



A research landscape on customer co-creation value: a systematic literature network analysis

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Abstract

Customer co-creation value has become a widely used term to describe an active, creative, and social collaboration process between producers and customers, in order to help companies assess the value of customers. Therefore, customers become active participants in an innovation process and have always been identified as a co-creator of value. Although the topic of customer co-creation value represents an emerging phenomenon in the business ecosystem, extant literature appears largely unexplored, and a recent systematic review is missing. This paper thus aims to bridge the gap by carrying out a systematic literature network analysis. By analyzing the citation network, the keywords co-occurrence, and the global citation score retrieved from Scopus, this document explores how the literature has evolved over time, which papers played a key role in the progress of knowledge, which methodological approaches dominated, and the existence of promising research areas that have been scarcely explored or that have involved scholars in recent years.

Keywords Customer co-creation value · Systematic literature network analysis · Bibliometric analysis · Citation analysis · Main path

1 Introduction

Since 1970s the figure of the customer has always played a role of considerable importance in business content, in particular, to identify critical success factors in product/service development (Rothwell et al., 1974). Since then, customers have become active participants in various innovation processes of companies and take part in the development of new products or services (Piller et al., 2011). This collaboration process between producers (retailers) and customers (users), is called "customer co-creation value".

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Customer co-creation value is a concept that defines the collaboration between a company and the customer in the joint creation of value. This involves the customer in designing and adapting the service experience to meet their specific needs (Prahalad & Ramaswamy, 2004). This process allows companies and customers to define and solve problems together, creating an experience environment in which consumers can actively dialogue and contribute to the construction of personalized experiences (Prahalad & Ramaswamy, 2004). The customer is thus not simply considered a passive recipient, but rather a collaborative partner who actively contributes to the creation of value with the company (Lusch & Vargo, 2006).

Saarijärvi (2012) pointed out that value co-creation with customers for innovation purposes is a fundamental part of modern marketing and that this process involves "shared creativity". Furthermore, the potential of customers in making contributions to innovation and value creation has also been recognized in other studies (Corsaro, 2019; Hatch & Schultz, 2010; Rashid et al., 2019; Saarijärvi et al., 2013). These studies highlight the crucial role of customers as a source of innovative ideas and as key contributors in the evolution and enrichment of products and services offered by companies.

The existing literature has only addressed the concept of value co-creation in a general way. However, specific academic efforts have emerged aimed to revise and summarize the large literature related to this research area in a more in-depth way. These efforts aim to collect, analyze, and critically evaluate the different perspectives, theories and empirical studies related to value co-creation. For instance, Galvagno and Dalli (2014) outlined the different theoretical perspectives and research streams present in the co-creation literature. By using bibliometric techniques, they identified emerging trends and gaps in this field. By analyzing the most recent articles along with the main articles, they attempted to gain a better understanding of the current landscape of value co-creation, offering a critical overview of research directions and areas that are still under-explored. Ranjan and Read (2016) also conducted a rigorous literature review on the topic of co-creation, which revealed its two main theoretical dimensions, i.e., co-production and value-in-use. Moreover, through this review, they developed specific measurement constructs for each of these dimensions, thus helping to define and provide tools to assess these two theoretical dimensions.

In addition, recent Systematic Literature Reviews were conducted on the topic of "value co-creation" on both the B2C and B2B sides in order to synthesize the literature and bibliography on this topic to the benefit of both academics and practitioners, providing insights for future research (Saha et al., 2022; Wang et al., 2019).

However, a comprehensive and systematic literature review (SLR) that analyze the topic of the co-creation value centered only on the customer has not yet been performed. This gap in research indicates the lack of a detailed and chronological overview about the evolution of the concept of value co-creation focusing on consumer involvement over time, as well as emerging trends that have influenced its development. The lack of a comprehensive review represents a challenge in comprehensively and clearly understanding the different fragmented conceptualizations about customer co-creation value. Therefore, in order

to comprehensively understand the concept of customer co-creation value and to highlight areas for further research in this field, a systematic literature network analysis (SLNA) was conducted.

In this way, SLNA constitutes a significant additional contribution, as it has proven to be an effective research approach for understanding the dynamics of a specific topic of study. This method has not only facilitated an in-depth investigation of research on a particular topic, but also facilitated the identification of research programs that can contribute to the further development of knowledge in that area. This is made possible thanks to the ability to combine a (SLR) and a bibliographic network analysis (Colicchia & Strozzi, 2012). In particular, this methodology allows the extraction of quantitative information from bibliographic networks, identifying emerging topics and highlighting the evolution of the literature as well as key challenges and directions for future research. Moreover, in contrast to conventional literature reviews, SLNA follows a strict protocol and rules (Massaro et al., 2016), by relying on the flow of citations that characterizes a research area and should serve as an indicator of the most relevant articles.

Therefore, this paper aims to investigate in depth the overall scientific work on customer co-creation value conducting a SLNA, that facilitates a broader view of the knowledge of a field in particular through the main path, i.e. “backbone of the research tradition” (de Nooy et al., 2018; Lucio-Arias & Leydesdorff, 2008), that allows to select papers the main reference points for more recent research works in order to identify promising research trajectories and to formulate suggestions for future studies. Despite its wide use in various fields (e.g., Akmal et al., 2020; Comerio & Strozzi, 2019), to the best of our knowledge, there are any contributions in the marketing domain that apply this methodology to investigate customer co-creation value.

In fact, from the results obtained, it is interesting to note that no paper in the main path or identified by the Global Citation Score Analysis carried out a systematic review of the literature on customer co-creation value. Therefore, this research fills that gap, rationalizing and systematizing the body of scientific literature on customer co-creation value. Second, findings suggest that, over the years, scholars started to explore more in detail the theme of customers’ co-creation of value with other customers (C2C), customer co-creation in service recovery, and customer value co-creation behaviour.

The analysis presents the most relevant contributions, the approaches adopted and the best practices, and, consequently, can help to find promising research trajectories that have been little explored and to formulate some suggestions for future studies to fill existing gaps.

The paper proceeds with an accurate description of the method implemented, seen as the process of selecting the sample of documents to be analyzed and their data assessment. Following this, results are presented, distinguishing output of citation networks analysis, keywords co-occurrence network analysis, and global citation score analysis. Finally, some conclusions are drawn, highlighting the promising research agenda and the emerging research trends.

