategies, informed by insights into webcare interventions in response to negative electronic eWOM, can mitigate the impact of negative reviews, safeguarding brand reputation and fostering customer loyalty.

The primary goal of the authors in Cluster #11 ("Customer Behavior") is to extensively study the effects of trust on customer behavior, particularly in the realm of e-commerce. Their research aims to provide valuable insights that can guide managerial practices in establishing trust and enhancing online purchase intentions. This effect is derived from various factors, among which usability and user experience play a significant role. According to Schlosser et al. [106], user experience encompasses not only front-office elements but also back-office considerations. Additionally, several authors, such as Bart et al. [5], highlight the significant impact of personalized organization of information and e-commerce categories on the user experience within each customer segment. Understanding these dynamics is crucial for businesses as they strive to tailor their strategies and improve trust-building efforts in different e-commerce contexts. For marketing executives, comprehending customer behavior is paramount for shaping user experience (UX) and trust in e-commerce. UX encompasses both front-end and back-end elements, necessitating seamless interactions across all touchpoints, from website design to post-purchase support, to cultivate trust and satisfaction among customers. To achieve optimal UX design, research recommends focusing on two key points: (1) Personalization—tailoring information and e-commerce categories to individual customer segments enhances the customer experience, fostering trust and loyalty, and (2) Usability—which plays a vital role in trust formation. Intuitive navigation, clear product descriptions, and secure payment processes are essential to instill confidence in consumers and eliminate barriers to purchase.

Papers in Cluster #12 ("Healthcare"), suggest that online reputation plays an important role in the healthcare industry, especially in the online space. The authors state that both individual and organizational reputations are significant determinants of physicians' performance and patients' choices of physicians on online platforms. However, the specific components of online reputation that have the most influence may vary across different studies and platforms. Thus, Deng et al. [33] focus on the relationship between physicians' online efforts and reputation and patients' choices of a physician on physician-rating websites (PRWs), Guo et al. [45] examine the determinants of social and economic returns of doctors in online healthcare communities (OHCs), Liu et al. [67] investigate the impact of individual and organizational reputation on physicians' online appointments in online health-care market communities, and Cao and Wang [12] and Goh et al. [43] focus on exploring the relationship between reputation and the adoption of telemedicine. For professionals in the healthcare sector, these insights emphasize the importance of actively managing and enhancing online reputation to attract and retain patients. Strategies should focus on fostering positive patient experiences, addressing concerns promptly, and showcasing expertise and credibility. Additionally, leveraging online platforms effectively,

such as physician-rating websites and online healthcare communities, and exploring innovative approaches like telemedicine can amplify visibility and reputation. Understanding the nuances of reputation dynamics in the digital healthcare landscape is crucial for optimizing marketing efforts and building trust among patients.

Cluster #13 ("Perceptions") focuses on studying the link between public reputation perceptions, which are influenced by online activities and consumer engagement, and shareholder value. They take into account the affective and cognitive components that contribute to establishing a reputation. This relationship, although it varies in its impact across different sectors, is explored extensively. For instance, in the case of Dijkmans et al. [35] it is studied within the context of the travel and tourism industry. Raithel and Schwaiger [102] delve into how these perceptions shape the financial worth of companies and how understanding and managing reputation can have significant implications for stakeholders and their decision-making processes. Through their investigations, they shed light on the intricate dynamics between reputation, consumer behavior, and shareholder value. The cluster underscores the need for executives to comprehend the multifaceted nature of reputation, which encompasses both affective and cognitive components influenced by diverse online interactions. These insights shed light on how reputation perceptions shape consumer behavior and ultimately impact shareholder value. Moreover, the cluster highlights the importance of cross-functional collaboration between marketing, finance, and corporate strategy departments. By integrating reputation management insights into decision-making processes across these functions, executives can leverage reputation as a strategic asset for long-term value creation.

