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Unveiling Patterns in Collaborative Consumption Research: A Bibliometric Perspective

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Abstract

Purpose: This research employs Bibliometric Analysis for the publications on "collaborative consumption" in the Scopus, considered one of the largest databases of abstracts and citations.

Design/methodology/approach: Studies were published on collaborative consumption which were further screened using inclusion and exclusion criteria. A final sample of 366 was taken to analyze the results. VOS viewer software is used to analyse the publication trend, top publications, citation analysis, co-citation analysis, and keyword analysis to understand the publication trends and research hotspots in "collaborative consumption" research.

Findings: Findings of the study include publication trends, top publications, citation analysis, co-citation analysis, and keyword analysis to understand the publication trends and research hotspots in "collaborative consumption" research. The results of the study also give us an idea of the future scope of research and collaboration in the domain of "collaborative consumption.

Originality: The current study is one of its kind which gives the bibliometric indicators on the publications done on collaborative consumption emerging as a new form of consumption linked with sustainability and a sustainable form of consumption.

Keywords: *Collaborative Consumption, Bibliometric Analysis, VOS Viewer, Sharing Economy.*

Introduction

Ownership-based consumption and access-based consumption are two forms of consumption that theoretically argue one's identity, image, status quo, etc. Two major and closely related terms that evolved and were used as synonyms with access-based consumption were "Sharing Economy" and "collaborative consumption" (Belk, 2014). Paul et al. (2016) have set the theoretical premise of the term sharing and differentiate between new sharing and pseudo sharing. According to Belk (2014) Sharing as a phenomenon is ancient, while the recent advancement in the form of the "sharing economy" and "collaborative consumption" was born with the internet. Belk (2007) put forward the "sharing as an act, which involves the process of distributing what is ours to others for their use and or the act and process of receiving or taking something from the other for our use" (Belk, 1988). When sharing is an inclusive act, it acts to make the user a part of the pseudo-family and this is called as 'sharing in'. In contrast, when sharing is an exclusive act, sharing or dividing something between strangers, for a one-time exchange, it is called 'sharing out'. The two perspectives that are put forward are sharing without marketplace exchange and sharing with marketplace exchange. These are some of the theoretical premises set for sharing by seminal authors. When this perspective is compared with internet-facilitated sharing, it is required to make a distinction as a lot of activities are emerging and people are using the term sharing to express the activities in which they are involved. It started with NAPSTER in the music-sharing business, which was followed by several sites like Bit Torrent, iTunes, Spotify, etc. Though many of these contents, which are shared on these sites have received the label of illegal and have gained a reasonable amount of media attention, music and film industries. Apart from this, YouTube as a major platform also asks users about its content, and the popular content is compensated. On a similar line are the other sharing facilitating platforms like Facebook, Amazon, E Bay, etc.

"Collaborative consumption" as a phenomenon, in many cases is used synonymously with "sharing economy "conceptualized by Felson & Speath (1978) who define it as an "act of those events in which one or more person consumes economic goods or services in the process of engaging in joint activities with one or more". Botsman & Roger (2010) defines "collaborative consumption" as a concept, which includes "traditional sharing, bartering, lending, trading, renting, gifting, and swapping". This view again contradicts the two perspectives of sharing which were presented by the previous scholars. Belk (2014) defines "collaborative consumption" as an "act in which people coordinate the distribution and acquisition of the resource for a fee or other fee compensation". Provided the theoretical premises of "sharing economy" and "collaborative consumption" it is evident that these two forms of consumption have ambiguity and lack clarity in their conceptualization. Hence, it needs of an hour to see and evaluate how the research on these consumption patterns is trending.

Review of Literature

Seminal work by Belk (2014) compares and contrasts the upcoming trend of consumer behavior –"sharing economy" and "collaborative consumption" and its impact on traditional businesses. The study was conceptual but clarified the contestations around the concept by explaining the difference between "sharing in" and "sharing out". He also mentioned the action plan that incumbents should have to either fight disruptive technologies or take flight from the business environment. Benoit *et al.* (2017) conducted 94 expert interviews and attempted to understand the consumer motives, activities and resources, and capabilities behind "collaborative consumption". Barnes *et al.* (2016) developed a comprehensive model to explain the consumer outcomes for "collaborative consumption". It was found that social benefit, economic benefit, and environmental benefit largely impacted the intention to recommend and intention to rent via a mediator-perceived usefulness. Social influence as a construct was not found to impact the dependent construct. The consumer also considers trust when they make a word-of-mouth recommendation underpinned by structural assurance. Dreyer *et al.* (2017) studied the stakeholder value impact of a collaborative consumption business model. Two companies, one from the dry cleaning industry and one from a car-sharing ride, were studied and two cases were taken from the traditional business model. Stakeholder value impacts were categorized as positive and negative impacts. The positive impact the case of car sharing rides is that it is considered flexible employment and a good avenue to earn money. The negative impact in the case of car sharing is that there is always pressure from the car owner. The regulation and governance part of collaborative consumption is also not less mature. Likewise, the positive impact in the case of cleaning is nearly the same in that it gives flexible employment and an avenue to earn money. The negative impact is the distance that needs to be travelled by the provider is large and time-consuming. Barnes & Mattson (2016) conducted a Delphi study to understand the current and future issues in collaborative consumption. The author conducted an exploratory study in which the objective was to determine the enablers, inhibitors, and future developments for 10 years in the field of collaborative consumption. Huber (2017) used Social Practice theory as a theoretical framework to theorize the dynamics of collaborative consumption. They compared the peer-to-peer accommodation platforms and cohousing. Apart from the theoretical conceptualization of collaborative consumption and framing the contested concept, Hartl et al. (2016) conducted a study on regulatory framework and governance. This study addresses the problem of regulation in "collaborative consumption". Vignettes were used for conducting the experimental research and the questionnaire was addressed to 355 University members of Austria and Germany. The result of the study indicates that most participants support governance and that governance increases cooperation. Pantano & Stylos (2020) conducted a study on the luxury segment. The study highlights the importance of renting luxury goods instead of purchasing, facilitated by the sharing economy platform. This research highlights the motivations of users in the context of "collaborative consumption". The need to wear new clothes for the event, motivations created by the products and brands, sustainable choices, and new ways of using luxury garments are some motivations that emerged to engage in the sharing economy platform. Luri Minami et al. (2021) investigated two interchangeably used concepts of a sharing economy and collaborative consumption in the literature. The study also highlights the drivers to participate in the sharing economy and collaborative consumption and whether these drivers differ significantly from each other.