2 Methodology

The selection and analysis of papers is based on the systematic literature network analysis (SLNA) methodology, which combines the SLR approach with bibliographic network analysis. Therefore, SLNA allows us to carry out a systematic literature review, which allows for delineating the research scope and can be beneficial in understanding of current trends, detecting existing gaps in scientific literature, and consolidating emerging topics in other areas (Lagorio et al., 2016). The selection of papers obtained from this phase is then used in the following analysis i.e., Bibliographic Analysis and Visualization. This latter analysis aims to outline the evolution of the main existing themes and emerging research trends using citation network analysis (CNA), keywords co-occurrence network, and global citations score (GCS).

The first step of a systematic literature network analysis consists in collecting data on academic publications and conducting a systematic literature review. Currently, there are several citation databases that can be used to collect data for the SLNA (e.g., Web of Science, and Scopus). Since Scopus by Elsevier is considered one of the largest citation databases (Colicchia et al., 2019; Falagas et al., 2008; Zhang & Merunka, 2015), offering documents published in a wide spectrum of journals that cover most scientific fields. As a result, Scopus was chosen as the best solution for this analysis.

The search was performed in December 2021. With the aim of mapping the existing literature on customer co-creation value, we used the following search string, by limiting the word search to “Title” and “Keyword” in order to retrieve only relevant materials:

“customer co-creation value” OR “customer value co-creation” OR
“CCCV” OR “customer co-creation”

The research has been further limited to papers in the categories “Business, Management and Accounting” and “Economics, Econometrics and Finance”. Moreover, results were limited to documents published in English and in the form of academic articles, conference papers, and book chapters.

The final sample thus results in 197 papers, that have customer co-creation value as central topic (Fig. 1). It represents the starting point for the next phase. Through these steps, it is possible to isolate the most relevant papers that will be analyzed in the subsequent phases.

The second step of the SLNA provides an exploration of existing themes and emerging research trends through a bibliographic network analysis and it is characterized by three phases. More in detail, the 197 papers collected constitute the input for the subsequent citation network analysis, keywords co-occurrence network analysis, and global citation score analysis (Colicchia et al., 2019).

CNA is a network analysis approach that allows papers to appear as nodes, while citations are depicted as linking arrows. In the network, an arrow extends from the cited paper (i.e., the source) to the citing paper, which allows for the chronological tracking of citation networks, yielding a clearer understanding of

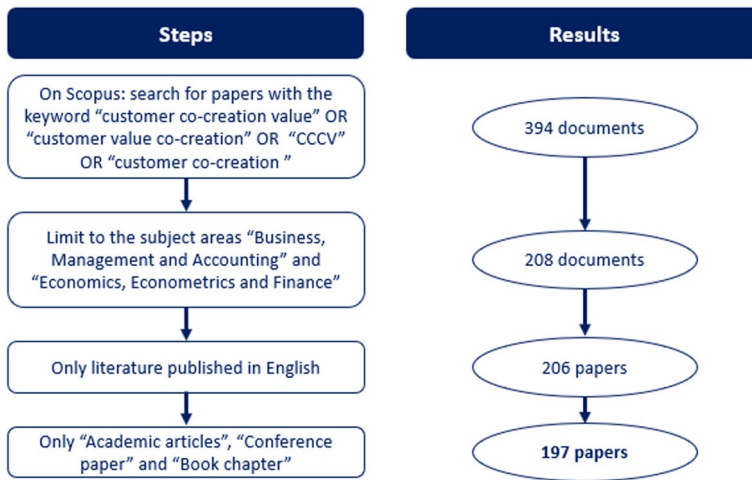


Fig. 1 Papers selection procedure and results

the influence of past research on subsequent studies. Under this approach, the non-connected nodes correspond to non-cited and non-citing papers; thus, they are excluded from the analysis, since the CNA builds on citations (Khitous et al., 2020).

In this paper, the CNA analysis is implemented using the software Pajek, based on three main techniques, namely: (i) "Community Analysis", used to process big communities of connected nodes; (ii) "Vector Analysis", used to consider specific properties of clusters; and (iii) "Main Path", used to uncover the papers that represent pivots of knowledge in the field.

The CNA does not consider those documents with few citations, and this could be due to the chronological proximity of the articles or to subjective factors related to the authors. Consequently, it is necessary to carry out both a keywords co-occurrence network analysis and a global citation score analysis, as these two methodologies consider the literature in its broader extent, including also isolated nodes.

The first is based on papers' keywords mapped through the VOSViewer Software, which allows clusters to be created on visualization of similarities. The 197 articles selected from Scopus (including not connected nodes) represented the VOSViewer input data.

By using a thesaurus file, the keywords were slightly modified in order to express in one form the terms stated in the singular and the plural, the abbreviations, and the unquestionable synonyms. As output, VOSViewer returns a network of keywords, where each node represents a keyword, and its size depicts the number of documents using that word. The nodes are linked together, and the thickness of the link represents the frequency with which the two words appear together. The software automatically creates non-overlapping clusters of keywords of different colors that constitute sub-areas of research focused on a specific facet of the topic analyzed.

The last one is a method that indicates the cumulated citations a paper received in the whole database (e.g., Scopus), whether it is part of a set of connected nodes in a citation network or of the main path. Thereby, this analysis makes it possible to highlight the most promising publications by taking into consideration the normalized global citation score, that is the ratio between the number of recent citations (i.e., year 2021) and the number of years since the article was published. In this way, the identification of the most recent revolutionary studies is possible.

3 Results

Before carrying out the bibliographic network analysis, it is appropriate to provide some information about the database of 197 papers retrieved from Scopus.

First, we have summarized in Fig. 2 the distribution of the papers by years that deal with customer co-creation value. The following graph shows that the first paper involving the customer as a co-creator of value in a business context dates to 2004. Furthermore, it appears to be a relatively recent area of research; not only have academic studies increased steadily since 2014 but two important peaks were recorded in 2019 with 30 publications and in 2021 with 34 publications.

This evidence suggests that the topic is becoming increasingly frequent in academic debates in the business and management fields.

Subsequently, Table 1 shows the main journals in which at least 3 papers have been published that dealt with the issue of customer co-creation value. The main journals, both for the number of papers published and for the number of citations, are Journal of Business Research, Journal of Service Management, and Journal of Service Theory and Practice. Moreover, despite having only 4 published papers, Journal of the Academy of Marketing Science boasts over 800 citations, recognizing an undisputed relevance of the journal in this field of research.