Cluster #14 ("Evolution") provides valuable insights into the complex nature of trust formation, evolution, and determinants in different contexts. The cluster highlights the importance of considering various factors that influence trust, such as word-of-mouth, offline trust, expected sanctioning power, information quality, and cultural constructs. The findings have implications for researchers and practitioners interested in several sectors. Kuan and Bock [61] investigate the formation of online trust in brick-and-click retailers before customers visit their online website. Zahedi and Song [138] explore the dynamics of trust revision over time, specifically in the context of health infomediaries and Kim [53] examines the impact of culture on trust determinants in computer-mediated commerce transactions. Research suggests that executives should incorporate the factors influencing trust formation into their trust-building initiatives to create more authentic and meaningful relationships with customers, ultimately enhancing brand credibility and fostering customer loyalty. Additionally, professionals are recommended to continuously monitor and adapt their trust-building efforts to align with evolving customer expectations, taking into account their cultural sensitivities and preferences.

4.2 Intellectual turning points in ORM

In the realm of co-citation clusters, which serve as fundamental structures in thematic research, each paper is visually represented as a node. These nodes not only signify individual research pieces but also act as intellectual turning points,

connecting diverse clusters within the network [22]. The significance of a node in linking others is quantified through betweenness centrality, a metric that measures how often a node functions as a bridge along the shortest path between two other nodes. Nodes with high betweenness centrality are essential connectors, playing a pivotal role in linking two or more nodes [22]. From a bibliometric standpoint, the betweenness centrality of a node is linked to the paper's long-term future citations, indicating its enduring impact [110].

Nodes exhibiting a betweenness centrality higher than 0.10 are identified as high betweenness centrality nodes based on social network theory. These nodes often lie on pathways connecting distinct clusters, showcasing their crucial role in interlinking various thematic research areas [22]. Table 5 describes four papers in the field of ORM, each with a betweenness centrality exceeding 0.10. These publications can be regarded as the intellectual backbone of this field, forming the foundation upon which the broader research landscape is constructed.

The study conducted by Sparks and Browning [115] represents a significant turning point in the field of online reputation and consumer behavior. By investigating the effects of eWOM this research contributes to the growing body of literature in this domain and offers practical implications for hotel managers and marketers aiming to enhance their online reputation and increase hotel bookings. Using a simulated website, the study examined how different types of eWOM influence consumer intentions to book a hotel room. The findings reveal that consumer behavior is significantly influenced by the valence and volume of reviews, as well as the trustworthiness of the source. Positive reviews and a higher volume of reviews positively affected the likelihood of consumers booking a hotel room, while negative reviews had an adverse effect. Moreover, reviews from trusted sources exerted a stronger influence on consumer behavior compared to reviews from untrusted sources.

This research is important for researchers, practitioners, and policymakers involved in ORM and consumer behavior. It not only represents one of the most important research outputs in Cluster #1 but also has decisive implications for Cluster #2 [24, 81], Cluster #4 [7, 55], and Cluster #10 [31].

Ayeh et al. [3], also present a groundbreaking study that marks a turning point in the research of online reputation and User-Generated Content (thereinafter, UGC). Focusing on the context of travel planning, the authors sought to unravel the influence of credibility perceptions of UGC on travelers' behavioral intentions. By investigating the dimensions of source credibility (expertise and trustworthiness) and homophily (demographic and social), the study provides valuable insights into the use of UGC for travel planning. A survey of online travel consumers in Singapore was conducted to test the impact of these dimensions on behavioral intentions.

The findings demonstrate that all four dimensions of credibility and homophily significantly affect travelers' behavioral intentions, with expertise emerging as the most influential dimension, followed by trustworthiness. Furthermore, social homophily was found to have greater importance than demographic homophily. The authors also develop a theoretical model that elucidates the interrelationships among the constructs tested in the study. This work serves as a pioneering step in comprehending credibility in the realm of UGC and calls for future studies to explore additional factors that further elucidate the intricate relationships among variables