Currently, the extant literature on "collaborative consumption" posits that many studies are published on systematic literature reviews (SLR) performed on the phenomenon, providing insights related to ''collaborative consumption". Arrigo (2021) conducted a systematic literature review on collaborative consumption in the fashion industry to provide a holistic view of collaborative consumption. Three major themes have been highlighted – customer perspective, business perspective, circular economy, and sustainability perspective in the studies published till date. Klarin & Suseno (2021) published a Scientometric analysis on the state of the state-of-the-art literature published on the sharing economy to

evaluate the different theories, contexts, and methods used in different publications. Rojanakit (2022) conducted a comprehensive systematic literature review of relevant literature on a sharing economy in the emerging market context to understand its implications on business framework but bibliometric analysis for the publications published in the domain of collaborative consumption was not explored. Hence, it is the major gap that we are filling in this particular research, attempting to conduct a bibliometric analysis of publications published in the domain of collaborative consumption. Therefore,

Research Objectives

- To undertake Bibliometric and visual analyses in order to analyze the publication on "collaborative consumption" included in the Scopus Database.
- To understand the most influential institutions countries, journals, the co-occurrence of keywords, current research hotspots, and future development trends on "collaborative consumption".

This research paper further provides a brief overview of the research methodology in Section 3 that the author has used to collect data, refine, and compile the appropriate literature. Section 4 highlights the details of different bibliometrics statistics collected from Scopus databases Section 5 discusses the contributions and research output generated highlighting the future research direction. This section presents the details of performance mapping and science mapping of the publication published on collaborative consumption with the help of different indicators.

Research Methods

A systematic methodology for scanning resources from Scopus databases is used in this study. The author has implemented the step-by-step process of selecting the appropriate bibliometric data for the analysis. The various steps were – 1) Finalization of the key; word 2) Initial Search and its results; 3) Inclusion and Exclusion Criteria for refinement of the results of initial search 4) Data collection and Analysis 5) Results. The data files are extracted from one of the largest databases- Scopus databases to search for relevant articles having "Collaborative Consumption" as a query in the article Title, Abstract, and keyword. The total number of documents retrieved for the query is 610 as of 13 July 2022. These 610 documents consist of articles, review papers, books, book chapters, etc. A total of 610 documents were screened based on the inclusion and exclusion criteria. For the final data analysis and reporting, only peer-reviewed articles and review papers are included in the data files created from the database, excluding the grey literature, conference papers, book chapters, etc. Data analysis is performed through VOS Viewer (Eck and Walkman, 2010) which is used for conducting Citation analysis and Co-citation analyses for the findings.

Going ahead with the above-mentioned methodology- **Step 1 – Defining the search term** or initial keyword which is finalized to search the database. Since the bibliometric analysis is presented about the phenomenon "Collaborative Consumption" the keyword used was "Collaborative Consumption" **Step 2-Initial Search Results** - Table 1. The information provided shows the initial search results and the total number of documents retrieved from Scopus Databases. The total number of documents retrieved through the initial search is- 610 as of 13 July 2022

Table 1: Bibliographic data

Search terms	Query applied	Total number of documents (Scopus)
"Collaborative Consumption" as Title, Abstract and Keyword	TITLE-ABS-KEY ("Collaborative Consumption")	610

Source: Developed by Authors

Bibliographic data – General Result Analysis

The general result analysis included two major parameters- bibliographic data in terms of the document type and subject-wise segregation of the total number of publications retrieved from Scopus databases.

Data on document types of Scopus databases explain that the largest number of publications are peer-reviewed articles, which are 417 in number. This indicates the quality of data that we would be using for the insight generation as most publications are in the category of peer-reviewed articles and a very small number of publications were found to contribute toward the grey literature. The first publication on "Collaborative Consumption appeared in 2012 (reference – Scopus database). The most frequent type of document is Articles (417) accounting for 68.36% of the total publications. At the second position is conference papers (96) accounting for 15.74% of the total publications. Other document types include Book chapter (49), Review (30), Book (7), Data Paper (2), editorials (3), Notes (2) and conference reviews (4). Table 2 enlists the numbers and proportions of the various document types. All documents were downloaded on 13th July 2022.

Table 2: General Results – Bibliographic data of "collaborative consumption" Research in Scopus (2008–2020)

Bibliographic data	Scopus	% of Total number of documents
Articles	417	68.36
Conference papers	96	15.74
Book Chapter	49	8.03
Review	30	4.92
Book	7	1.15
Data paper	2	0.33
Editorial	3	0.49
Note	2	0.33
Conference Review	4	0.66
Total	610	100

Source: Developed by Authors

Subject Area Wise Representation

Six hundred and ten documents from Scopus which were initially retrieved were further analyzed for Subject Area contribution to "Collaborative Consumption". The number of documents under each of the subject areas is listed in Table 3.