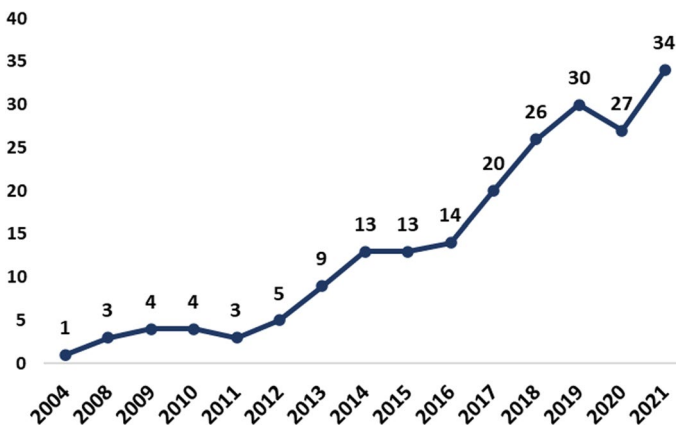


Fig. 2 Distribution of the papers by years

Table 1 Main journals on the topic with at least 3 papers published

Journals	N of papers	N of citations
Journal of Business Research	10	858
Journal of Service Management	7	623
Journal of Service Theory and Practice	7	134
International Journal of Hospitality Management	5	122
International Journal of Industrial Engineering and Management	5	36
Journal of the Academy of Marketing Science	4	849
International Journal of Contemporary Hospitality Management	4	296
Marketing Intelligence and Planning	4	159
European Journal of Marketing	4	62
Journal of Services Marketing	4	28
Journal of Product Innovation Management	3	572
Tourism Management	3	511
Service Industries Journal	3	39
Journal of Strategic Marketing	3	36
Journal of Hospitality and Tourism Management	3	31
International Journal of Production Economics	3	18
Service Business	3	5

3.1 Paper citation network analysis

To better understand the relationships between scientific publications, the citation network analysis (CNA) has been adopted. This method examines and visually represents the connections among academic articles through reciprocal citations. It relies on citations between articles, allowing for tracking and understanding how documents interconnect within a field of study. CNA identifies the most influential articles through nodes with numerous incoming citations, aiding in pinpointing contributions that have significantly impacted the scientific community. Furthermore, it enables the analysis of thematic clusters, identifying groups of articles with similar topics, facilitating an understanding of connected research areas and emerging trends in the field. Finally, it measures the impact and influence of a node within the network, providing valuable insights into the importance and impact of specific works within the considered discipline (Khitous et al., 2020; Strozzzi et al., 2014).

In the context of this article, CNA was performed using Pajek software, based on community analysis, used to process large communities of connected nodes, and vector analysis, used to consider specific properties of clusters. In detail, community analysis allows articles to be grouped into communities based on the links between them through citations with the aim of identifying specific areas of research or specializations. Vector analysis makes it possible to identify the most cited articles within each community.

The decision to use Pajek software to conduct the network analysis was driven by its distinctive features. This software is known for its ability to manage large networks efficiently. Thanks to its multi-level algorithms that optimize

the modular structure of networks, it offers good management and understanding of complex data interconnections. In addition, it has powerful visualization tools that facilitate the interpretation and analysis of the results obtained (De Nooy et al., 2018).

CNA is a citation-based method, in which: the nodes are the documents and the links are the citations, where the greater the thickness of the link, the greater the number of citations.

These metrics help to understand the structure of the network and identify the most relevant or influential nodes, thus providing an overview of the dissemination and importance of information within a given research area. Therefore, “isolated” nodes, i.e., those articles that do not present any kind of link (Strozzi et al., 2014), are excluded from the CNA. In light of these considerations, based on the two analyses in the CNA, the first step involved a restructuring of the starting database, considering only those articles linked with the rest of the sample. As a result, a database of 145 articles was created, representing 74% of the initial database, characterized by articles with connections through citations on the topic of customer co-creation value.

Thus, thanks to the first two techniques of Pajek, the community analysis and the vector analysis, will allow to investigate the process of knowledge creation, transfer, and development. By using the Louvain method (applied with the following two criteria: max number of levels in each iteration 20; max number of repetitions in each Level 50), the software, based on the thickness of the links, identified 14 well-polarized communities of different sizes. These 14 clusters represent 14 different research topics, as illustrated in Table 2 which summarizes the main references i.e., main topics, articles, publication dates, size in the largest linked component, and number of papers. Hence, CNA shows that research about customer co-creation value is fragmented and multidisciplinary. These 14 research themes, which were identified, highlight their leading role in setting the foundation for customer co-creation value research. However, as some research trajectories have been consolidated over time, while others have emerged and others are still developing, further grouping was carried out, which included nodes with a high number of shared references, which may thus constitute a possible research sub-area (Khitous et al., 2020). Therefore, the 14 clusters were grouped into 4 main clusters.

- Clusters 5, 7, 10, 11, 12, 13, 14 include papers that have been written since 2013 and are the largest in the biggest connected component with 55% of its overall size (Clauss et al., 2019; Hidayanti et al., 2018; Yi & Gong, 2013). The main theme covered by these clusters is the impact of customer value co-creation behaviour and this topic presents the third highest number of citations (about 651). In the literature, the different types and the main drivers of the customer value co-creation behaviour are first all addressed. Subsequently, this theme has been studied in different areas. First, take into account the impact of corporate social responsibility (CSR) activities on customer value co-creation behaviour. Second, storytelling has been used as a powerful co-creative behaviour in tourism. Third, how customer value co-creation behaviour can enhance university brand image and reputation has been studied. Finally, since customer co-creation

Table 2 Clusters in the biggest connected component

Research topic	Main subjects	N. of papers	Examples of most relevant papers	Publication dates	Size in the biggest connected component (%)
Cluster 1:	Customer co-creation in service innovation	12	Gustafsson et al. (2012); Bengtsson and Ryzhkova (2015)	2012–2021	8
Cluster 2:	Customer co-creation under service failure-recovery situation; impact of initiation on customer post-recovery evaluations	7	Dong et al. (2008); Xu et al. (2014)	2008–2021	5
Cluster 3:	Customer knowledge in innovation processes	9	Cui and Wu (2016); Anning-Dorson et al. (2018)	2009–2021	6
Cluster 4:	Customer involvement in innovation processes	9	Khanagha et al. (2017); Trischler et al. (2017)	2010–2020	6
Cluster 5:	Customer value co-creation behavior and SMEs radical creativity	4	Clauss et al. (2019); Balau et al. (2020); Tran & Vu (2021)	2013–2021	3
Cluster 6:	Customers as co-creators in new service innovation	4	Edvardsson and Tronvoll (2013); Shah (2018)	2013–2020	3
Cluster 7:	Customer value co-creation behavior	26	Yi and Gong (2013); Sfeir (2018)	2013–2021	18
Cluster 8:	Customers' co-creation of value with other customers	15	Rihova et al. (2013); Rihova et al. (2015)	2013–2021	10
Cluster 9:	Customer co-creation in service failure episodes	10	Heidenreich et al. (2015); Sugathan and Ranjan (2019)	2014–2021	7
Cluster 10:	Customers' online value co-creation activities; customer co-creation behavior	22	Kang (2014); Frasquet-Deltoro et al. (2019)	2014–2021	15
Cluster 11:	Customer value co-creation attitude and behaviour; customer engagement	12	Shamim et al. (2016); Yen et al. (2020)	2015–2020	8
Cluster 12:	Co-creation value behaviour on customer satisfaction and loyalty within the context of digital channels	7	Hidayanti et al. (2018); Foroudi et al. (2019)	2016–2021	5

