

## Customer Engagement in Online Brand Community: A Bibliometric Analysis

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### Abstract

Building an online brand community becomes a marketing and customer relationship management strategy for companies. Visiting online brand communities is also an important channel for consumers to get product introduction and communicate with other consumers. So far, more and more scholars have paid attention to the participation of consumers in the online brand consumption community. In order to have a systematic and comprehensive understanding of the relevant literature, this paper uses VOSviewer and Biblioshiny toolkit in R language to search the literature from the Web of Science database and conduct bibliometric analysis. Through bibliometric analysis, this research first counts the most authoritative articles, authors, journals, and countries in the field, then analyzes the most frequent keywords in this field through word frequency analysis, and finally summarizes the research stream (Word-of-mouth and behavior, social media, social identity and commitment, consumer value co-creation, brand loyalty trust) in this field through co-occurrence analysis.

**Keywords:** Customer Engagement, Online Brand Community, Vosviewer

### Introduction

The convenience of online communication, transactions, and services has led to the establishment of online brand communities that connect businesses and consumers. Online brand communities allow consumers to search for brand information, post product reviews, and enable companies to gather consumer feedback, stimulate product innovation, upgrade services, and maintain consumer relationships (Chen & Tsai, 2020). Consumers actively participate in online brand communities to gather information and reduce uncertainty resulting from limited knowledge about products or services, thereby benefiting from reduced uncertainty (Chan et al., 2022). Companies can significantly boost their sales by promoting and encouraging consumers to share and endorse products or services they have

experienced (Kim et al., 2021). The practical significance of consumer participation in online brand communities has attracted more researchers to carry out relevant studies (Kumar, 2021).

While customer engagement in online brand communities is widely studied, there is currently a lack of comprehensive analysis on the topic. This study employs bibliometric analysis to provide a comprehensive overview of the present research landscape. Bibliometric analysis is useful for observing the progress of a research field. To gain a comprehensive understanding of the field of consumer engagement in online brand communities, this study poses the following research questions: (1) What are the most influential articles, authors, journals, and countries in the literature concerning customer engagement within online brand communities? (2) What are the main research clusters that pertain to this topic? (3) What are the future research directions about this topic?

To answer the above questions, this study first searches in the Web of Science database, and then extracts the metadata of the literature. Firstly, the most influential authors, articles, journals, countries, and the most frequent keywords in this field are presented, which is helpful for future researchers to have some knowledge of important research results in research topics. In addition, this study also visualizes the current research streams through co-occurrence network analysis, summarizes the current research status of each research stream, and makes suggestions for future research directions.

## **Literature Review**

### **Customer Engagement**

The paradigm of service-dominant logic (S-D logic), companies have changed direction to focusing on enhancing the customer's overall consumer experience (Grönroos, 2006). Consumers are transforming from passive audiences to active participants, creating co-value and personalized experiences through their interactions with brands. In this context, the related research on customer engagement has attracted more and more attention from researchers (Lim et al., 2022). Scholars discussed the definition of customer engagement from different perspectives such as behavior, psychology, and attitude (Lim et al., 2022). Customer engagement covers consumers' positive behavior, loyalty, and purchase intention (Lim et al., 2022). Van et al (2010) defined customer engagement as a behavioral manifestation of customers' attention to brand related information, driven by a certain motivation, in addition to purchasing specific product.

### **Online Brand Community**

Organizations have begun to establish their own online communities to manage relationships with customers and provide a platform for communication between customers (Anaya-Sánchez et al., 2020). Online brand communities are online communities with brands as the focus. In contrast to the traditional community, online community breaks down the concept of geographical space to connect users using digital technology. Online communities are able to interact without any limitations of time and space due to the widespread use of internet technology. The online brand community is a non-geographical social relationship between consumers and brands based on the network space (Muñiz & O'Guinn, 2001; Bilro & Loureiro, 2021; Yuan et al., 2021; Amoah et al., 2022). Muñiz and o'Guinn pointed out that the brand community's identity includes shared awareness, rituals, traditions, and moral responsibility (Muñiz & O'Guinn, 2001; Bilro & Loureiro, 2021).

