The Sharing Economy: A Bibliometric Analysis of the State-of-the-Art

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Abstract

Design/methodology/approach: Journal (co-)citation analysis, author (co-)citation analysis, institution citation and co-operation analysis, keyword co-occurrence analysis, document (co-)citation analysis, and burst detection analysis were conducted based on a bibliometric data set relating to sharing economy publications.

Purpose: Quantitative bibliometric approaches were used to statistically and objectively explore patterns in the sharing economy literature.

Findings: Sharing economy research is multi- and inter-disciplinary. Journals focused upon products liability, organizing framework, profile characteristics, diverse economies, consumption system, and everyday life themes. Authors focused upon profile characteristics, sharing economy organization, social connections, first principle, and diverse economies themes. No institution dominated the research field. Keyword co-occurrence analysis identified organizing framework, tourism industry, consumer behavior, food waste, generous exchange, and quality cue as research themes. Document co-citation analysis found research themes relating to the tourism industry, exploring public acceptability, agri-food system, commercial orientation, products liability, and social connection. Most cited authors, institutions, and documents are reported.

Research limitations/implications: The study did not exclusively focus on publications in top-tier journals. Future studies could run analyses relating to top-tier journals alone, and then run analyses relating to less renowned journals alone. To address the potential fuzzy results concern, reviews could focus on business and/or management research alone. Longitudinal reviews conducted over several points in time are warranted. Future reviews could combine qualitative and qualitative approaches.

Originality/value: We contribute by analyzing information relating to the population

of all sharing economy articles. In addition, we contribute by employing several quantitative bibliometric approaches that enable the identification of trends relating to the themes and patterns in the growing literature.

Keywords

Bibliometric analysis, citations, co-citation analysis, co-occurrence analysis, research themes, sharing economy.

1 Introduction

Growing debate relates to the sharing economy phenomenon (Botsman, 2010; Laurell and Sandström, 2018). The sharing economy refers to the "peer-to-peer sharing of access to underutilized goods and services, which prioritizes utilization and accessibility over ownership" (Cheng, 2016, p. 61). In the digital economy, it has become a predominant business model (Kraus et al., 2019; Richter et al., 2017). Sharing relates to a diverse array of industries (Geissinger et al., 2020; Sanasi et al., 2020), such as accommodation sharing (Oskam and Boswijk, 2016; Zervas et al., 2017), coworking spaces (Bouncken et al., 2018; Bouncken et al., 2020; Vidaillet and Bousalham, 2020), transportation services (Cohen and Kietzmann, 2014), car sharing (Bardhi and Eckhardt, 2012; Cohen and Kietzmann, 2014), etc. As the sharing economy has the potential to disrupt industries, it is an important research topic. Disruption challenges incumbents and presents opportunities for new and established entrepreneurs. Moreover, the sharing economy highlights that sustainability is a major opportunity or challenge for entrepreneurs and incumbents (Curtis and Lehner, 2019; Govindan et al., 2020; Hamari et al., 2016; Liu and Chen, 2020; Pies et al., 2020; Ponce et al., 2018; Pouri and Hilty, 2018). Policy-makers recognize that the sharing economy can create with regard to startup formation, wealth creation, and job generation. In addition, it can destroy with regard to firm closures and job losses. An evidence base is required to ascertain whether there is a case for intervention (i.e., regulatory and/or financial initiatives) to support sharing-based firms.

Due to the fast growing number of publications on the sharing economy, calls have made to map the emerging sharing economy research field, and to identify avenues for additional research attention (Castillo-Vergara et al., 2018; Guttentag, 2015). To address this, a literature review is a widely used approach to identify themes, patterns, processes, and outcomes with regard to a research field (Bodolica and Spraggon, 2018; Torraco, 2016; Tranfield et al., 2003; Webster and Watson, 2002). Qualitative literature review approaches have been employed to identify thematic research clusters (Agarwal and Steinmetz, 2019; Cheng, 2016) relating to the sharing economy phenomenon. More specifically, a literature review approach was used to identify sharing-based business models (Trabucchi et al., 2019). However, the qualitative reviews have not focused on the population of all sharing economy studies, and all themes relating to the sharing economy phenomenon.