Table 5 Intellectual turning point cited articles in ORM

Centrality	Cluster	References	Title	Source
0.45	4	Beldad et al. [7]	How shall I trust the faceless and the intangible? A literature review on the antecedents of online trust	Computers in human behavior
0.39	1	Sparks & Browning [115]	The impact of online reviews on hotel booking intentions and perception of trust	Tourism management
0.19	1	Ayeh et al. [3]	"Do We Believe in TripAdvisor?" Examining Credibility Perceptions and Online Travelers' Attitude toward Using User-Generated Content	Journal of travel research
0.15	3	Kim et al. [54]	A trust-based consumer decision-making model in electronic commerce: the role of trust, perceived risk, and their antecedents	Decision support systems

related to online credibility and the use of UGC in the context of travel planning. Notably, this study has been cited by several authors in Cluster #2 [41, 57, 97, 107, 132] and Cluster #6 [8], who have expanded upon the open lines of research outlined in this article.

The research conducted by Kim [53] also marks a turning point in the field of ORM. Through a comprehensive systematic literature review, the authors critically analyze three main themes: the importance of online reputation, the factors shaping online reputation, and the relationship between online reputation and business success. The findings reveal the profound impact of online reputation on customer behavior, brand perception, and financial performance. It also identifies several research avenues that have been pursued by authors in Cluster #3 [96], Cluster #4 [7], and Cluster #8 [99]. These include investigating factors influencing online reputation, developing innovative monitoring and management methods for social media and online communities, exploring ethical and legal implications, examining the impact of online reputation in diverse domains, and conducting cross-cultural and cross-national studies to identify contextual variations in online reputation dynamics.

Finally, the article written by Beldad et al. [7] seems to be deeply influenced by other authors in Cluster #1 [115] and also represents a turning point in the research of online reputation, recognizing its escalating significance in today's digital landscape. The study emphasizes the substantial influence of social media on online reputation, both positive and negative, as it provides a platform for consumers to share their experiences and opinions, rapidly reaching a wide audience. The article delves into the factors that influence the impact of social media on online reputation, including the type and source of content and the credibility of the source. Furthermore, it explores the role of social media in shaping consumer perceptions and discusses the benefits and drawbacks of using social media for ORM. While acknowledging social media as a valuable tool, the authors underscore the importance of a comprehensive strategy that considers the multifaceted factors influencing online reputation.

This article contributes significantly to the literature by providing valuable insights that aid businesses and individuals in effectively managing their online reputation in the digital era. It concludes with a research agenda, highlighting key areas for future exploration including the following topics: impact of social media on offline reputation, the role of influencers in shaping online reputation, ethical considerations in ORM, effective measurement tools and metrics, use of artificial intelligence and natural language processing techniques for content analysis, and the development of standardized measures of online reputation across diverse contexts and industries. Notably, this research has catalyzed the investigation of these open research lines by several authors in Cluster #1 [115], Cluster #3 [1, 23, 54], and Cluster #11 [106].

The studies conducted by Beldad et al. [7], Sparks & Browning [115], Ayeh et al. [3], and Kim et al. [54] underscore the crucial role of online reputation in shaping consumer perceptions and business success. They urge e-commerce and marketing directors to prioritize trust-building initiatives, utilize credible sources, and implement comprehensive strategies for effective Online Reputation Management (ORM)

in the digital era. These studies not only represent pivotal moments in online ORM literature but also provide practical insights for e-commerce and marketing directors, as shown in Table 6, which have been extensively cited by other authors.

4.3 Burst detection in ORM

In the realm of online reputation studies the identification and analysis of burst patterns play a pivotal role in understanding the evolution and impact of research trends. This examination, based on the Kleinberg [60] algorithm, delves into 45 papers classified as bursts, unraveling key insights that shed light on the dynamics within the field. As seen in Table 7. Top 45 References with the Strongest Citation Bursts in ORM, the red line segment represents the time period in which a reference was found to have a burst, indicating the beginning and ending years of the duration of the burst.

Cluster #1 emerges as the epicenter of scholarly attention, boasting a substantial 14 references and accounting for a remarkable 31% of the total. Following closely are Clusters #2 and #3, collectively encompassing 67% of the burst references. In stark contrast, Clusters #10 and #11 exhibit minimal representation, each contributing only one reference to the overall burst landscape. Cluster #1 not only leads in quantity but also in temporal breadth, spanning seven years from 2014 to 2021. Conversely, Clusters #3, #8, and #11 establish themselves as pioneers, with contributions dating back to 2010.