Table 2 (continued)

Research topic	Main subjects	N. of papers	Examples of most relevant papers	Publication dates	Size in the biggest connected component (%)
Cluster 13:	Impact of corporate social responsibility (CSR) activities on customer value co-creation behavior	4	Luu (2019); Mubushar et al. (2021)	2017–2021	3
Cluster 14:	Effects of co-creative behaviour to satisfy tourists	4	Pera (2017); Santos-Vijande et al. (2018)	2017–2021	3

behaviours are easier to perform online than offline, recent research has studied different virtual co-creation behaviours.

- Clusters 1, 3, 4, 6 include papers with the highest number of citations on customer co-creation value theme (about 787) and represents 23% of the biggest connected component. These clusters explore the customer engagement as co-creators in new service innovation (Cui & Wu, 2016; Gustafsson et al., 2012; Shah, 2018).
- Clusters 2, 9 represents 12% of the biggest connected component, with an important number of citations (about 553). These clusters are one of the oldest (papers since 2008) and explore the underlying mechanism of customer co-creation in service recovery, called co-recovery, when a service failure occurs (Dong et al., 2008; Heidenreich et al., 2015; Sugathan & Ranjan, 2019).
- Cluster 8 represents the smallest connected component with only 10% of its overall size, but it is one of the most cited (725). Research in this cluster deals with customers' co-creation of value with other customers, in particular with insight in tourism and festival contexts (Kandampully et al., 2015; Pandey & Kumar, 2020; Torkzadeh et al., 2021).

Furthermore, some research trajectories have consolidated over time, others have emerged and grown, others are disappearing. Indeed, in order to detect how the topics have evolved over time, Fig. 3 shows the evolution over the years of the clusters identified with CNA, grouped by the main research topics detected.

The use of Pajek also facilitated the identification of the most relevant documents, i.e., those constituting the core of knowledge concerning the customer co-creation value. This was possible through the use of the main path tool, which is based on the application of the key route algorithm to the connected main component of the network. The final aim has been to identify the nodes that have been most frequently

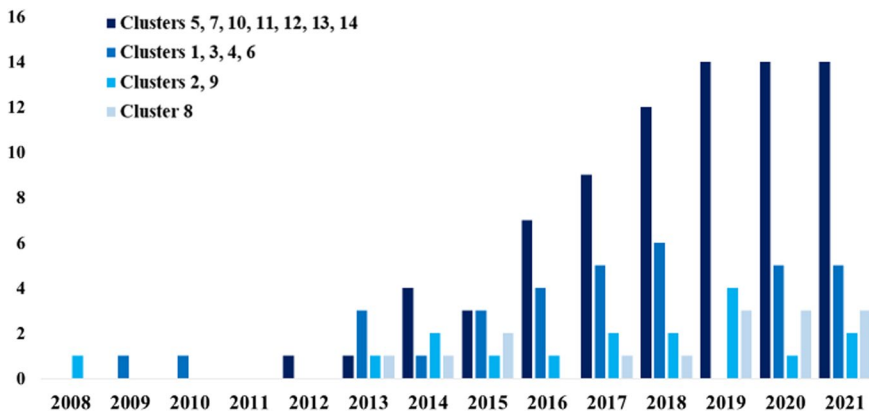


Fig. 3 Distribution of research papers in terms of application area

cited or that have most frequently cited others, thus representing the most established and influential research in the field of customer co-creation value.

In this way, 21 connected nodes (as shown in Fig. 4) were recognized, that represent the pillars about our research field. Lastly, each paper was analyzed in detail, defining their topics, publisher and publication year, authors' country, methodologies, and country where the research was carried out in the case of empirical studies.

According to Main Path, to discover the developing about customer co-creation theme, it is necessary start from the oldest articles. The first is Matthing et al. (2004) who assert new service development relies on the complex task of understanding and anticipating latent customer needs. Thus, to facilitate proactive learning about the customer, recent findings stress customer involvement in the development process and observations of customers in real action. The second is OHern and Rindfleisch (2010) who shed on light the important customer involvement.

Based on these two initially articles, Mahr et al. (2014) claim that, during the innovation process, customer co-creation has been suggested to be a major source for companies' competitive advantage. Hereby, customers actively engage in a company's innovation process and take over innovation activities traditionally performed by a company's employees. Moreover, the theme about customer involvement in a co-creation process has been studied also by Zhang and Merunka (2015) and Omar et al. (2018a).

Cambra-Fierro et al. (2018) investigate how the relationship life cycle moderates the link between relationship quality and customer value co-creation. Results suggests that the influence of relationship quality on customer co-creation value is stronger than in the decline stage, as a result this article provides companies with additional interesting tools to personalize business strategies and to adapt marketing investments to the specific situation of customers. From this paper have been developed two articles. On one side, Tuan et al. (2019) have the goal to foster customer co-creation value in the business-to-business (B2B) tourism