The latter concerns can be addressed by quantitative bibliometric approaches, which statistically and objectively explore patterns in the literature with reference to a large number of publications (Batistič, and van der Laken, 2019; Zupic and Čater, 2015). Bibliometric analysis was used by Filser et al. (2020) to identify patterns relating to the 20 most cited sharing economy articles. Building upon the insights provided by previous qualitative and quantitative reviews, we contribute by collecting and analyzing bibliometric data from the Web of Science Core Collection database relating to the population of all sharing economy articles published so far. Rather than employing a single bibliometric approach, we contribute by employing several quantitative bibliometric approaches. Therefore, our research goal is to map the sharing economy literature using bibliometrics by conducting performance analyses and science mappings.

The key findings of our review are as follows. Sharing economy publications were detected across several disciplines. Journals focused upon products liability, organizing framework, profile characteristics, diverse economies, consumption system, and everyday life themes. Authors focused upon profile characteristics, sharing economy organization, social connections, first principle, and diverse economies themes. No single institution dominated the research field. Keyword

co-occurrence analysis identified organizing framework, tourism industry, consumer behavior, food waste, generous exchange, and quality cue as research themes. Document co-citation analysis found distinct research themes relating to the tourism industry, exploring public acceptability, agri-food system, commercial orientation, products liability, and social connection. Botsman's (2010) book is the seminal publication, and she is the most influential scholar in the field.

This article is structured as follows. In the following section, the bibliometric methods employed and the data collection process are summarized. Results are then reported. Finally, conclusions are presented.

2 Bibliometric Methods and Data Collection

Bibliometric analysis is viewed as an objective approach to explore the patterns relating to the involved disciplines, journals, authors, institutions, keywords, and documents with regard to a research field (Ferreira et al., 2014; Kruggel et al., 2020; Luther et al., 2020; Mas-Tur et al., 2020; Merediz-Solà and Bariviera, 2019; Vanhala et al., 2020; Zupic and Čater, 2015). We employ performance analyses, which focus on the productivity and impact of sharing economy publications, and science mappings, which search for research themes within the sharing economy literature (Noyons et al., 1999). We start with an overview relating to the disciplines which conduct sharing economy research. If research can be attributed to more than one discipline, the field might be multi- or even interdisciplinary.

Journal citation analysis was conducted to monitor the relevance of publication outlets. Journal co-citation analysis identifies research themes based on the frequency journals are cited together in another publication.

Author citation analysis was conducted to monitor the research productivity of authors (Culnan, 1986). Author co-citation analysis was conducted to explore common threads in their works. If two or more authors are jointly cited in another publication, the cited authors form a co-citation relationship. Thus, co-citation analysis enables the identification of the research themes that are attracting attention by citing authors (McCain, 1990; Kang et al., 2019; Zhao and Strotmann, 2015).

Further, it enables the identification of networks between key scholars in the field (Rosetto et al., 2018; Silva et al., 2019; Waltman et al., 2010).

Institution citation analysis was conducted to monitor the research productivity of an institution based on the number of citations generated by their sharing economy publications. Institution co-operation analysis was conducted to explore the links between research institutions. This analysis identifies the hidden faculties focusing upon the sharing economy.

Keyword co-occurrence analysis is another approach to identify research clusters. The notion of this approach is to explore the frequencies of specific keywords being mentioned jointly.

Document citation analysis was conducted to monitor the citations generated by journal articles and book chapters, indicative their perceived relevance. Document co-citation analysis was employed to identify common themes. If two or more sharing economy publications (also called documents) are jointly cited by another document, this forms a co-citation relationship (Small, 1973).

Burst detection analysis was conducted relating to the number of citations generated by a publication in a certain time span. This analysis identifies the seminal publications that have had a prolonged impact on shaping the research field. Moreover, it identifies recent publications that are anticipated to be future seminal publications.

For the aforementioned analyses, bibliometric data from the Web of Science Core Collection database relating to the population of all sharing economy articles published between the 1st January 2013 and the 29th February 2020 was collected. This database is considered to be comprehensive (Norris and Oppenheim, 2007). Publications listed in the Science Citation Index (SCI) and the Social Science Citation Index (SSCI) were identified. This enabled the identification of sharing economy publications within and beyond business and management publication outlets. Owing to the (still) small size of the population of sharing economy publications, a quality threshold approach focusing upon articles in top-tier journals was not used. With reference to the research term “shar* economy”, 326 publications were identified. Information relating to the abstract, keywords, citations, and references was collected

(Carvalho et al., 2013; Vallaster et al., 2019). The bibliometric analyses were conducted using CiteSpace visualization software (Li and Chen, 2017), which is widely used in bibliometric studies (Chen, 2006).