It is evident from the statistics that the maximum contribution of "Collaborative Consumption" research is in the area of 'Business Management and Accounting', 'Social Sciences', 'Environmental Science' 'Economics', 'Econometric, and Finance', 'Energy', 'Computer Science', 'Engineering', 'Psychology', 'Medicine and Others'

Table 3: Subject area wise % of documents of "collaborative consumption" Research in Scopus

Keyword Search	**Subject area-wise percentage**	**No of Documents Subject area wise**
"Collaborative Consumption"	Scopus – Business Management and Accounting	306
	Social Sciences	202
	Environmental Science	109
	Economics, Econometrics and Finance	106
	Computer Science	146
	Engineering	100
	Energy	79
	Psychology	45
	Decision Sciences	41
	Mathematics	20
	Arts and Humanities	19

	Medicine	13
	Earth and Planetary Sciences	10
	Material Sciences	6
	Pharmacology, toxicology and Pharmaceutics	4
	Physics and Astronomy	4
	Agricultural and Biological Sciences	3
	Multidisciplinary	3
	Chemistry	2

Source: Developed by Authors

Step 3 – Screening of documents from the initial search result - Based on the initial Search query on "collaborative consumption" in the title 610 documents were derived from the Scopus database. Initial search results were refined based on the inclusion and exclusion criteria given in Table 4–Articles and review papers were included in the analysis, and other grey literature like conference papers, book chapters, etc. were excluded. Articles in English published in the area of Business & Management and Social Sciences are included, all other language articles were excluded from the analysis. Major Keyword search is the same "Collaborative Consumption" should be in the title, abstract and keyword of the article. Based on the screening criteria mentioned in Table 4, the number of articles that were finally used for analysis was 366 articles. Table 5 explains the search syntax for the final screening of 366 articles. A graphical chart for the final literature synthesis is given in Fig. 5.

Table 4: Inclusion and Exclusion Criteria for screening the initial search documents

Keyword	**Inclusion Criteria**	**Exclusion Criteria**
"Collaborative Consumption"	1. Articles and review papers were included in the analysis 2. Articles and review papers are written only in English. 3. Articles and review papers have been published in the area of Business & Management and Social Sciences.	1. Grey literature – conference proceedings, data papers, reviews, and book chapters. 2. All other foreign language articles.

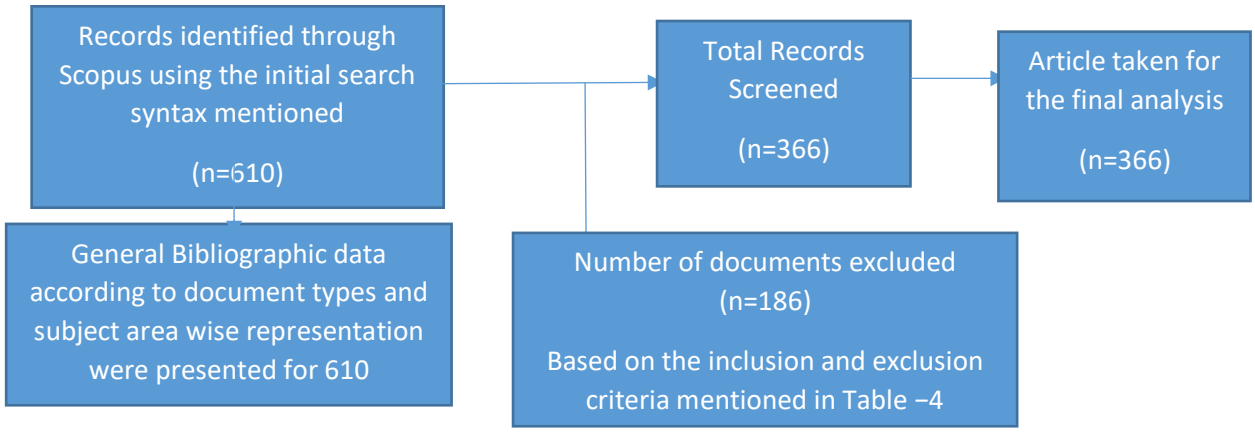
Source: Developed by Authors

Table 5: Search Syntax and Number of Publications after refinement of the initial results

The search term	**Search Query/Search Syntax**	**Search results in No of documents – Scopus**
"Collaborative Consumption"	TITLE-ABS-KEY ("Collaborative Consumption") AND (LIMIT-TO (DOCTYPE, "ar") OR LIMIT-TO (DOCTYPE, "re")) AND (LIMIT-TO (SUBJAREA, "BUSI") OR LIMIT-TO (SUBJAREA, "SOCI")) AND (LIMIT-TO (LANGUAGE, "English"))	366

Source: Developed by Authors

Figure 1: Graphical presentation for the final literature synthesis of "Collaborative Consumption" Research.



Source: Developed by Authors

Step 4-Results and Data Statistics

This section presents the results of the paper in different parts. Section 4.1 – The current status of the "collaborative consumption" Study. Section 4.2 introduces the keyword analysis of the research done on "collaborative consumption". Section 4.3 represents the "co-citation analysis" and "co-authorship" analysis, respectively.

Results and Findings

The results and findings of the data analysis are presented in two categories– 1) Performance analysis – which presents the contribution of the research constituents.2) Science mapping – which presents the relationship between the research constituents (Donthu et al., 2021)

Performance Analysis

4.1 Current status of "collaborative consumption" Research.

4.1.1 Publication Trend

The 366 documents from Scopus, which were screened from Step 3 were analysed for year-wise publication output. The yearly publishing trend is captured in Table 6, Fig. 1

The Publication analysis on "Collaborative Consumption" indicates that the publication on "Collaborative Consumption" started in 2012. It can also be observed that the databases show a steep increase in the number of publications from 2016 to 2017. Another interesting insight can be observed in terms of the number of publications in 2017 and 2018. In Scopus, there was an increase in the number of publications by 3 documents. The 2019 year can be considered a prominent year of contribution toward "Collaborative Consumption" in terms of several publications.

The publication analysis of 366 documents from the Scopus database indicates that in Scopus there is a steep rise in the number of publications in 2017 and it increased further in the years 2018, and 2019 and dropped down in the years 2020 (Table 6, Fig 2). The entire trend of publications shows that "Collaborative Consumption" as a phenomenon is recent with the number of publications increasing after 2017. A drop down in the number of publications in 2020 can be ascertained due to the pandemic COVID -19. The statistics depict the fact that there is a huge opportunity for research in the area of "Collaborative Consumption" a new form of consumption for varied products and services giving importance to accessibility rather than ownership.