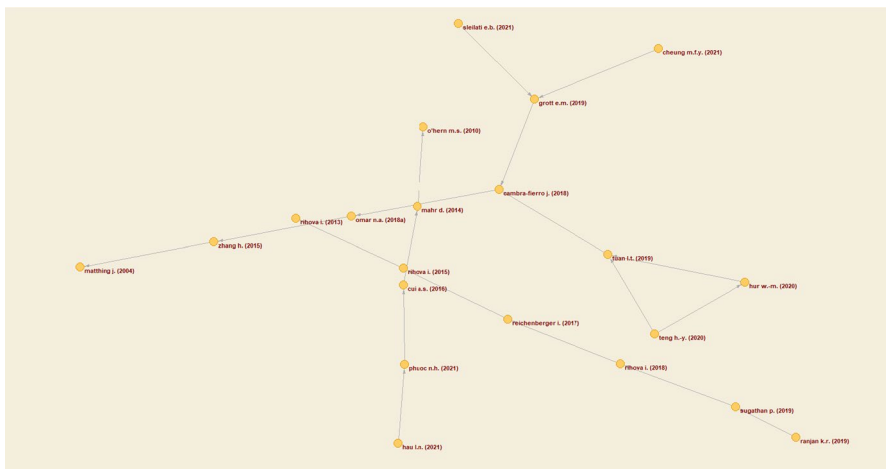


Fig. 4 The main path

service context as well as the mechanisms underlying this relationship, based on corporate social responsibility (CSR). In turn, this paper was the starting point for two other authors Hur et al. (2020) and Teng and Tsai (2020). The first explores the mediating role of emotional brand attachment in the relationship between customers' perception of corporate social responsibility and two types of customer extra-role behavior i.e., customer participation behavior and customer citizenship behavior. The second investigates the tourist value co-creation behaviors that play an essential role in the creation of a memorable tourism experience. On the other side, Grott et al., 2019 analyze the outcomes of co-creation from a customer perspective using well-recognized customer management variables i.e., customer satisfaction, loyalty, and word-of-mouth (WOM). Subsequently, the loyalty theme has been studied in deep by Sleilati and Sfeir (2021), where their study investigates the impact of value co-creation behaviour on customer loyalty within the context of social media. Differently, the word-of-mouth variable has been associated with the involvement customer in a study of Cheung and To (2021) who mediates this relationship with service co-creation.

Finally, another line of research was developed by one of the authors who appears three times in this main path. It is about Rihova, who in 2013, which focused on customer-to-customer (C2C) co-creation topic, to then deepen his research by channeling it into the context of tourism (Reichenberger, 2017; Rihova et al., 2015, 2018). Furthermore, some scholars, i.e., Hau & Thuy, 2021 and Hong et al., 2021, have considered Rihova et al. (2015)'s article as the starting point for exploring the topic of customer co-creation behavior.

The resulting main path highlights the incremental development of customer co-creation value knowledge over time, by designating the papers that were vital to its progress and which continue to be pivotal to subsequent research. The results also reveal the following aspects:

- With reference to the authors' country, this field of research is dominated by Asian academics, who account for 47% of articles in the main path. Likewise, also the European contribution should be considered (43%). In fact, scholars from UK, Austria, Sweden, Spain and Netherlands published articles for the progress of knowledge about customer co-creation value.
- The research methodology was mainly empirical (86%) with a predominance of statistical analysis. In fact, two studies conducted a qualitative analysis with interviews (Reichenberger, 2017; Rihova et al., 2018) and only Matthing et al. (2004) carried out an experiment. Furthermore, only three articles in the main path adopted a theoretical approach (OHern & Rindfleisch, 2010; Rihova et al., 2013, 2015).
- The review mapped the territory in which the empirical research was carried out. Not all articles declare the country of origin of the sample. However, empirical research was carried out in North America, Europe (Sweden, UK and Spain), Asia (Lebanon, Vietnam, South Korea, Taiwan and China) and in Oceania (New Zealand).

Overall, Table 3 shows an overview of the main themes that emerged from the Main Path, the main theories used, the main papers and the methodologies employed.

3.2 Co-word network analysis

Through keyword analysis of the whole dataset retrieved from Scopus is suitable to better investigate emerging research topics. Author keywords in all 197 papers are the input to the VOSViewer software. The 2-D map of keywords is shown in Fig. 5; it contains 19 connected items and highlights the existence of 4 clusters reflecting 4 different micro research areas.

The main topics for each area of research are as follows clusters:

- Cluster 1 represents the largest group of elements within the research and includes key concepts such as “value of customer co-creation”, “customer engagement”, “customer loyalty”, “customer satisfaction”, “service quality” and “corporate social responsibility”. This cluster is also associated with the most recent research in the field. The central topic in this cluster is “customer value co-creation”, which is examined in relation to corporate social responsibility (CSR) (Luu, 2019) and customer engagement (AbdelAziz et al., 2021). For instance, some research explores how CSR activities can positively influence customer value co-creation behaviour (Mubushar et al., 2020). It is interesting to note that the academic debate on customer co-creation value is gradually shifting towards the topic of customer involvement. Customer engagement refers to a customer’s emotional connection with a brand or product, which leads to increased interaction with the object itself (Thakur, 2018). For instance, Abror et al. (2020) argue that providing high-quality services can increase customer engagement, leading to greater satisfaction and brand loyalty.
- Cluster 2 focuses on the specific topic of innovation and customer co-creation (Gemser & Perks, 2015; Mahr et al., 2014; Verma et al., 2012), being the largest node of the whole network (43 occurrences). For instance, Shah (2018) shows that customers as co-creators in new service innovation is increasingly being suggested as a successful strategy to improve the success rate of new services. Moreover, the topic on innovation and customer co-creation have been associated with use of social media. In particular, Martini et al. (2014) claim that in the realm of customer co-creation, the use of social media represents a great opportunity for company management. In fact, social media represents a new trend, as it changes the rules of communication with customers by allowing companies to engage in timely and direct end-consumer contact at a relatively low cost and higher efficiency levels than with more traditional communication tools.
- Cluster 3 concerns the topic of value co-creation and service-dominant logic. Among the numerous theories proposed in the service research, “service-dominant logic” (SDL) particularly stands out for both its clarity and managerial implications (Tommasetti et al., 2017). Examples include (Botti et al., 2018), showing that, in service-dominant logic, involvement of customers in the entire

Table 3 Trajectory of main topics

Trajectory of main topics	Theory	Paper	Method
Customer involvement in a co-creation process	Market and learning orientation theory	Matthing et al. (2004)	Field experiment
Customer involvement in innovation processes	Innovation and marketing theory	O'Hern & Rindfleisch (2010) Mahr et al. (2014) Cui and Wu (2016)	Conceptual paper Structural equation modeling (SEM) approach
Relationship quality of customer value co-creation	Theory of relationship dynamics Social exchange theory	Cambra-Fierro et al. (2018) Omar et al. (2018b)	Partial least square-structural equation modeling (PLS-SEM)
Customers' value co-creation behaviour	Affective events theory Self-determination theory Social exchange theory	Hunt–Vitell theory of ethics Teng and Tsai (2020)	Structural equation modeling (SEM) approach
Customer-to-customer (C2C) co-creation	Service-dominant logic (SDL) theory	Sleilati and Sfeir (2021)	Conceptual paper Conceptual paper In-depth interviews Qualitative interview- and observation-based methods
	Service-dominant logic (SDL) theory	Hau and Thuy (2021)	
	Service-dominant logic (SDL) theory	Cheung and To (2021)	
	Service-dominant logic (SDL) theory	Rihova et al. (2013)	
	Social flow theory	Rihova et al. (2015) Reichenberger (2017) Rihova et al. (2018)	
	Practice theory		