3 Results

3.1 Disciplines involved in sharing economy research

Figure 1 highlights that the sharing economy has been discussed in several disciplines, and their productivity has changed over time. Each circle in the time zone diagram relates to a discipline. The more a circle (i.e., a discipline) is located to the left in Figure 1, the earlier that discipline focused on the sharing economy. An increase in the number of sharing economy publications in a discipline is indicated by larger circle sizes. The lines in Figure 1 represent the links between the disciplines regarding their co-occurrence.

Sharing economy publications were first published in the Business and Economics discipline. The size of the purple outer circle relating to each node (i.e., discipline) indicates the contribution of sharing economy articles. The scale of contribution ranging from high to low was as follows: Business and Economics, Business, Environmental Sciences and Ecology, Social Science, Hospitality, and Engineering. The node in the upper right corner of the figure highlights that Engineering Industry and Engineering Manufacturing were the most recent disciplines focusing upon the sharing economy. Table 1 shows the number of citations in each discipline. The largest numbers of citations relate to Cluster #1 and then Cluster #2.

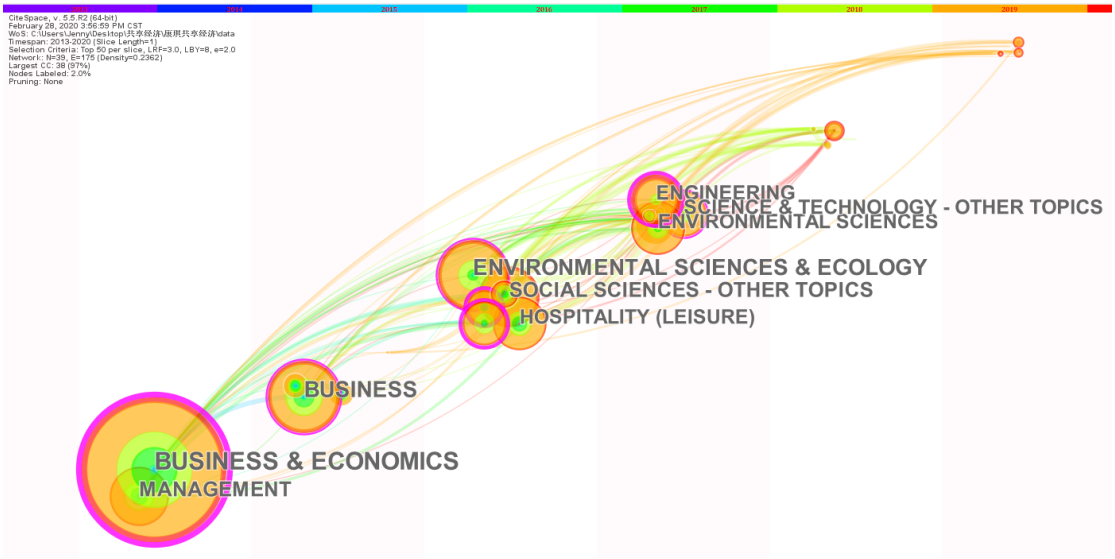

Figure 1 Discipline Contexts Focusing Upon the Sharing Economy over Time

Table 1 Discipline Citation Counts

Number of citations	Discipline and publication starting year	Cluster #
133	Business and Economics: 2014	2
67	Business: 2015	2
63	Environmental Sciences & Ecology: 2016	1
57	Management: 2014	2
56	Social Science - other topics: 2016	2
49	Hospitality: 2016	2
49	Environmental Sciences: 2017	1
47	Engineering: 2017	0
43	Science and Technology - other topics: 2017	1
42	Environmental Studies: 2017	1

3.2 Journal citation and co-citation analysis

The five most frequently cited journals were as follows: Journal of Business Research, Journal of Consumer Research, Journal of Marketing Research, and Journal of Marketing. Figure 2 shows the clusters of journal co-citation. Journals are generally concentrated in the following clusters: products liability (Cluster #0), organizing framework (#1), profile characteristics (#2), diverse economies (#3), consumption system (#4), and everyday life (#5). The modularity Q value was 0.497 and indicated a logical clustering structure. However, the clustering effectiveness relating to the silhouette value was less than 0.5. This suggests that the significance and explanatory power of the presented clusters are limited.