## Customer Engagement in Online Brand Community

Brand engagement represents a kind of customer engagement focused on a particular object. Online brand communities gather consumers interested in brands, so an active brand community has natural advantages in promoting customer loyalty, brand awareness, and purchase intentions (Kim et al., 2021). However, these advantages cannot be obtained without customer engagement (Anaya-Sánchez et al., 2020). In the online brand community, consumers can help each other to solve problems encountered during the consumption process, can become brand advocates or propagandists to enhance the brand's attractiveness, and can also become the inspiration source of product innovation and service optimization (Anaya-Sánchez et al., 2020).

## Research Methodology

In this study, we retrieved and extracted documents based on the Web of Science (WOS) database. WOS covers important academic articles in the fields of natural science, engineering technology, social science, art, and humanities and consists of Science Citation Index Expanded, Social Sciences Citation Index, and Arts & Humanities Citation Index (Zheng et al., 2023). Since the Web of Science has a schematic screening mechanism for the included articles, many scholars regard the WOS database as the platform for collecting data when conducting bibliometric analysis (He et al., 2017). This research applies the "Topic" query, which searches the title, abstract, author keywords, and keywords plus of the article and uses "customer engagement," "consumer engagement," "user engagement," "online brand community," "virtual brand community" to search in articles published last five years. The search formula is ((TS = Customer engagement) OR (TS = consumer engagement) OR (TS = user engagement)) AND ((TS = online brand community) OR (TS = virtual brand community)). After the screening by applying the PRISMA model, this study extracted 478 results from the WOS core collection, as shown in the following figure.

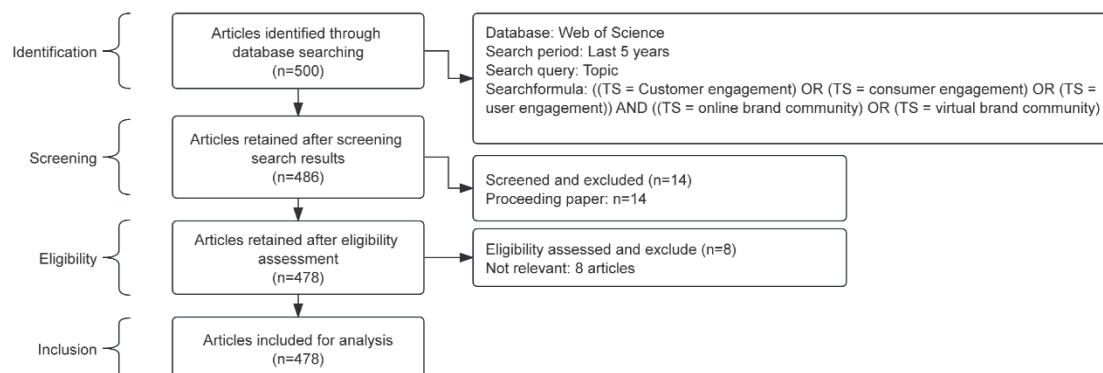


Figure 1. Article Screening

Among these 478 results, we count "the Sum of the Times Cited" value as 5513, the "Average Citations per Item" value as 11.53, and the h-index value as 36. We will combine the VOSviewer and Biblioshiny toolkit in R language to conduct a further bibliometric review of these 478 results. Bibliometric analysis is a literature material research method that originated in the field of library and information science research and has been widely used in management, economics, and education (Singh et al., 2020; Srivastava & Sivaramakrishnan, 2021). Bibliometrics provides a visual overview of the topic through a longitudinal analysis of the literature on the topic of consumer engagement in online brand communities (Donthu et

al., 2021). Biblioshiny toolkit in R language software is suitable for theme analysis, word cloud analysis, and co-occurrence analysis and can reflect influential journals, authors, and countries (Srivastava & Sivaramakrishnan, 2022). VOSviewer can also perform cluster analysis, co-occurrence analysis, and research trend analysis, which complements the analysis results of the Biblioshiny toolkit in R language (Van et al., 2010).