Table 6: Publication output of "collaborative consumption" Research

Year of Publication	Number of documents
2010	0
2011	0

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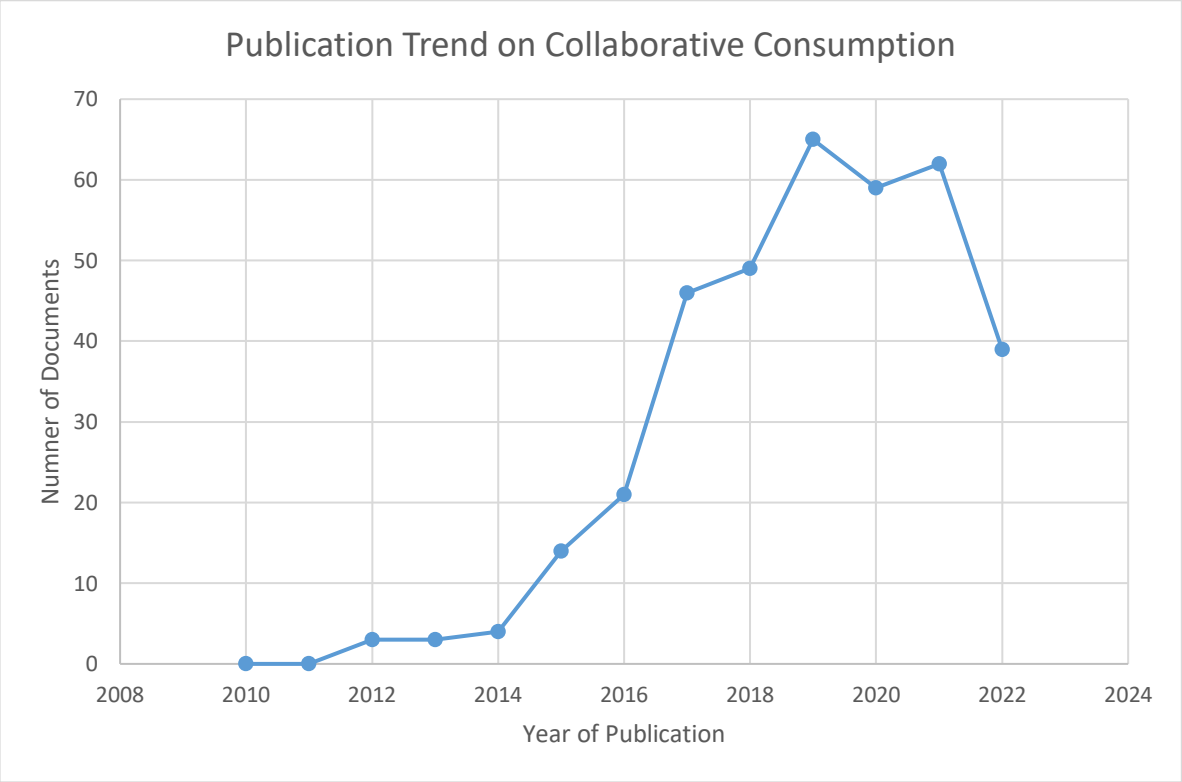
2012	3
2013	3
2014	4
2015	14
2016	21
2017	46
2018	49
2019	65
2020	59
2021	62
2022	39

Source: Developed by Authors

Fig.2: Publication trend of "collaborative consumption" Research



Source: Developed by Authors

4.1.2 Publication of Documents by Institutions/Affiliating Universities on "Collaborative Consumption"

The University of Manchester, the University of Quebec, and the University of Minnesota have the highest number of publications out of the total production of 366 articles, contributing to 1.91% of the total number. "University of Quebec Montreal," "Ecole Polytechnique Fédérale de Lausanne," "King's College London," and "University of Queensland" lies at the second position, accounting for 6-publication and 1.6% of total publication. Fig. 3 indicates the distribution of the top 10 institutions engaging themselves in "Collaborative Consumption" research.

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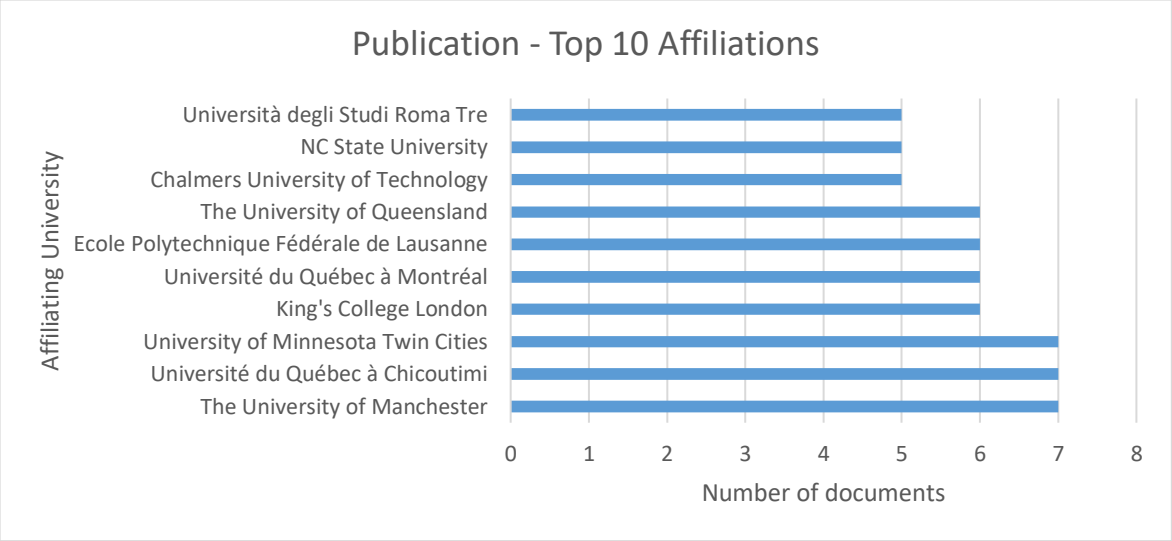
Fig.3: Publication of Documents by Institutions/Affiliating Universities on "collaborative consumption"