Table 2 indicates that the two largest clusters relate to products liability (#0) and organizing framework (#1). Each cluster had a silhouette value above 0.6, which is reasonable. The products liability Cluster (#0) related to 32 journals, and Yi et al.'s (2020) article was the most cited article. Their paper 'The effect of the perceived risk on the adoption of the sharing economy in the tourism industry: the case of Airbnb' was published in Information Processing & Management. The study investigated how risk affects the development and proliferation of the sharing economy, especially for Airbnb. The structural equation analysis found that sharing economy privacy and financial risks had a negative impact on the intention to use shared goods, and that physical and performance risks were positively related to behavioral intentions or desires.

The organizing framework Cluster (#1) related to 32 journals, and Lai et al.'s (2020) article was most cited article. It was published in Resources Conservation and Recycling. Guided by social science perspective and Wright's (2010) concept of real utopia, this study explores the potentials and limitations of the strategies adopted in sharing economy projects towards societal transformation, especially coping with environmental degradation and hyper-consumption.

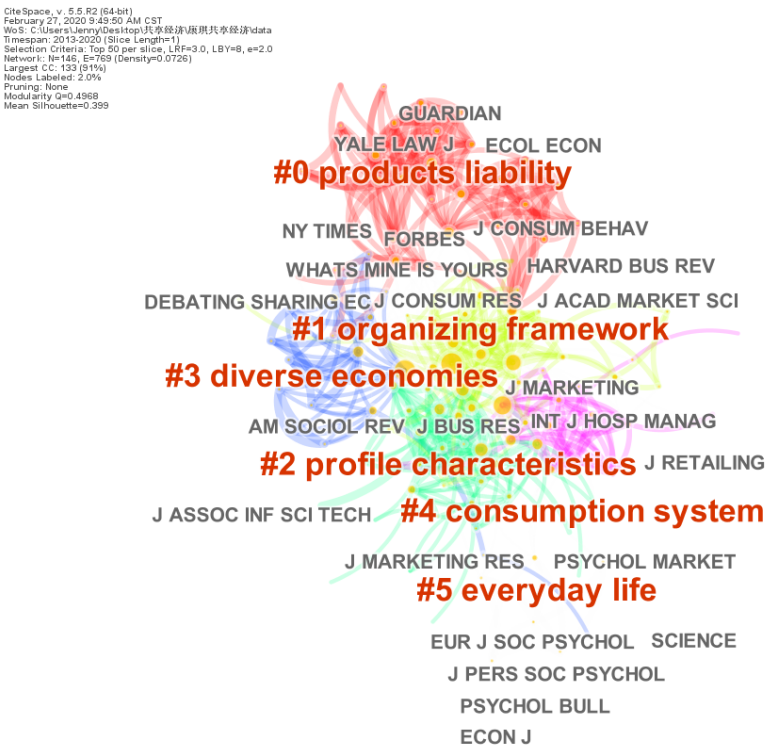

Figure 2 Journal Co-Citation Map

Table 2 Two Largest Clusters of Journal Co-Citation

Cluster #	Size	Silhouette	Label	Source of most active literature
0	32	0.878	Products liability	Information Processing and Management
1	32	0.684	Organizing framework	Resources Conservation and Recycling

3.3 Author citation and co-citation analysis

Author co-citation analysis findings are reported in Figure 3. The modularity value was 0.467 and indicated distinct clusters. Each cluster relates to a color in the figure. The labels relating to the largest clusters are highlighted with red text. The names of the authors with the most citations are highlighted in black text. Relating to research themes, the following clusters were detected: profile characteristics (Cluster #0),

sharing economy organization (#1), social connections (#2), first principle (#3), and diverse economies (#4).

Table 3 shows the lead authors with 100 or more citations with regard to research cluster themes. Botsman, a member of Cluster #4, reported the most citations. Belk and Hamari, members of Cluster #1, reported the second and fourth largest numbers of citations, respectively. Zervas, a member of Cluster #0, reported the third largest number of citations. These authors are the drivers of sharing economy research.