## Results and Discussions

### Main Information

Table 1 shows the basic information of all articles. It can be seen that there are 182 sources for 478 documents. In addition, the average number of citations in the literature is 11.58, and the number of references is 23869. In the past five years, a total of 1166 authors have paid attention to the importance of user participation topics in online brand communities, and as of June 2023, the number of publications on customer engagement in online brand communities shows an increasing trend, as shown in Figure 2. Thus, it can be concluded that related studies are gaining popularity among academics.

Table 1

#### Main Information

Description	Results
Sources (Journals, Books, etc)	182
Documents	478
Average citations per doc	11.58
References	23869
Authors	1166

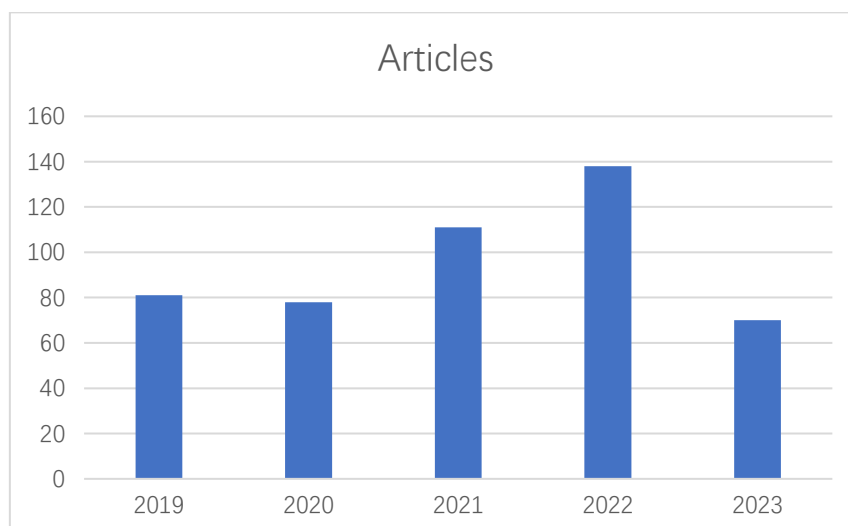


Figure 2. Number of Articles Published Year by Year

### Most Influential Documents, Authors, and Journals

According to the citation report, the three most influential articles were selected according to the number of citations in customer engagement in the online brand community, as presented in Table 2. Mastering this information can help researchers quickly grasp core research as a reference.

Table 2  
The Most Influential Articles

Research Subject	Authors	Source Title	Average per Year	Total Citations
Digital marketing combined with social media	Dwived et al. (2021)	INTERNATIONAL JOURNAL OF INFORMATION MANAGEMENT	114	342
The relationship between platform interaction and customer engagement behavior	Kang et al. (2021)	INTERNATIONAL JOURNAL OF INFORMATION MANAGEMENT	42.33	127
The influencing factors of consumer brand engagement and brand loyalty (community identification, rewards)	Kaur et al. (2020)	TELEMATICS AND INFORMATICS	28.25	113

This study analyzes the most domain-specific journals in this field from the perspectives of the number of articles published and citations. According to Figure 3, the journals with the most significant output total are the Journal of Business Research, with 24 articles; the Journal of Product and Brand Management, with 19 articles; and Sustainability, with 19 articles. From the list of journals most relevant to this topic, we can also see that this study combines various fields such as management, information systems, psychology, and consumer research.