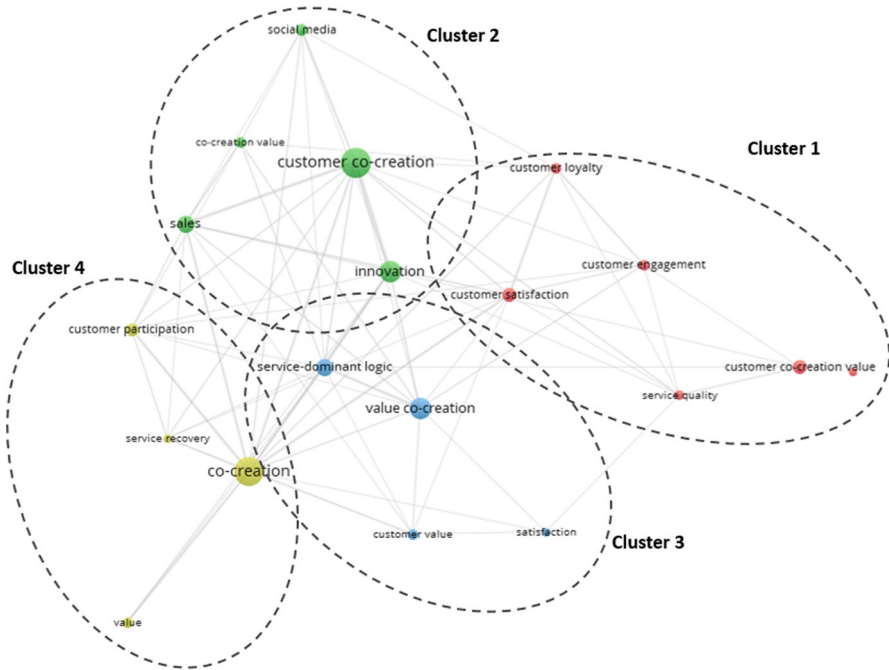


Fig. 5 Keyword network

corporate processes encourage value co-creation. In this way, the subjects to produce a combined value that not only creates innovative solutions, but that in the short term gives birth to satisfaction and in the long run customer loyalty.

- Cluster 4 is composed of "customer participation", "service recovery", "value", "co-creation" being the second largest node of the whole network (42 occurrences). This cluster explores the co-creation topic in service recovery. For instance, Xu et al. (2014) provide a better understanding of the underlying mechanisms of co-creation in service recovery. In addition, Heidenreich et al. (2015) highlighted that customer are more satisfied when they take part in the recovery process.

3.3 Global citation score analysis

In order to identify the most recent studies inspiring experts in the academic debate and, which can therefore be considered breakthrough, a Global Citation Score (GCS) analysis was conducted. First, data on citations of each paper year by year has been downloaded from Scopus database and then we classify papers based on the ratio of the number of citations in 2021 and the number of years since publication (normalized GCS). In this way, it was possible to identify the top 10 studies, which, despite having a limited number of citations due to their temporal proximity, are relevant for the progress of knowledge (see Table 4).

Table 4 Top 10 papers in Scopus based on the normalized GCS

Rank	Title	Authors (Publication year)	Journal	Main Path	<2017	2017	2018	2019	2020	2021	>2021	GCS	Citations 2021/ Years since Publication
1	A Bibliometric Review of Open Innovation: Setting a Research Agenda	Randhawa et al. (2016)	Journal of Product Innovation Management	No	4	21	39	56	72	122	0	314	24
2	Innovativeness and customer value co-creation behaviors: Mediating role of customer engagement	Yen et al. (2020)	International Journal of Hospitality Management	No	0	0	0	0	2	24	1	27	24
3	Customer-to-customer value co-creation and co-destruction in sporting events	Kim et al. (2020)	Service Industries Journal	No	0	0	0	1	5	24	0	30	24
4	Industry 4.0, quality management and TQM world. A systematic literature review and a proposed agenda for further research	Chiarimi (2020)	TQM Journal	No	0	0	0	0	3	22	2	27	22
5	Co-creating social media agility to build strong customer-firm relationships	Chuang (2020)	Industrial Marketing Management	No	0	0	0	1	9	18	1	29	18

Table 4 (continued)

Rank	Title	Authors (Publication year)	Journal	Main Path	<2017	2017	2018	2019	2020	2021	>2021	GCS	Citations 2021/ Years since Publica- tion
6	Customer value co-creation behavior: Scale development and validation	Yi and Gong (2013)	Journal of Business Research	No	95	66	83	81	127	139	2	593	17
7	Enhancing university brand image and reputation through customer value co-creation behaviour	Foroudi et al. (2019)	Technological Forecasting and Social Change	No	0	0	0	4	13	29	1	47	15
8	How valuable are your customers in the brand value co-creation process? The development of a Customer Co-Creation Value (CCCV) scale	Merz et al. (2018)	Journal of Business Research	No	0	0	4	14	40	42	2	102	14
9	Co-creating the tourism experience	Sugathanand Ranjan (2019)	Journal of Business Research	Si	0	0	0	1	14	27	1	43	14
10	Customer-to-customer co-creation practices in tourism: Lessons from Customer-Dominant logic	Rihova et al. (2018)	Tourism Management	Si	0	0	3	15	24	40	0	82	13

Table 4 shows that only 2 papers belong to the main path track, which confirms the recent scholars' tendency observed on the main path to consolidate the consumer-company co-creation is increasing in the tourism industry. Interestingly, the remaining eight papers do not belong to the main path but point out some of the chief recent research tendencies, on customer value co-creation behaviors (Foroudi et al., 2019; Yen et al., 2020; Yi & Gong, 2013) and also on innovation topic (Chiarini, 2020; Randhawa et al., 2016). In addition, the GCS analysis also highlighted the relevance of Chuang (2020) study that investigates the effect of customer co-creation on operational agility through the use of social media.

4 Discussion of developing trends and future research directions

By combining the results obtained from the conducted analyses, and following the trajectory provided by the main path, it is possible to offer an in-depth overview of the main areas of study in the literature and research trends related to the value of customer co-creation. This makes it possible to identify key directions for future research.