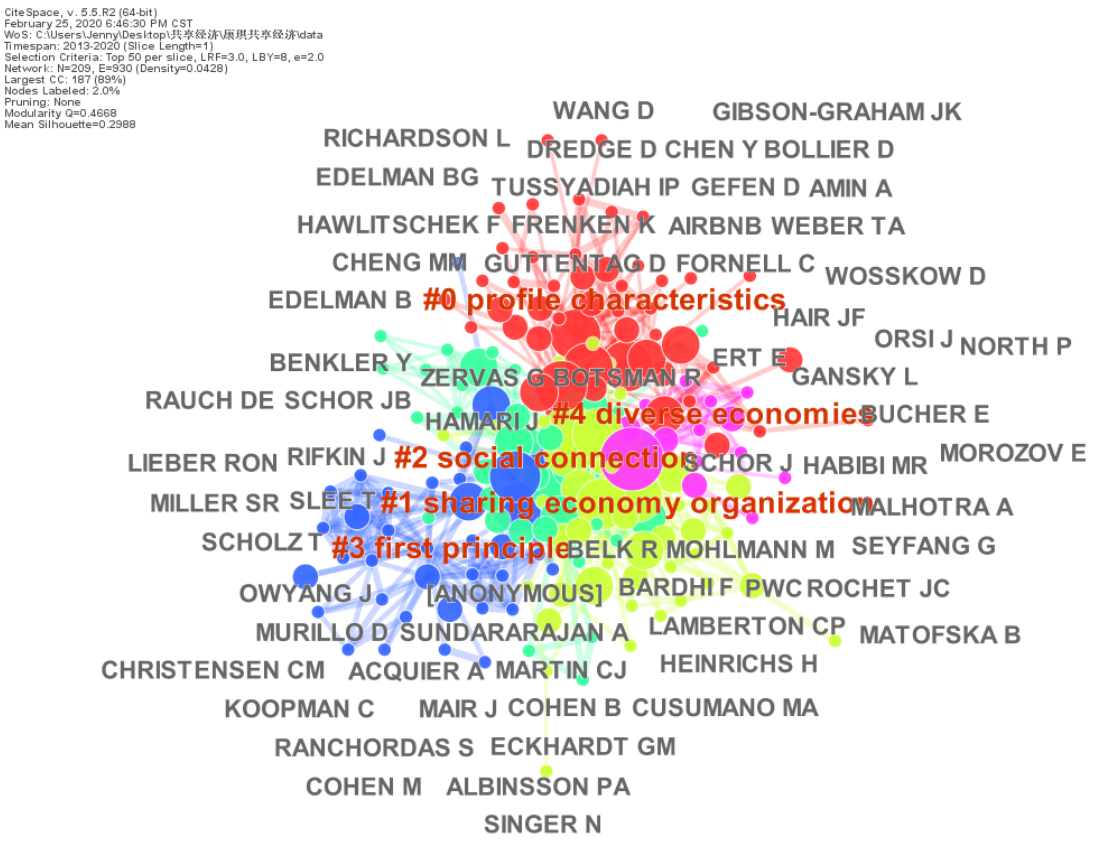

Figure 3 Author Co-citation Map

Table 3 Most Cited Authors

Number of citations	Lead author	Cluster membership
154	Botsman, 2014	4

149	Belk, 2015	1
111	Zervas, 2016	0
100	Hamari, 2016	1

3.4 Institution citation and co-operation analysis

Institution co-operation analysis findings are reported in Figure 4. Circle size increases with regard to the growing number of citations generated by an institution. Recent citations are highlighted with regard to lighter colours, whilst older publications are highlighted with reference to darker colours. The University of Utrecht with eight publications was the most frequently cited institution. Then followed by Shanghai Jiao Tong University, Tsinghua University, Boston University, Chung Ang University, University of South Carolina, Peking University, Technical University Berlin, University of Central Florida, and University of Manchester. Figure 5 also shows that the largest institution co-operation network relates to the following institutions: National University of Singapore, University of Central Florida, Hefei University of Technology, Curtin University, University of International Business and Economics, Ohio State University, Beijing International Studies University, University of South Carolina, University of Queensland, Boston University, Purdue University, and Texas A&M University. Co-operation between these institutions has been direct and/or indirect. Themes discussed in the University of Utrecht's three most cited articles are highlighted in Table 4.