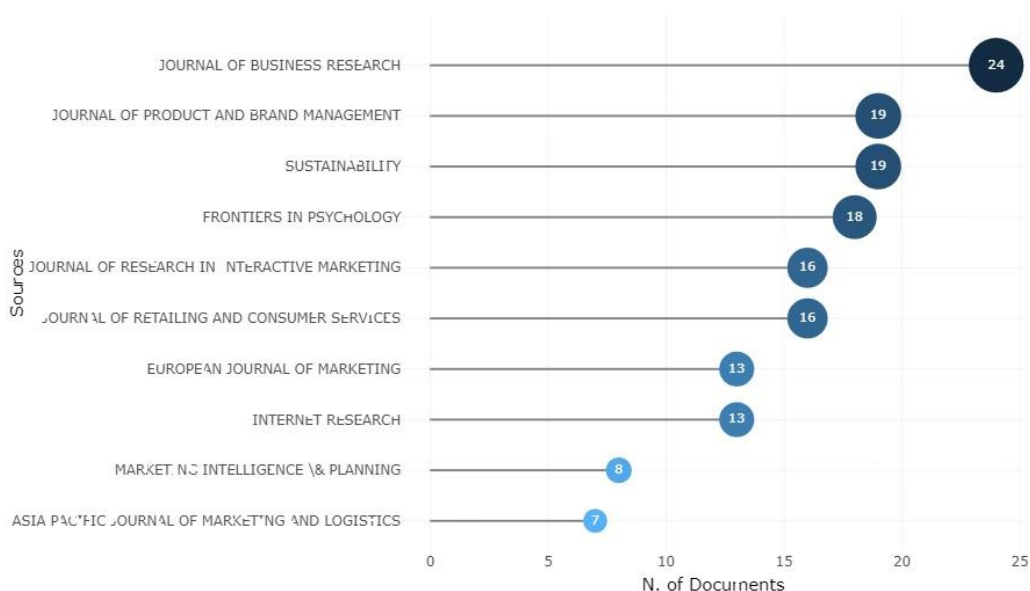


Figure 3. Number of Journal Articles

In this study, the h-index, g-index, and m-index were considered comprehensively when evaluating the influence of journals. The h-index is a mixed quantitative index that combines the number of publications and the number of citations. The g-index evaluates the cumulative citations of multiple articles to avoid the bias caused by the high citations of a single paper. The m-index is a time-standardized h-index that avoids the bias caused by academic age.

Based on the above indicators, the three most influential journals are the Journal of Business Research, the Journal of Product and Brand Management, and the Journal of Research in Interactive Marketing, as can be seen in Table 3.

Table 3  
*Journal Index*

Element	h_index	g_index	m_index	Total Citations
JOURNAL OF BUSINESS RESEARCH	14	24	2.8	586
JOURNAL OF PRODUCT AND BRAND MANAGEMENT	10	15	2	241
JOURNAL OF RESEARCH IN INTERACTIVE MARKETING	10	16	2	317

**Most Influential Countries**

Two criteria have been selected to identify the number of publications and the average number of citations. According to statistics, the most influential countries in this field include China, the United Kingdom, Finland, Australia, and the United States, as shown in Table 4.

Table 4  
*Most Influential Countries*

Country	Total Citation	Average Article Citations
CHINA	991	9.09
UNITED KINGDOM	519	14.03
FINLAND	508	56.44
AUSTRALIA	479	18.42
USA	407	8.66

**Word Cloud**

The word cloud graph is a visual reflection of word frequency, and keywords in this field can be seen. In addition, to search keywords, the words with the highest frequency are brand loyalty, value co-creation, Facebook, social media marketing, brand trust, satisfaction, social capital, brand experience, Netnography, user-generated content, psychological ownership, eWOM, brand love, and interactivity as can be seen from Figure 4.



Figure 4. Word Cloud

### Co-occurrence Network

As shown in Figure 5, based on the keyword co-occurrence network analysis, we obtained five research clusters, including Word of mouth and behavior, Social media, Social identity and commitment, Consumer value co-creation, Brand loyalty, and Brand trust.