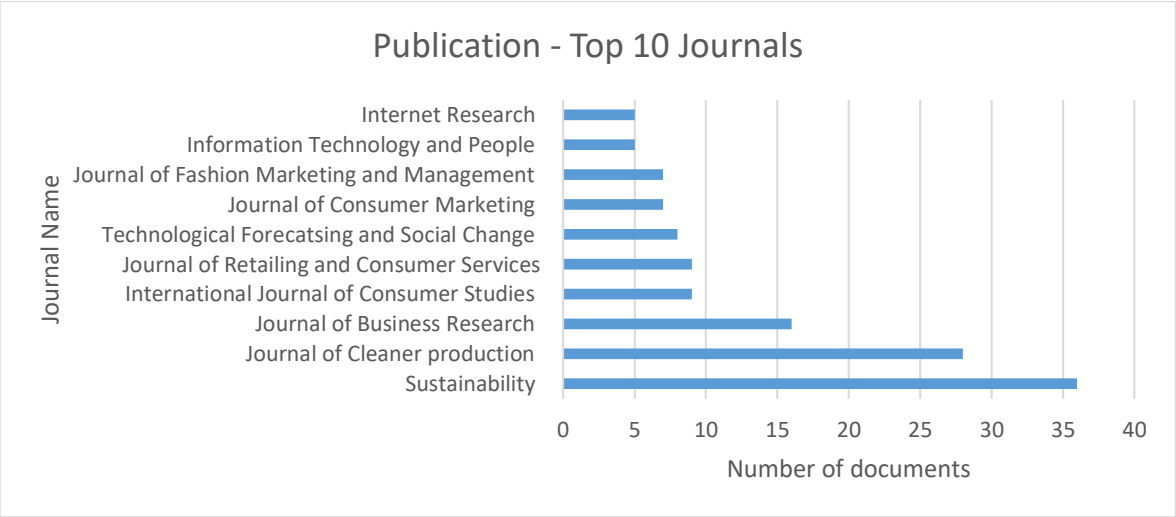


Source: Developed by Authors

4.1.3 Publication trend - Journals on "collaborative consumption"

All 366 publications were published in journals, which indicated the quality of data screened for the analysis of the bibliometric indicators. It is observed that 35.5% of the total number of publications are presented in the top 10 journals, as shown in Fig 4. As depicted in the given figure "Sustainability" is the topmost journal publishing on Collaborative Consumption having a total number of publications 36, followed by "Journal of Cleaner production" and "Journal of Business Research" (28 and 16 publications respectively).

Fig.4: Top 10 Journals Publishing "collaborative consumption" Research



Source: Source: Developed by Authors

Science Mapping

4.1.4 Citation Analysis of "Collaborative Consumption" Research.

The number of citations, which a document or author received is evaluated as a quality indicator of the content published in the academic fraternity. This subsection extends the discussion on Citation analysis for Countries, Sources, and Authors for the documents published on "Collaborative Consumption".

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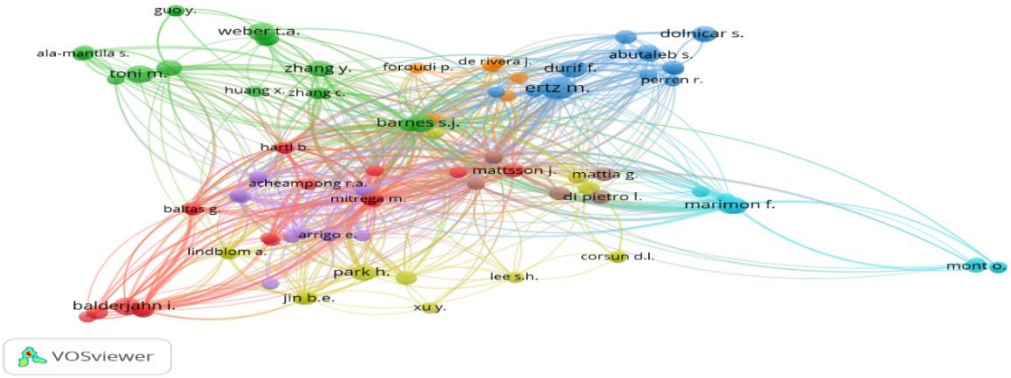
Citation Analysis for the Authors

Author mapping who published in the domain of collaborative consumptions posits that there are a total of 831 authors publishing a total of 366 documents. Out of 831 authors, 98 were taken for the final citation network. These 98 authors have a minimum of 2 documents published and have a minimum of 2 citations. The largest set of connected authors out of 98 was found to be 96 divided into 8 clusters having a total number of linkages of 903 and total link strength of 1461. As seen in Table 8, Branes, S.J. and Dolnicar, S. have the highest no of publications (5) and (4) respectively but the average citation per document is less than 74 and 57, respectively. The average citation per document is much more in the case of Hamari, J., Belk, R., and Tussyadiah, I.P.as 983,604 and 247 respectively. Though the no of documents published by them are less i.e. 2, 3, and 3. This gives the explanation of the impactful research published by Belk, Hamari, and Tussyadiah in the domain of "collaborative consumption". The highest total link strength is of Belk which is 188 making him connected in 188 documents with other authors.

Fig 6: Citation Analysis – Authors of "collaborative consumption" Research



Source: Developed by Authors

Table 8: Author-wise Average Citation of "Collaborative Consumption" Research

Serial No	Author	Documents	Citations	Average citation per Document	Total Link Strength
1	Hamari, J	2	1965	983	88
2	Belk R.	3	1812	604	188
3	Tussyadiah I.P.	3	740	247	39
4	Pesonen J.	2	589	295	30
5	Peters G.M.	2	385	193	22
6	Sandin G.	2	385	193	22
7	Barnes S.J.	5	369	74	76
8	Mattsson J.	3	328	109	69
9	Baker T. L.	2	278	139	64
10	Benoit S.	2	278	139	64
11	Mont O.	3	278	93	11
12	Jiang B.	3	262	87	8
13	Tian I.	3	262	87	8
14	Weber T. A.	5	258	52	21
15	Dolnicar S.	4	229	57	7