The influence of Clusters #1, #2, #5, and #7 extend until the most recent year of study, 2021, showing their enduring importance. Notably, the prolific year of 2013 is the zenith, marking a peak in burst activity.

Examining temporal metrics, the average burst duration is 1.93 years, underscoring the transient nature of burst patterns. Cluster #1, with two articles, and Cluster #4, with one article, stand out as the enduring stalwarts, achieving durations exceeding four years.

A closer inspection reveals that eight articles maintain both interest and relevance in the year 2021, with notable contributions from 2015, 2016, and 2017. This attests to the enduring impact of certain burst topics, transcending temporal constraints.

Table 6 Insights for e-commerce and marketing directors from the intellectual turning points

Reference	Insights for e-commerce and marketing directors
Beldad et al. [7]	Highlights the importance of understanding the factors influencing social media impact and adopting appropriate measures to safeguard online reputation
Sparks & Browning [115]	Emphasizes the need for businesses to actively manage online reviews and enhance trustworthiness through credible sources
Ayeh et al. [3]	Suggests that eCommerce firms should prioritize credible UGC sources and leverage expertise to enhance consumer trust
Kim et al. [54]	Underscores the importance of monitoring and managing online reputation, developing innovative strategies, and exploring ethical implications to maintain a positive brand image

Table 7 Top 45 References with the strongest citation bursts in ORM

Cluster	References	Year	Strength	Begin	End	2010 – 2021
1	Sparks & Browning	2011	6.95	2014	2016	
3	Josang et al.	2007	6.37	2010	2012	
2	Xie et al.	2014	5.78	2017	2019	
4	Beldad et al.	2010	5.7	2011	2015	
5	Y. Kim & Peterson	2017	5.27	2018	2021	
6	Chiu et al.	2014	4.62	2018	2019	
1	Mauri & Minazzi	2013	4.54	2015	2018	
1	Levy et al.	2013	4.54	2015	2018	
3	D.J. Kim et al.	2008	4.46	2010	2013	
2	Serra Cantallops & Salvi	2014	4.4	2017	2019	
8	Pavlou et al.	2007	4.24	2010	2012	
2	Sparks et al.	2016	4.2	2018	2019	
1	Ye et al.	2011	4.14	2015	2016	
3	Aiken	2006	4.06	2010	2011	
11	Schlosser et al.	2006	4.06	2010	2011	
2	W. G. Kim et al.	2015	4.00	2018	2021	
7	Zervas et al.	2017	3.99	2019	2021	
1	Zhu & Zhang	2010	3.88	2014	2015	
7	Ert et al.	2016	3.76	2019	2021	
2	Filieri et al.	2015	3.75	2018	2021	
6	Luca & Zervas	2016	3.72	2017	2019	
1	S.-Y. Park & Allen	2013	3.68	2016	2018	
1	Lange et al.	2011	3.62	2015	2016	
1	Ogut & Onur Tas	2012	3.49	2015	2017	
9	Y. Fang et al.	2014	3.37	2018	2019	
1	W. G. Kim & Park	2017	3.35	2018	2019	
4	Hu et al.	2010	3.33	2014	2015	
9	Dimoka	2010	3.33	2014	2015	
1	Leung et al.	2013	3.26	2016	2018	
2	B. Fang et al.	2016	3.26	2019	2021	
10	Cui et al.	2012	3.05	2015	2017	
1	Yacouel & Fleischer	2012	3.05	2015	2017	
5	Oliveira et al.	2017	2.99	2018	2021	
1	Sparks et al.	2013	2.94	2014	2018	
1	Ayeh et al.	2013	2.94	2014	2018	
2	Ladhari & Michaud	2015	2.93	2018	2019	
2	Proserpio & Zervas	2017	2.9	2019	2021	
3	Y. Chen & Barnes	2007	2.89	2010	2011	
8	Pavlou & Fygenson	2006	2.89	2010	2011	
3	Bélanger & Carter	2008	2.89	2010	2011	
2	Z. Liu & Park	2015	2.86	2017	2018	
4	M.-J. Kim et al.	2011	2.82	2012	2015	
1	Ye et al.	2014	2.8	2018	2019	
3	Palvia	2009	2.73	2011	2013	
3	Li et al.	2012	2.6	2013	2015	