Figure 4 Institution Co-operation Map

Table 4 University of Utrecht's Three Most Cited Articles

Number of citations	Title, year of publication and journal outlet
153	Putting the sharing economy into perspective; 2017; Environmental Innovation and Societal Transitions
78	Sharing for people, planet or profit? Analysing motivations for intended sharing economy participation; 2017; Environmental Innovation and Societal Transitions
43	Political economies and environmental futures for the sharing economy; 2017; Philosophical Transactions of The Royal Society A – Mathematical, Physical and Engineering Sciences

3.5 Keyword co-occurrence analysis

Outcomes from the keyword co-occurrence analysis focusing upon journal articles are reported in Figure 5. A clustering operation was conducted, and the modularity value was 0.686, which suggests the clustering structure is logical. The following six clusters were identified: engagement platform (Cluster #0), organizing framework (#1), tourism industry (#2), consumer behavior (#3), food waste (#4), generous exchange (#5), and quality cue (#6). Keyword frequency of citation is reported in Table 5. The keyword "sharing economy" was (obviously) the most frequently cited, and the other keywords have been reported over the last five years.

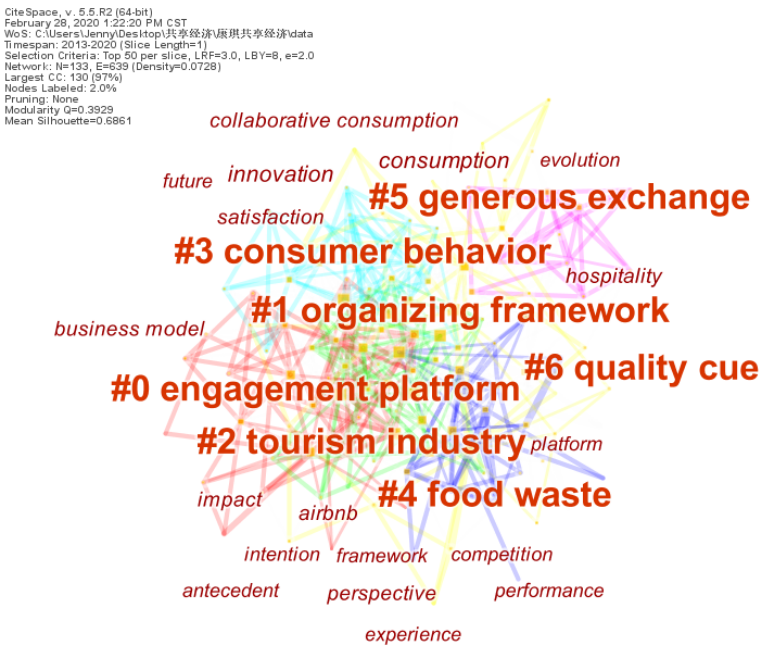

Figure 5 Keyword Co-Occurrence Map

Table 5 Keyword Frequency

Frequency	Keyword
204	Sharing economy
62	Consumption
52	Airbnb

50	Collaborative consumption
42	Trust
36	Sustainability
31	Satisfaction
31	Model
27	Innovation
26	Business model

Table 6 lists the six clusters and their representative bibliography. Clusters #2, #3, and #4 have silhouette values above 0.5 which suggests a large and homogenous citer set. Tong and Gunter's (2020) article 'Hedonic pricing and the sharing economy: how profile characteristics affect Airbnb accommodation prices in Barcelona Madrid, and Seville' was cited in these three clusters. This article explored how various characteristics of an Airbnb listing impacted on prices. The authors detected that the overall evaluation and characteristics of the scale of accommodation had the strongest positive impact on prices. Conversely, the number of reviews and distance from the city center had the strongest negative impact on prices. Clusters #4, #5, and #6 have silhouette values above 0.85, which suggests the findings in these three clusters are highly effective. The keywords 'innovation, 'platform' 'information', people' and 'determinant' were the most frequently cited in these clusters.