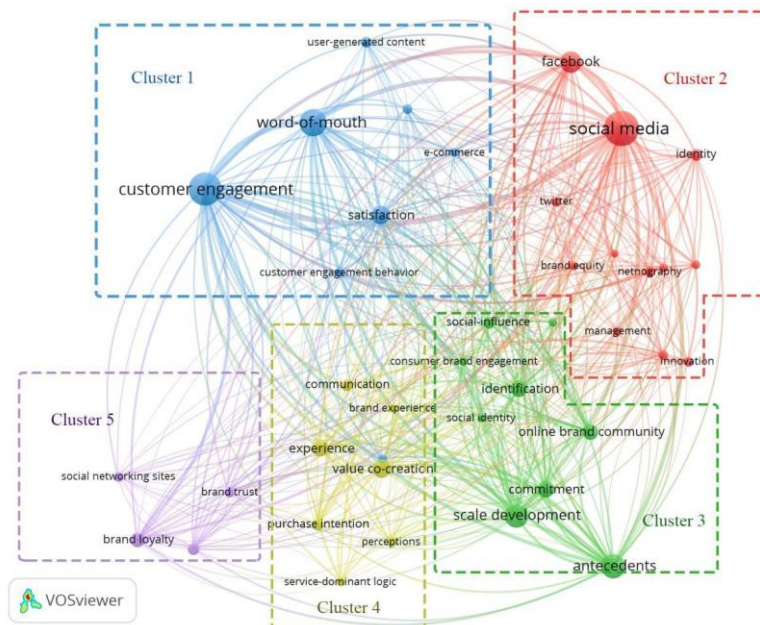


Figure 5. Research Clusters

**Cluster 1: Word-of-mouth and behavior.** Word-of-mouth is embodied in consumers who have already purchased, sharing their shopping experience with others, and recommending products and services (Chan et al., 2022). The researchers in this research stream first focused on the importance of eWOM. Thompson et al (2019) analyzed the words and numbers in online branding community, suggesting that encouraging consumers to participate in eWOM events actively is critical to successful product launches for brands that want to launch new products. Haikel-Elsabeh et al (2019) found that inactive users (lurkers) and active users (posters) have different motivations for sharing content, given the actual behavior data of users. Chan et al. (2022) explored the consumer community around online consumer reviews, focusing on channeling consumption into publishing high-quality content to enhance the value of the online brand community. They illustrated the importance of guiding potential consumers into the role of opinion leaders and promoting their intent to publish content. The eWOM engagement is a manifestation of consumer engagement at the behavioral level.

**Cluster 2: Social media.** Social media have received much attention as a channel for generating and disseminating eWOM. As a form of online brand community, social media brand pages play an essential role in maintaining the brand's interaction with consumers. As social media changes the speed of online dissemination of information, Twitter and Facebook are receiving increasing attention, and consumers can use these social media platforms to post or forward content on brand pages. Some scholars in this research stream have paid attention to the motivation of consumers to engage in social media-based brand pages (Maree and Van, 2021). Maree and Van (2021) studied consumer engagement from the perspective of Facebook brand fan communities explained that different types of brand fans have different ways to contribute to the online brand community. They also emphasized the

importance of social media marketing activities for brands to attract fans. Some other scholars in this research stream have paid attention to the impact of consumers' engagement in social media-based brand pages.

**Cluster 3: Social identity and commitment.** In recent years, social identity theory has often been applied by researchers to explain consumer engagement behavior (Thompson et al., 2019; Valmohammadi et al., 2023). Tajfel (1978) defines social identity as "the value and affective meaning derived from being a member of a social group as part of the self-concept." The social identity of online brand community members influences consumer loyalty, purchase intention, and word-of-mouth engagement intention (Chen et al., 2020). Thompson et al. (2019) pointed out the applicability of Social identity theory in analyzing eWOM behavior when online brand communities as circumstances. Therefore, a community member who identifies with an online brand community will take action to defend their brand community. Valmohammadi et al (2023) believe that brand community identification and brand community elements have a positive impact on consumers' positive behavior, brand trust, and brand loyalty.

Consumer commitment is another factor researchers have focused on as an antecedent to active participation behavior (Zhang et al., 2021; Cai & Bae, 2023). Although online brand communities provide convenience for consumers, when information contributors do not feel the recognition of information seekers or receive rewards from the community, they will be unwilling to continue contributing knowledge (Zhang et al., 2021). Based on social exchange theory, Zhang et al (2021) explored the mediating role of community commitment in alleviating members' unwillingness to contribute time and energy to the community through community support. Cai and Bae's (2023) findings show that a high level of community identification and relational commitment have a positive relationship with the active engagement of community members.

**Cluster 4: Consumer value co-creation.** Many consumers will discuss improving products and upgrading services within the online brand community. In this process, knowledge is created and the connection between consumers is also strengthened, promoting the occurrence of Value co-creation (Cao et al., 2022). The value co-creation of customers and firms was proved by Hussain et al (2022) to be an important antecedent in promoting consumers' positive electronic word-of-mouth (e-WOM) and driving consumers' purchase intentions. Other researchers have focused on the antecedents of value co-creation. Rubio et al (2020) proposed user altruism and user-service firm Interactivity as the premise of sustainable co-creation behaviors. Wang et al (2022) adopted a resource integration framework based on customers' mastery of knowledge, abundant shopping enthusiasm, and perceived information usefulness, which is an important prerequisite for customer content generation behavior and ultimately affects consumers' proactive behavior in the community.