Given the data extracted from the burst analysis, and aiming to deepen the understanding of Online Reputation Management (ORM), we grouped the burst papers by cluster. This categorization, detailed in Table 8, highlights the number of manuscripts associated with each cluster, offering a clearer view of periods of heightened research activity and their impact. This structured approach not only elucidates the thematic evolution within ORM but also pinpoints critical phases of scholarly focus, thus providing valuable insights for future research trajectories.

The analysis identifies three distinct stages of research focus over time, illuminating shifts in thematic emphasis and the evolution of scholarly interest within the field. These stages reflect broader trends and emerging challenges in digital commerce and social interactions, as illustrated in Table 9.

In conclusion, the burst analysis provides a nuanced understanding of the ebb and flow of online reputation research. While certain clusters dominate the scholarly landscape, others contribute with enduring influence, creating a mosaic of temporal dynamics that enriches the discourse in marketing and e-commerce. Specifically, we can outline four main conclusions from the burst analysis:

(1) Identification of key research clusters. Cluster #1 (Hospitality) emerged as the most significant, with 14 references and covering 31% of the total burst activity, reflecting a sustained and concentrated research interest from 2014 to 2021.

(2) Temporal Shifts in Research Focus. Research in ORM has evolved through three distinct stages: (a) Early Years (2010–2013): Focused on foundational research such as customer behavior and frameworks, (b) Middle Years (2014–2017): Shifted towards practical applications in specific industries, particularly hospitality and online reviews, and (c) Recent Years (2018–2021): Emphasized integrating ORM into eCommerce and broader business strategies, addressing trust in online transactions, and exploring the collaborative economy.

(3) Enduring Importance of Certain Clusters. Clusters #1, #2 (Hotel), #5 (e-Commerce), and #7 (Collaborative Economy) extended their influence up to the most

Table 8 Strongest citation bursts in ORM by cluster

Cluster	Cluster label	No. Papers	2010 – 2021
11	Customer Behavior	1	
8	Frameworks	2	
3	Marketplaces	7	
4	Intangible Asset	3	
9	Maintain Trust	2	
1	Hospitality	14	
10	Online Reviews	1	
2	Hotel	9	
6	Business Operations	2	
5	e-Commerce	2	
7	Collaborative Economy	2	

Table 9 Three distinct stages of research focus over time

Stage 1	Focus	Description
Stage 1: early years (2010–2013)	Focus on foundational research and frameworks	Customer Behavior (Cluster 11, 2010–2011): Early interest in understanding customer behavior laid the groundwork for subsequent studies Frameworks (Cluster 8, 2010–2012): Development of structural understandings and methodologies was crucial during this period Marketplaces (Cluster 3, 2010–2015): Initial exploration of digital marketplaces reflects the growing importance of online commerce environments
Stage 2: middle years (2014–2017)	Shift towards practical applications and specific industries	Intangible Asset (Cluster 4, 2011–2015): Recognition of the value of non-physical assets in business operations Hospitality (Cluster 1, 2014–2021): Significant research interest in the hospitality industry, driven by online reputation concerns Online Reviews (Cluster 10, 2015–2017): Emphasis on the role of online reviews in shaping consumer perceptions and business reputations Hotel (Cluster 2, 2016–2021): Continued focus on the hotel industry, aligning with broader hospitality trends
Stage 3: recent years (2018–2021)	Integration of online reputation management into broader business strategies:	Maintain Trust (Cluster 9, 2014–2019): Ongoing concerns about credibility and reliability in online transactions Business Operations (Cluster 6, 2017–2019): Integration of ORM into broader business strategies e-Commerce (Cluster 5, 2018–2021): Rapid growth and evolution of e-commerce, highlighting the need for robust ORM practices Collaborative Economy (Cluster 7, 2019–2021): Importance of trust and reputation in shared economic activities

recent year of study (2021), indicating their ongoing relevance and impact in the field.