4.1 Customer-to-customer value co-creation

From a general perspective, the results of the analyses showed that the literature on customer co-creation value first focuses on the concept of customer-to-customer value co-creation, i.e. the idea that customers not only interact with the company, but also with each other, contributing significantly to value creation through these interactions. The existing literature provides a clear idea of the areas in which customer-customer interaction has been examined. For instance, many studies have been conducted in the retail sector (Martin, 1996; Tomazelli et al., 2017), restaurant and bar sectors (Lin et al., 2020; Tombs & McColl-Kennedy, 2010) and also in social media (Novani & Kijima, 2012; Zadeh et al., 2019). Furthermore, the literature review showed that the C2C value co-creation process has progressed especially on the topic of tourism (Reichenberger, 2017; Rihova et al., 2015, 2018). In this perspective, tourism is often associated with the social interactions of tourists themselves. These interactions, which may manifest themselves during cruise holidays, guided tours or events and festivals, are a fundamental aspect of the tourism experience. During these experiences, tourists build social relationships, create bonds and improve their interaction skills, thus contributing to the co-creation of value. Although academic studies on tourism have explored the concept of value co-creation, they have largely focused on the relationship between the tourist organization and the tourist. However, there is a gap in understanding the ability of tourists themselves to co-create value with each other, rather than only with the tourism organization. Therefore, this needs to be further explored by exploring how tourists interact and contribute to the creation of mutual value during their tourism experiences. To achieve this, key methodologies for C2C co-creation research require an interpretive approach. As a result, it is crucial to adopt qualitative methodologies

based on an interpretive paradigm to fully understand the unique social structures and shared representations of social systems in the tourism context where C2C co-creation takes place. For instance, research methods such as participant observation are valuable tools for collecting data on tourists' activities and their participation in social practices in various contexts aimed at understanding tourists' experiences and the co-creation process that emerges from such interactions.

4.2 Customer co-creation value in service recovery

A second debated and growing topic is customer co-creation value in service recovery. This topic is associated with the service marketing literature, where it has been shown that customers play a major role in the service recovery process, as they have been found to influence satisfaction with the service recovery process, perceived value of future co-creation, intentions concerning future participation (Dong et al., 2008; Guo et al., 2016; Heidenreich et al., 2015; Roggeveen et al., 2012; Xu et al., 2014).

Up to now, existing research has mainly explored the consequences of co-creation in service recovery, neglecting the antecedents of co-recovery behaviour. Therefore, future studies should investigate the underlying processes of co-recovery behaviour and co-creation of value. This could include an assessment of both the hedonic aspects, which represent how socially or emotionally meaningful the co-creation of service recovery was, and the utilitarian aspects, which measure the efficiency and usefulness of co-creation of service recovery in achieving customer goals. Furthermore, it would be important to consider the specific type of failure involved in this context. In terms of methodology, instead of using scenario-based experiments that might limit the external validity of the results, alternatives could be the use of field experiments or the analysis of industry data from a diverse range of service failure contexts. These approaches would offer a broader and more applicable perspective of the dynamics of co-recovery and co-creation of value in real and diverse contexts.

4.3 Customer value co-creation behaviour

Finally, the third and last widely growing topic of the customer value co-creation behaviour. Existing research states that a high degree of attention has been paid to the customer's behavioural participation in the co-creation of value (Auh et al., 2007; Bendapudi & Leone, 2003; Brodie et al., 2013; Chan et al., 2010; Chen & Wang, 2016; Mustak et al., 2013).

In this perspective, Yi and Gong (2013) introduced a more articulated conception of value co-creation behaviour, distinguishing between different dimensions such as citizenship behaviour and participation behaviour. In detail, customer participation behaviour includes specific actions or requests essential for co-creating the service, characterized by four behavioural components i.e., information seeking, information sharing, responsible behaviour, and personal interaction (Revilla-Camacho et al., 2015), while the customer citizenship behaviour is "an extra-role customer's behaviour, which is not required for value co-creation, but if performed, it will give

supplementary value to the firm” (Bove et al., 2009; Shamim & Ghazali, 2014) and such behaviour improves the quality of the social and mental environment in the workplace and leads to improved company performance (Estiri et al., 2018).

Furthermore, many studies explore the reasons why customers adopt behaviours that extend beyond the simple role of buyer or user. A number of customer-oriented drivers have been proposed to explain active customer engagement, encompassing factors such as satisfaction, brand affinity, trust, along with personal goals, resources and the customer’s perception of value (Van Door et al., 2010). There have been empirical studies conducted in online environments that have shown that customers are driven to participate in non-transactional behaviour. This is because they expect benefits such as increased learning and better reputation, social and economic benefits such as cost savings (Füller, 2010). Concerning companies, they can foster active customer involvement by providing efficient platforms for information exchange and interaction (Baron & Warnaby, 2011; Dholakia et al., 2009), and also by incentivizing customers to contribute by rewarding them for their contributions (Füller, 2010; Kumar et al., 2010). Although a lot of research has been conducted on value co-creation behaviour by customers in different contexts, some shortcomings have emerged.

First, there is scant empirical evidence on the effect of value co-creation behaviour by customers on corporate performance. Although business performance can be assessed through balance sheet and market indicators (Gentry & Shen, 2010), differentiated performance metrics are needed to confirm the link between value co-creation and business success. In today’s customer- and value-driven business landscape, companies are constantly seeking customer feedback. There is an increase in the importance given to assessing value from a customer perspective rather than from a corporate perspective (Kotler & Armstrong, 2018). As a result, assessing customer-oriented performance, such as customer perceptions of value, becomes crucial to understanding the impact of customer involvement in value co-creation.

Furthermore, different researches have highlighted the link between customer value co-creation behaviour and the service context, in particular in the field of hospitality (Kim et al., 2019; Lee & Kim, 2019; Liu & Jo, 2020; Yen et al., 2020). However, research on the correlation between innovation perception, customer engagement and value co-creation behaviour is still limited. It must also be taken into account that innovation is of crucial importance in the service sector as customers often demand improvements to services through the addition of new functionalities. This stimulates their involvement in value co-creation and increases loyalty towards service providers. (Kim et al., 2019; Leckie et al., 2018). Hence, in order to fill this gap, future research could integrate factors that predict customer involvement in value co-creation, such as customer perceptions of innovation and involvement, with those that result from it, such as customer satisfaction and loyalty. Further longitudinal studies are recommended to better understand the cause-effect relationship and long-term implications of customer involvement in value co-creation in the service sector.