**Cluster 5: Brand loyalty and brand trust.** Brand loyalty is a metric that has received much attention from researchers and practitioners due to its strong positive impact on customer retention, word of mouth, and company profitability (Huang et al., 2022; Shukla et al., 2023). Research by Huang et al (2022) shows that enhancing consumers' interaction perception, benefit perception, and community satisfaction can help enhance their community loyalty. Shukla et al (2023) revealed that psychological empowerment significantly affects brand community commitment and ultimately has a significant impact on brand loyalty. They



pointed out that the specific manifestations of brand loyalty include positive eWOM, promotion community, and repurchase intention. Researchers also divide brand loyalty into two different dimensions: behavior and attitude. The content of brand loyalty in the attitude dimension is consumers' purchase intention, word-of-mouth intention, and emotional brand attachment. In contrast, in the behavior dimension, the content is consumers' actual behavior (Fetais et al., 2023).

### **Future Directions**

Since there are different research clusters on consumer engagement in online brand communities, this study summarizes the researchers' suggestions for future research directions according to different research clusters. In the Word-of-mouth and behavior research stream, the researchers propose future research to investigate users' actual purchasing behavior and expand current research on social platforms, product categories, and target groups (Burnasheva et al., 2019; Maree and Van, 2021). In the stream of research around social media, researchers suggest that future research should focus on the motivations behind social media brand page fan behavior to explain why different consumer groups have different insights (Maree and Van, 2021). Researchers in the Social identity and commitment research stream suggest that future research could broaden the relationship between social identity and other variables by including factors such as brand experience and self-expression (Burnasheva et al., 2019). In the value co-creation research stream, future research can consider the role of factors such as product type, personal skills, inheritance of resources in the community, and trust in consumer content generation on value co-creation (Wang et al., 2022). In the brand loyalty research stream, the researchers propose that future research can collect participants' psychological information to understand the impact of different types of brand experiences on consumer perception and behavior (Huang et al., 2022).

### **Conclusion and Limitations**

After bibliometric analysis of 478 documents in WOS, firstly, the articles with the highest number of citations, authors, and sources are listed. Second, the journals with the highest number of publications in our statistics include the Journal of Business Research, Journal of Product and Brand Management and Sustainability, and the three journals with the highest cited index are the Journal of Business Research, Journal of Product and Brand Management and Journal of Research in Interactive Marketing. Third, we list the most influential countries in this field: China, the United Kingdom, Finland, Australia, and the United States. Fourth, according to the word frequency statistics, brand loyalty, value co-creation, Facebook, social media marketing, brand trust, satisfaction, social capital, and brand experience appear more frequently as keywords. Finally, we summarized five research streams through keyword co-occurrence network analysis: Word-of-mouth and behavior, Social media, Social identity and commitment, Consumer value co-creation, Brand loyalty, and brand trust, and extracted recommendations for future research according to the research streams. As for research contributions, this study lists the most influential articles, authors, and journals in the field, which helps scholars who want to conduct relevant research quickly choose authoritative research results as references. In addition, summarizing the research clusters allows other researchers to quickly grasp the current research results and conduct literature reviews more efficiently. Finally, the suggestions for future research directions in this study can help stimulate researchers to obtain inspiration for further research.

However, this study also has certain limitations. We used the WOS database, including SCI-E, SSCI, and A&HCI, as the literature source, which ensured that the high-quality literature had been included in the research scope of this study to a great extent. However, the data in this study only come from the WOS database, which inevitably means that there are high-quality documents that are not included in the WOS index are excluded. Future research can incorporate literature from SCOPUS, IEEEExplore, and JSTOR databases. In addition, the thesaurus used in the co-occurrence analysis in this study is the author's keywords, and future research can consider using other keywords as data sources for co-occurrence analysis.

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