(4) Transient Nature of Burst Patterns. The average burst duration was 1.93 years, underscoring the ephemeral nature of research trends. However, certain clusters, like Cluster #1 (Hospitality) and Cluster #4 (Intangible Asset), had articles with burst durations exceeding four years, highlighting their significant and lasting impact on the field.

5 Discussion

Our Research Methodology called for a co-citation analysis. While alternate bibliometric methodologies, including bibliographic coupling, co-authorship analysis, and term co-occurrence analysis may serve as supplementary techniques for classifying scientific bibliographic output and creating visual representations, they do not seem to be the most apt for procuring a historical perspective on the structural or intellectual foundation that has propelled the field's development, which is the target of our inquiry. For instance, co-authorship analysis proves instrumental in identifying relationships between researchers, institutions, or nations; co-occurrence analysis offers insights into well-explored themes; bibliographic coupling concentrates more on recent contributions, affording a detailed understanding of the field's current state rather than its historical evolution. Consequently, the adoption of co-citation analysis emerges as an appropriate methodology for unveiling the intellectual underpinnings of the field's advancement to its present state [9, 85, 127, 142].

Leveraging potent tools such as CiteSpace facilitates the examination of citations within specified time frames, enabling the identification of pivotal works prominently cited during that period. This aids in discerning foundational contributions to the field's development while also revealing unexplored avenues.

A query of the WoS database yields slightly more than a dozen studies related to ORM that employ bibliometric analysis techniques. Notably, only four of these studies acknowledge the use of co-citation analysis, and none explicitly articulate an intent to expose the intellectual structure underpinning their investigations [44, 87, 88, 95]. The remaining studies mostly center on aspects such as online visibility and reputation, leveraging altmetric data in domains such as medicine, health, environmental sciences, personal reputation construction, correlation between online and traditional academic visibility, and researcher reputation in academic social networks. While it is plausible that additional studies employing co-citation analysis exist, the search conducted within WoS, a leading bibliographic database, yields these outcomes. Therefore, our study makes a novel contribution by concentrating on the revelation of the intellectual foundation within the realm of ORM.

In pursuit of a comprehensive understanding of the field of ORM, our research combines quantitative bibliometric methods with qualitative insights to unravel the intellectual underpinnings and evolution of this domain. We employ the bibliometric methods described above, specifically co-citation analysis, to quantitatively analyze a network of 1136 papers and 48,385 cited references. This approach, rooted in social network theory, enables us to discern intellectual structures and relationships

among scholarly works. The co-citation analysis not only identifies influential papers but also thematic clusters, illustrating how earlier research has been repurposed in alternative contexts, opening avenues for new research.

Our methodology, informed by bibliometric principles and using CiteSpace software, analyzes co-cited references to map the intellectual landscape of ORM. By leveraging the g-index with a regulation factor (k = 35), we ensure a cohesive and differentiated sample that captures the essence of the field. This approach, novel in the study of online reputation, uncovers the knowledge base, intellectual evolution, and potential research gaps in this dynamic domain.

6 Conclusions

We found a nuanced thematic landscape organized into 14 distinct co-citation clusters. This sheds light on the intricate interconnections among scholarly works, emphasizing the dynamic repurposing of research in alternative contexts. The clusters identified exemplify how researchers have harnessed earlier works as a collective knowledge source. This highlights the significance of co-citation cluster analysis in uncovering thematic structures beyond traditional parameters like title or keywords, fostering a deeper understanding of the multifaceted relationships among research contributions. The recognition of these clusters not only enriches our comprehension of existing thematic structures but also points to new avenues for research, underscoring the enduring impact of earlier works on subsequent scholarly discourse.