Source: Developed by Authors

4.2 The Keyword Analysis of "Collaborative Consumption" Research.

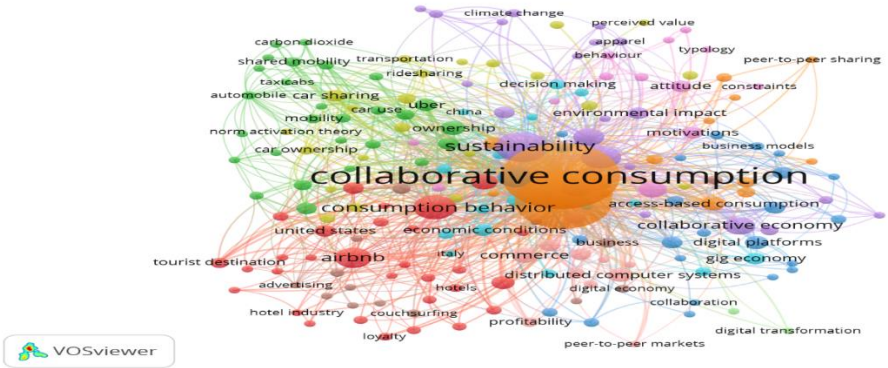
This section of the paper presents the distribution of the keyword and their co-occurrences. The analysis will present the top 10 keywords based on occurrences and total link strength, and the "keyword co-occurrence network" map and density visualization map will be analyzed.

Keyword occurrence networks can effectively reflect the main associated areas of research providing support for further scientific research. In all 366 documents selected total number of keyword were 1692 and only 197 keywords passed the threshold of 3 keyword as a minimum number of occurrence level.

The keyword co-occurrence network was developed using VOS software. The size of the nodes and words represents the weights of those keywords in "Collaborative Consumption" publications. The distance between the nodes explains the strength of the relationship between the two nodes. The larger the size of the node and the word, the larger the weight of the keyword smaller the distance between the nodes higher the strength of the relationship between them. If the connecting line between them is thicker larger is the co-occurrence between them as the line between them reflects that they appeared together. In total, there are 11 clusters of keywords seen among the 197 selected keywords. The total number of links between these 197 is 2399 and the total link strength is 4058. The nodes that are of the same color belong to the same cluster. The keyword "Collaborative Consumption" has the highest occurrences at 263 followed by the keywords "sharing economy" (177) and "Sustainability" (54). The two keywords "collaborative consumption" and "sharing economy" can be considered as the keyword having the highest weights among all keywords as they are prominently displayed in the keyword network and highest total link strength.

The link strength between the two nodes is the frequency of co-occurrence of the two nodes. It can be used as the index of the relationship between the two nodes (Pinto et al., 2014). The total link strength of a node is the sum of the link strength of this node over all other nodes. The node "collaborative consumption" has thicker lines with "sharing economy", "sustainability", "consumption behavior", "sustainable consumption" "access-based consumption,", "Internet", "circular economy", "emerging economies", "Peer-to-peer sharing ", "product service system", "social innovation", "economic development", "product-sharing". The relationship between "collaborative consumption" with "sharing economy," "consumption behavior", "access-based consumption", "product-sharing", and "product-service system" reflects the explanation of "collaborative consumption" and "sharing economy" as an economic system giving rise to different ways of consuming products and services. "Collaborative consumption" is a new form of emerging consumption behavior where in product sharing, access-based consumption is the central idea, and ownership is given as a secondary stage. The relationship between "collaborative consumption" and a keyword like "internet," "peer-to-peer,", and "emerging economies" posits internet is an important facilitating infrastructure through which peer-to-peer platform is used as a business model for the exchange of product and services across the domains. The association of "collaborative consumption" with keywords like "economics", "economic development," "sustainability," and "sustainable consumption", "circular economy", "social innovation" explains the link of "collaborative consumption" leading to sustainable economic development, which requires future empirical evidence. Fig. 8 and Table 10 show the top 10 keyword co-occurrences with "collaborative consumption" studies that explain their occurrences and total link strength.

Fig. 8: Keyword Co-Occurrence network of "collaborative consumption" Research.



Source: Developed by Authors

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Table 10: Top 10 Keywords of "collaborative consumption" Research.

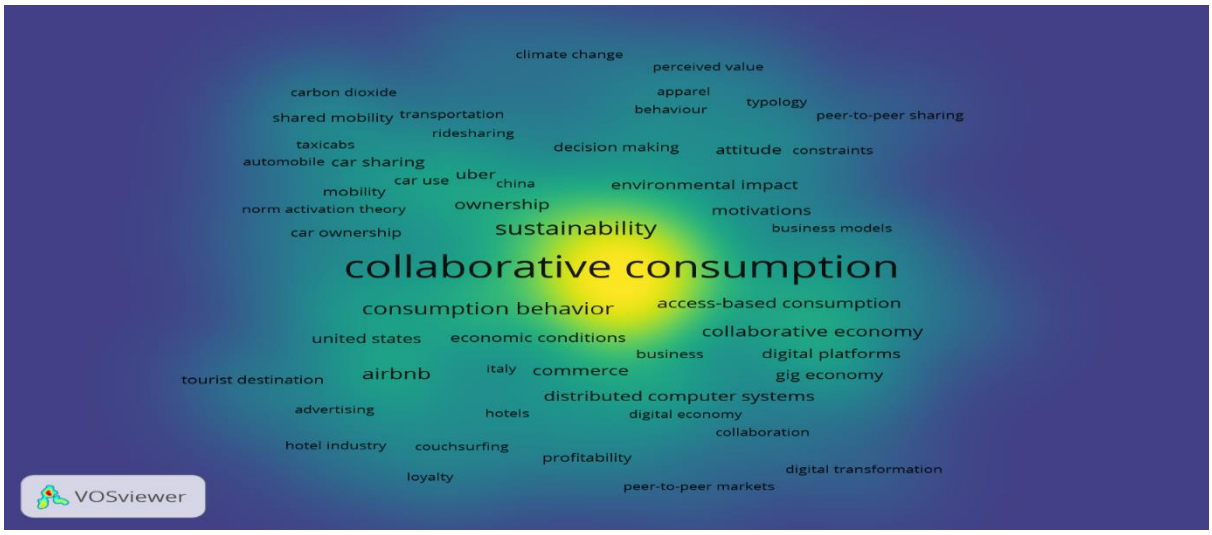
Keyword	Occurrences	Total Link Strength
"Collaborative Consumption	263	967
Sharing Economy	177	687
Sustainability	54	289
Consumption Behavior	34	217
Sustainable Development	31	195
Economics	19	124
Sustainable Consumption	19	100
Sharing	23	98
Air BnB	26	96
Innovation	17	92

Source: Developed by Authors

VOS viewer can make density visualization Fig 9. Each keyword node in the density visualization plot has a color that relies on the density of the items at that node. In other words, the color of the node depends on the items in the neighborhood node (Liao et al, 2018). The keyword that appears in red and yellow color appear more frequently compared to the keyword that appears in green color. Such density visualization is done to understand the structure of the map and what is the most important area of the map.