Finally, social media platforms have become spaces for collaborative and co-creative activities between customers, organizations and others. Moreover, they represent a valuable source for understanding customers’ needs, allowing for more direct

engagement and detailed information about their needs and preferences (Murschetz et al., 2018; Nemati & Khajeheian, 2018). This level of engagement with social platforms creates valuable big data that provides patterns of user behaviour (Parker et al., 2016; Stellefson et al., 2020) and a significant amount of user time is spent on different types of social platforms, including marketplaces, crowdsourcing, social media and other types of social platforms. Despite these capabilities, it has been shown that start-ups and small businesses often suffer from a lack of understanding and knowledge of using social media tools for co-creation activities to connect with their customers (Fischer & Reuber, 2011). This deficiency prevents companies from accessing the ideas, insights, and creativity of users and customers to develop new services that meet their needs. As a result, the company may fall behind the competitors, missing out on opportunities to innovate and adapt to market demands (Reillier & Reillier, 2017). Although there is extensive research highlighting successful strategies and crucial elements of social media to manage businesses in this era of value co-creation, there is still a lack of studies on how small businesses and start-ups can optimize the use of social media and better engage users by maintaining relationships over the long term. Furthermore, few companies have achieved long-lasting results, mainly due to the challenges encountered in developing effective strategies to exploit the full potential of social media. Therefore, future research could focus on these topics to deepen our understanding of them. Below, Table 5 shows a synthesis of the future research directions per area and the corresponding research questions for the future.

5 Conclusions

Since the topic of customer co-creation value has many facets in the literature, the aim of this article is to trace the development of academic research on the concept of customer co-creation value and to analyze current trends through a SLNA.

In order to achieve this goal, this research employed various quantitative bibliometric tools, algorithms, and software to create a dynamic representation of the evolution of research on customer co-creation value over time. This approach made it possible to present a comprehensive and practical picture, identifying the main trends emerging from the studies and proposing a roadmap for future research areas, guided by the continuous evolution and development of the topic.

This analysis was divided into two distinct phases. First, a systematic review of the publications was performed using the Scopus database, resulting in a body of literature consisting of 197 articles. Next, a bibliographic network analysis of these articles was conducted using different bibliometric tools and software such as Pajek and VOSViewer. These tools made it possible to visualize and understand the structure of the citations and relationships between the articles, providing a deeper perspective on the connections within the corpus.

Although there have been some literature reviews, no comprehensive and systematic review analyzing the role of customer co-creation value has been conducted till now. Therefore, this article offers important contributions to provide the evolution of research on customer co-creation value, identify academic trends and new emerging

Table 5 Future research directions and research questions

Main subjects	Future research directions	Research questions
Customer-to-customer value co-creation	The co-creation value between tourists	How do tourists interact and contribute to the creation of mutual value during their tourism experiences?
	The C2C co-creation process adopted in social structures and shared representations of social systems in the tourism context	What are the effects of interactions between tourists in a process of co-creation of value? What is the role of tourists as resource providers and co-creators in the experience value co-creation process?
Customer co-creation value in service recovery	The co-recovery behaviour of the value co-creation	How much do hedonistic and utilitarian values influence the process of co-creating service recovery to achieve customer goals?
	The type of failure in a process of co-recovery	What are the effects of the co-creation process, based on the type of failure, in the service recovery context?
Customer value co-creation behaviour	The customer value co-creation behaviour on corporate performance	What are the effects of value co-creation behaviour by customers on company performance?
	The correlation between innovation perception, customer engagement, and value co-creation behaviour	How crucial is it to evaluate customers' perception of value in order to understand the effectiveness of customer involvement in value co-creation? How can we improve the understanding of the cause-effect relationship of customer involvement in the co-creation of value in the service sector?
	The collaboration and the co-creation activities of customers on social media platforms	What is the role of social media platforms in understanding customer needs and enabling more direct engagement by providing insights into their needs and preferences? How can small businesses and start-ups optimize the use of social media and better engage users by maintaining relationships over the long term?

themes. Furthermore, scholars' attention is drawn to these promising areas, inviting them to devote further effort and attention to these topics.

From the theoretical perspective, this study enriches the landscape of the literature on customer co-creation value. The results obtained through the SLNA demonstrate that this concept represents a significant paradigm, in which a common body of theoretical statements has been developed and widely applied to a wide range of diverse empirical contexts. This contributes to the consolidation and further development of the theoretical understanding of the concept of customer co-creation value, demonstrating its relevance and applicability in various empirical contexts and domains.

Second, it is interesting to highlight how the concept of customer co-creation value has grown since 2014. This evolution has been fueled by the contributions and collaboration of scholars from different disciplines and geographical areas. Originally, it was North American and European academics who brought attention to this concept, but since 2018, research on customer co-creation value has been mainly driven by Asian scholars. This phenomenon underlines the global interest in the topic and emphasizes how important it is to explore the various perspectives and contributions from different parts of the world. Emerging trends in this field indicate that the concept of customer co-creation value continues to evolve and be enriched through constantly developing research. This offers wide opportunities for further studies and insights in the next years, as was discussed in the previous section.

Third, the following study identified the main emerging trends in the literature related to customer co-creation value and suggested detailed future research directions derived from these trends. These perspectives and future research directions were presented in section "4. Discussion of developing trends and future research directions". These future research directions are expected to further promote the development of research on customer co-creation value.

The application of the SLNA methodology represents a further significant contribution as it proved to be an effective research approach to understand the dynamics of a specific research topic. This method not only allowed for an in-depth exploration of the research on a specific topic but also allowed for the deduction of research agendas that can contribute to the further development of knowledge in this field, through systematic literature reviews on different topics based on quantitative bibliometric analysis.

Indeed, from the results, it is interesting to note that no article in the main path or identified by the global citation score analysis performed a systematic literature review on customer co-creation value. Therefore, this research fills this gap by rationalizing and systematizing the body of scientific literature on customer co-creation value. Furthermore, the findings suggest that, over the years, scholars have begun to explore the topic of customer co-creation value in more detail by moving towards customer-to-customer value co-creation, customer value co-creation in the context of service recovery, and customer co-creation behaviour related to both customer loyalty and CSR.

Finally, it is important to emphasize that the approach adopted in this work has some significant limitations. First, the dataset used was extracted from Scopus, a large and relevant source for a literature review; however, it is essential to consider

that Scopus represents only a part of the wide range of scientific literature available; therefore, some contributions might not be included. Furthermore, the analysis was based on citation data, which may imply that some recent and relevant articles may have been excluded from the quantitative analysis simply because they have not yet received citations.

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