Regarding turning points in the field of ORM, we employed co-citation clusters to identify intellectual nodes that are pivotal for thematic research. Using betweenness centrality as a metric we spotlighted four high-impact papers shaping ORM's intellectual landscape. Notably, Sparks and Browning's [115] investigation into online reviews and eWOM emerged as a turning point, influencing Clusters #1, #2, #4, and #10. Equally noteworthy is Ayeh et al.'s [3] groundbreaking study on credibility perceptions in UGC, resonating in Clusters #2, #4, and #6. Additionally, Kim et al.'s [54] literature review on ORM's importance influences Clusters #3, #4, and #8, while Beldad et al.'s [7] exploration of social media's influence on online reputation contributes to Clusters #1, #3, and #11. These turning points collectively enrich the scholarly dialogue and provide a roadmap for future ORM research.

We also focus on the burst detection in online reputation studies that identify periods of concentrated research activity. In our analysis we found 45 references that can be considered as bursts. Cluster #1 emerges as a focal point, comprising 31% of references and spanning the years 2014–2021. Clusters #2 and #3 collectively constitute 67% of bursts. Clusters #10 and #11 have minimal representation. Notably, the most prolific year was 2013. The average burst duration is 1.93 years, with Clusters #1 and #4 exceeding four years. Eight articles remain important in 2021, showing enduring impact. This nuanced understanding of burst dynamics enriches the discourse in prestigious marketing and e-commerce journals.

This study significantly advances our understanding of Online Reputation Management (ORM) through an innovative bibliometric analysis. Using co-citation

techniques, we mapped the intellectual structure of ORM, identifying pivotal turning points and thematic clusters. Table 10 summarizes the study's results in an organized manner:

This study provides a robust foundation for future research, guiding researchers, practitioners, and policymakers in navigating the evolving landscape of online reputation management in e-commerce and beyond.

7 Limitations and future research

We acknowledge the limitations inherent in utilizing only a single database (WoS: SCI-E, SSCI & ESCI). Recognizing the absence of alternative databases in our work (Scopus, Dimensions) and data from Webometrics or Altmetrics methods [10, 104, 119, 120], we admit to the possibility to more comprehensively cover the subject's knowledge domain [80]. Despite this constraint, the established value of WoS in social science bibliometrics validates our method and results. Nevertheless, caution is warranted when interpreting the findings due to the constraint mentioned.

As far as future research is concerned, in navigating the co-citation clusters, we advocate for a thorough research agenda to drive the field forward. This agenda should include exploring emerging areas, addressing potential research gaps, delving

Table 10 Research conclusions

Theme	Novel conclusion
Advanced bibliometric tools	Pioneering use of co-citation analysis techniques to map ORM's intellectual structure, revealing its evolution and key turning points
Identified thematic clusters	Discovery of 14 distinct clusters, including "Hospitality," "Trust-Hotel," "Marketplaces," and "e-Commerce."
Intellectual turning points	Identification of four seminal articles with high centrality: Beldad et al. [7], Sparks & Browning [115], Ayeh et al. [3], and Kim et al. [54]
Temporal burst patterns	Analysis of 45 references with strong citation bursts, highlighting the evolution and influence of topics like "Hospitality" and "Trust-Hotel."
Thematic evolution in research	Identification of three stages: Foundational and Customer Behavior (2010–2013), Practical Applications (2014–2017), Integration into Business Strategies (2018–2021), especially in e-commerce and the collaborative economy
Foundational research (2010–2013)	Early research focused on foundational studies and understanding customer behavior, laying the groundwork for future practical applications
Practical applications (2014–2017)	Shift towards practical applications in industries, particularly in hospitality and online reviews
Integration into business strategies (2018–2021)	Recent emphasis on integrating ORM into broader business strategies, especially in e-commerce and the collaborative economy

into new dimensions of online reputation, and considering the ethical implications of ORM. The fusion of quantitative rigor and qualitative insights not only enriches the current understanding of ORM but also lays the groundwork for future scholarly pursuits in this dynamic field.

Declarations

Conflict of interest On behalf of all authors, the corresponding author states that there is no conflict of interest.

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