Table 6 Clusters and Representative Bibliography

Cluster #	Silhouette	Bibliography
0	0.646	Breidbach and Brodie (2017). Engagement platforms in the sharing economy conceptual foundations and research directions. Journal of Service Theory and Practice
1	0.5	Sanasi et al. (2020). Making sense of the sharing

		economy: a business model innovation perspective. Technology Analysis and Strategic Management
2	0.648	Tong and Gunter (2020). Hedonic pricing and the sharing economy: how profile characteristics affect Airbnb accommodation prices in Barcelona, Madrid, and Seville. Current Issues in Tourism
3	0.77	Tong and Gunter (2020). Hedonic pricing and the sharing economy: how profile characteristics affect Airbnb accommodation prices in Barcelona, Madrid, and Seville. Current Issues in Tourism
4	0.868	Tong and Gunter (2020). Hedonic pricing and the sharing economy: how profile characteristics affect Airbnb accommodation prices in Barcelona, Madrid, and Seville. Current Issues in Tourism
5	0.892	Morgan (2018). The sharing economy. Annual Review of Law and Social Science
6	0.851	Jang et al. (2020). The effect of quality cues on travelers' demand for peer-to-peer ridesharing: a neglected area of the sharing economy. Journal of Travel Research

3.6 Document citation and co-citation analysis

Document co-citation analysis findings are reported in Figure 6. Circle size increases with regard to the growing number of citations generated by a document. Lines between the document nodes show the relationships between the documents. The clusters are as follows: tourism industry (#0), exploring public acceptability (#1), agri-food system (#2), commercial orientation (#3), products liability (#4), and social connection (#5).

Table 7 shows that the eight most cited references relate to journal articles, and

the ninth and tenth most cited references relate to book chapters. The table also shows that 174, 269, 56, 51, 88, and 54 most cited references were located in clusters (#0), (#2), (#3), (#4) and (#5), respectively.

The most cited journal article was presented by Belk (2014) with the title 'You are what you can access: sharing and collaborative consumption online', which was published in the Journal of Business Research. The article discussed the reasons for the current growth in collaborative consumption and their implications for firms using traditional models of sales and ownership. Sundararajan's (2016) book 'The sharing economy: the end of employment and the rise of crowd-based capitalism' is the most cited reference in Cluster #5. He suggested that 'crowd-based capitalism' is a new way to organize economic activity that can replace the traditional company-centric model. This book discussed examples of the following companies that have recently become globally popular with regard to their sharing models: Airbnb, Lyft, Uber, Etsy, TaskRabbit, BlaBlaCar, Didi Kuaidi, and Ola. Further, Botsman (2010) published the book 'What's mine is yours: the rise of collaborative consumption', which discussed the rise of new economic models relating to shared resources and collective consumption.