Hence, we can see in density visualization "collaborative consumption," "sharing economy," "economic conditions", " Sustainability", "consumption behavior", "access- based consumption" turns as most important keyword which can be considered the core keyword related to the phenomenon.

Fig.9: Key Word Density Visualization map of "collaborative consumption" Research

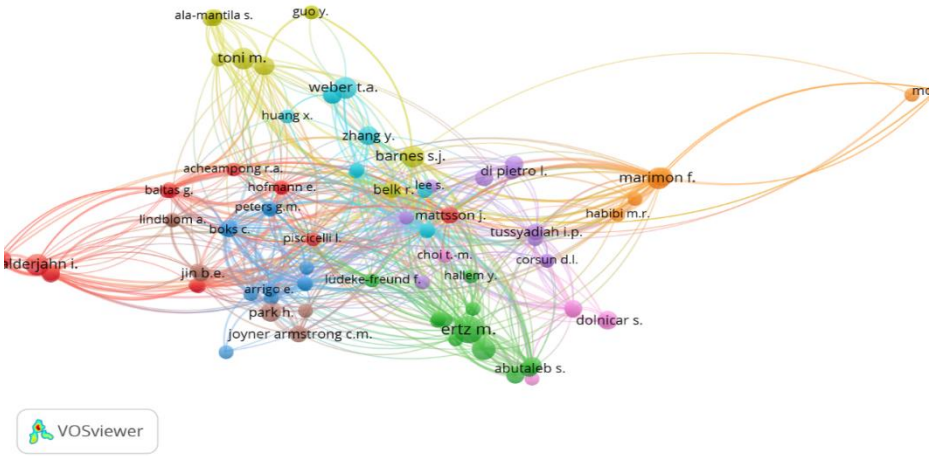


Source: Developed by Authors

4.3. The Author Co-Authorship Analysis

Figure 11 shows the Author Co's authorship analysis on "collaborative consumption" research. A total of 91 items were found to have a relationship with each other. The total number of clusters was 9 in number having a total no of links 38 and total link strength of 1215. 91 items posit the number of authors having a minimum of 2 documents published on collaborative consumption. These 91 authors meeting the threshold of 2 documents are divided into 9 clusters based on linkages. The total link strength of 91 authors is 1215 which means that 91 authors are connected and linked to each other in 1215 documents.

Fig.11: The Author Co-Authorship Analysis of "Collaborative Consumption" Research



Source: Developed by Authors

4.3.3 Top 10 publications in the field of "collaborative consumption" Research based on citations

Table 11 presents the most cited prominent author, paper title, year of publication, and total citations of the paper published in the field of "collaborative consumption". This section presents some of the most influential papers in the field of "collaborative consumption". The total number of papers published in 2015 is 14 in numbers and the number of publications are increasing thereafter having total of 62 documents published in 2021 in the domain of "collaborative consumption". Six papers out of 10 papers listed are co-authored papers. The most influential paper which was found in the context of "collaborative consumption" was the publication by Hamari et al (2016) having a citation count of 1536. The paper aims to understand the people's motivation to participate in collaborative consumption. The findings of the study show that factors like enjoyment, sustainability, and economic gains are found to be major reasons impacting participation in collaborative consumption. The paper authored by Belk (2014) is the second-highest cited paper. The paper intends to compare and contrast the concepts of sharing economy and collaborative consumption as both these concepts are growing in popularity. The third-ranked paper in terms of number of citations was by (Cheng, 2016). The major objective of the author is to provide a systematic and holistic review of the sharing economy to understand key themes and theoretical foundations. These themes were finalized based on co-citation analysis and content analysis. Content analysis revealed three major focuses of impacts – SE's business models and impacts, nature of SE's, and SE's sustainable development. The two areas of focus for tourism and hospitality are impacts on tourists and impacts on destination and tourism services. The paper titled- "Transforming homo economics into homo ludens: A field experiment on Gamification in utilitarian peer-to-peer trading services" is the fourth largest paper in terms of several citations". The paper reports the result of a field experiment of gamification on a utilitarian peer-to-peer trading services platform. Impacts of peer-to-peer accommodation use on travel patterns (Tussyadiah et al, 2016) is the next highly cited paper. The main aim of the paper was to understand how the use of peer-to-peer accommodation platforms leads to changes in traveler's behavior. The study was conducted in two different geographies of USA and Finland. The findings of the study identified that social and economic appeals impact the expansion of destination selection, length of stay, and other range of activities.

Table 11: Top 10 most cited articles of 'Collaborative Consumption' Research

	"Collaborative Consumption"			
Year of Publication	**Author**	**Article Title**	**Journal**	**Citation Count**
2016	Hamari J., Sjöklint M., Ukkonen A.	"The sharing economy: Why people participate in collaborative consumption".	Journal of the Association for Information	1536

			Science and Technology	
2014	Belk R.	"You are what you can access: Sharing and collaborative consumption online".	Journal of Business Research	1498
2016	Cheng M.	"Sharing economy: A review and agenda for future research".	International Journal of Hospitality Management	460
2013	Hamari J.	"Transforming homo economics into homo ludens: A field experiment on gamification in a utilitarian peer-to-peer trading service".	Electronic Commerce Research and Applications	444
2016	Tussyadiah I.P., Pesonen J.	"Impacts of Peer-to-Peer Accommodation Use on Travel Patterns ".	Journal of Travel Research	406
2017	Gutiérrez J., García-Palomares J.C., Romanillos G., Salas-Olmedo M.H.	"The eruption of Airbnb in tourist cities: Comparing spatial patterns of hotels and peer-to-peer-accommodation in Barcelona".	Tourism Management	346
2017	Acquier A., Daudigeos T., Pinkse J.	"Promises and paradoxes of the sharing economy: An organizing framework".	Technological Forecasting and Social Change	338
2014	Belk R.	"Sharing versus pseudo-sharing in web 2.0".	Anthropologist	322
2017	Böcker L., Meelen T.	"Sharing for people, planet or profit? Analyzing motivations for intended sharing economy participation"	Environmental Innovation and Societal Transitions	305
2018	Sandin G., Peters G.M.	"Environmental impact of textile reuse and recycling – A review"	Journal of Cleaner Production	296

Source: Developed by Authors

Discussion

The current study presents the Bibliometric analysis and visual analysis of the publication made in the domain of "collaborative consumption". The analysed results are divided into two parts -1 – some indicators of Performance indicators and 2- some indicators of Science mapping.

The bibliographic data of publications on collaborative consumption explains that the largest number of publication on this domain is from Business Management and Accounting (306) and Social Sciences (202). The Publication trend explains that the number of publications on "collaborative consumption" was highest from 2017-2021. In 2020, there is a drop, which could be accounted for Global Pandemic and emergencies impacting the lives of each one of us. Top 3 university publishing in the domain of collaborative consumption are the University of Manchester, the University of Quebec, and

the University of Minnesota. The top 3 journals publishing in the domain of collaborative consumption are Sustainability, Journal of Cleaner Production, and Journal of Business Research.

Citation analysis of countries, sources, and authors was done to analyze the two important indicators- The number of publications and the average citation per document. Citation analysis of countries posits that the United States and the UK have the highest number of publications on "collaborative consumption" but in terms of average citation per document Finland, Denmark, and Canada are much ahead, gives an interesting fact that the US and UK have to pay attention toward the quality of publications made in the given subject. Similarly, average citation analysis was done for authors, sources, and countries. (Barnes S.J and Dolnicar S.) has the highest number of publications as 4 and 5 but the average citation is 74 and 229 respectively, the highest no of average citations is associated with Hamari, J. having 2 publications but the average citations per document is much higher than 983. Hamari, J. is having one of the highest average citations per document. Belk, R. has the second highest average citation per document at 604 and total number of publications at 3. The highest number of documents in the given domain is published by the Sustainability and Journal of Cleaner Production has an average citation per document of 43 and 59. These are the journals that produce the highest number of publications. But, if relatively compare the average citation per document it is less than Journal of Business Research, which has the highest no of average citation per document, which is 139. Therefore, the Journal of Business Research is one of the important journals publishing quality articles in the domain of collaborative consumption.

Keyword Analysis was attempted through network analysis and density visualization. The top keyword which was found to have the highest co-occurrences are "Collaborative Consumption", "Sharing Economy", "Sustainability" and "Consumption Behaviour". Keyword occurrence networks can effectively reflect research hotspots providing support for further scientific research. In all 366 documents selected total number of keyword were 1692 and only 197 keywords passed the threshold of 3 keyword a minimum number of occurrence level. 3 major research hotspots that emerged through keyword analysis- The relationship between "Collaborative Consumption" with "sharing economy," "consumption behavior," "access-based consumption," "Product-sharing," and "Product service system," reflects the explanation of "Collaborative Consumption," "sharing economy" as a new form of emerging consumption behavior trend and consumer attitude where in product sharing, access-based consumption is the central idea and ownership is given as the secondary stage that is the first research hotspot. The Second research hotspot between the term "collaborative consumption" and keywords like "internet," "peer-to-peer," and "emerging economies" explains the association of "collaborative consumption" as the internet being an important facilitating platform where in peer-to-peer platforms are used as a business model for the exchange of product and services. The third types of keywords associated with the term "collaborative consumption" are "economics," "economic development," "sustainability," "sustainable consumption," "circular economy," and "social innovation" which explains the emerging form of consumption behavior leading to sustainable economic development which requires future empirical evidence. Hamari, J. contributed top publication in the field of "collaborative consumption" having the highest number of citations. Co Authorship analysis for countries explains that the level of co-operation between these countries US, the UK, and China was more compared to the US and France, the US, and Canada.

"Collaborative consumption" as a socio-economic model is a well-established theme for academicians. Increasing the number of publications after 2017 posits future opportunities for publications and collaboration with researchers. Also, the study can be taken as an information piece to understand the top publications, top journals, and top institutes publishing in the context of "collaborative consumption". Empirical research on collaborative consumption can be conducted considering different models and different domains of business. Strong association and link of "collaborative consumption" with sustainability, sustainable consumption, consumer research, and having the highest number of publications in Sustainability and Journal of Cleaner Production indicated the strong link between "collaborative consumption" and "Sustainable development goals" that can be taken as a future research opportunity to contribute toward the sustainability and environment, sustainability and governance studies.

Though the author is presenting a bibliometric analysis of "collaborative consumption" some of the limitations of the above study are pertinent. The data is collected from the Scopus database only, so other databases can be used to retrieve the larger datasets for new publications in the given area. This might increase the comprehensive contribution of the research in the given domain. Also, the articles that are taken are screened for the language that undermines the publication and contributions done in other languages. Future research can be attempted by collecting data from two or more databases and different languages increasing the representation. The current study presents the performances analysis and science

mapping on some of the indicators of bibliometric analysis. Future research in the given domain can study other analytical indicators like co-citation analysis, bibliographic coupling, and enrichment techniques like network metrics, clustering, etc.

Limitation and Future Directions

The current study does have some limitations. The current study has taken into consideration the publication published in the Scopus database. For future studies, other databases like Web of Science, Google Scholar, etc. can be considered to have a comprehensive understanding of the performance indicators and intellectual structures. The current study presents the publication trends, citation analysis, top publications on collaborative consumption based on citations, keyword analysis, and co-authorship analysis. Future studies can be conducted to present other enrichment techniques like network metrics- degree of centrality, Betweenness centrality, Eigenvector centrality, Closeness centrality, Page Rank. Clustering and Visualisation can also be attempted with the help of SciMat, Gephi, etc. (Donthu et al., 2021).

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