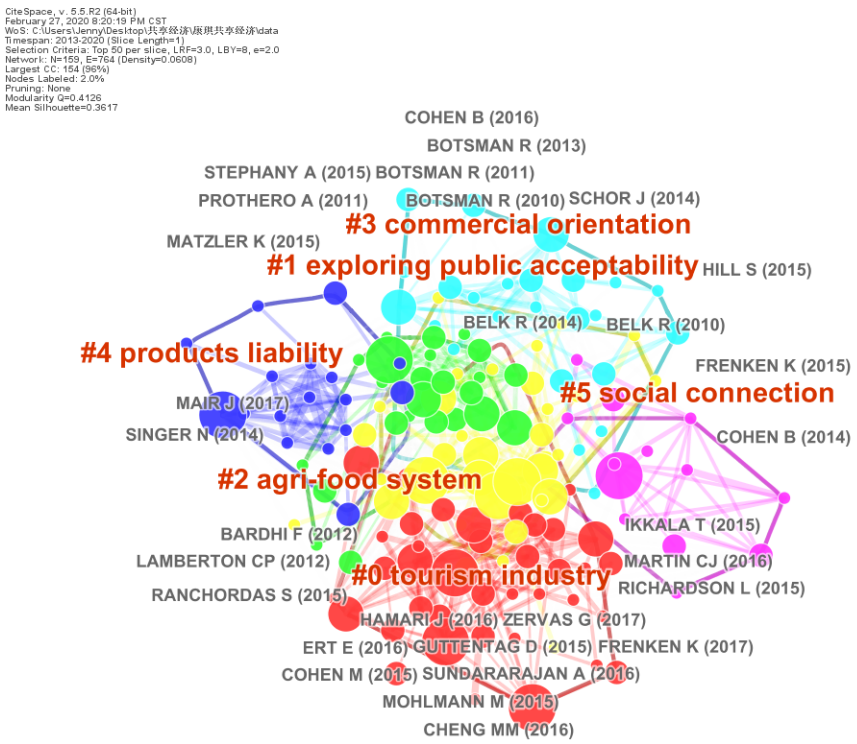

Figure 6 Document Co-Citation Map

Table 7 Top 10 Most Cited References

Rank	Number of citations	Reference	Cluster membership
1	116	Belk (2014), Journal of Business Research	1
2	90	Hamari (2016), Journal of the Association for Information Science and Technology	1
3	88	Bardhi and Eckhardt (2012), Journal of Consumer Research	4
4	63	Martin (2016), Ecological Economics	1
5	61	Zervas (2017), Journal of Marketing Research	0
6	58	Guttentag (2015), Current Issues in Tourism	0
7	56	Lamberton (2012), Journal of Marketing	2
8	55	Ert (2016), Tourism Management	0
9	54	Sundararajan (2016): The Sharing Economy: The End	5

		of Employment and the Rise of Crowd-Based Capitalism	
10	51	Botsman (2010): What's Mine is Yours: The Rise of Collaborative Consumption	3

The citing article and cited references in Cluster #0 are highlighted in Table 8. Three out of the four most citing articles were published in 2020. The most citing article was by Casado-Diaz et al. (2020). It discussed three dimensions (i.e., economics, psychology and space) to explore 'house exchange'. They discussed the example of non-monetized Peer-to-peer-shared accommodation where individuals exchange houses through a web-based platform. This article was assigned to Cluster #0 and Cluster #1. The most cited reference was by Zervas et al. (2017), which focused on Airbnb's market entry in Texas. They measured Airbnb's impact on the Texas hotel industry over the next decade. Moreover, they discussed the economic impact of the sharing economy on incumbent firms. The citing articles and cited references in Cluster #1 are highlighted in Table 9. All the most citing articles were published in 2020. The most citing article was by Gurău and Ranchhod (2020), whilst the most cited reference was by Belk (2014).

Table 8 Most Cited References and Citing Articles in Cluster #0

Citing article		Cited references	
Coverage (%)	Article	References	Citations
20	Casado-Diaz et al. (2020). The home exchange phenomenon in the sharing economy: a research agenda	Zervas et al. (2017): Journal of Marketing Research	61

16	Murillo et al. (2017). When the sharing economy becomes neoliberalism on steroids: unravelling the controversies	Guttentag (2015): Current Issues in Tourism	58
12	del Mar Alonso-Almeida et al. (2020). Shedding light on sharing economy and new materialist consumption: an empirical approach	Ert et al. (2016): Tourism Management	55
10	Yi et al (2020). The effect of the perceived risk on the adoption of the sharing economy in the tourism industry: the case of Airbnb	Möhlmann (2015): Journal of Consumer Behavior	48

Table 9 Most Cited References and Citing Articles in Cluster #1

Citing article		Cited references	
Coverage (%)	Article	References	Citations
18	Gurău and Ranchhod (2020). The sharing economy as a complex dynamic system: exploring coexisting constituencies, interests and practices	Belk (2014): Journal of Business Research	116
13	Lai and Ho (2020).	Hamari et al. (2016):	90

	Unravelling potentials and limitations of sharing economy in reducing unnecessary consumption: a social science perspective	Journal of the Association for Information Science and Technology	
12	Sanasi et al. (2020) Making sense of the sharing economy: a business model innovation perspective	Martin (2016): Ecological Economics	63
12	Casado-Diaz et al. (2020). The home exchange phenomenon in the sharing economy: a research agenda	Frenken and Schor (2017): Environmental Innovation and Societal Transitions	45

3.7 Burst detection analysis

Table 10 shows the five publications focusing upon the sharing economy with the strongest citation bursts. Botsman's (2010) book reported the highest strength value, which means that this publication has attracted the most attention and citations over a short time period, and it is therefore the most influential publication. The citation burst started in 2014, and its impact has increased over time. The book is the most influential sharing economy publication.

Table 10 Top Five Publications with the Strongest Citation Bursts

Publications	Strength	Start	End	2013 to 2020
Botsman (2010)	10.341	2014	2018	
Belk (2010)	7.949	2017	2018	
Schor (2014)	4.638	2015	2017	

Martin (2015)	4.413	2016	2017	
Gansky (2010)	3.436	2017	2018	

Botsman's (2010) citation history is illustrated in Figure 7. A consistent growth in citations over time has been reported. The number of citations relating to 2020 only covers the period to end of February. Extrapolating the 11 citations, it can be expected that the numbers of citations are still increasing.

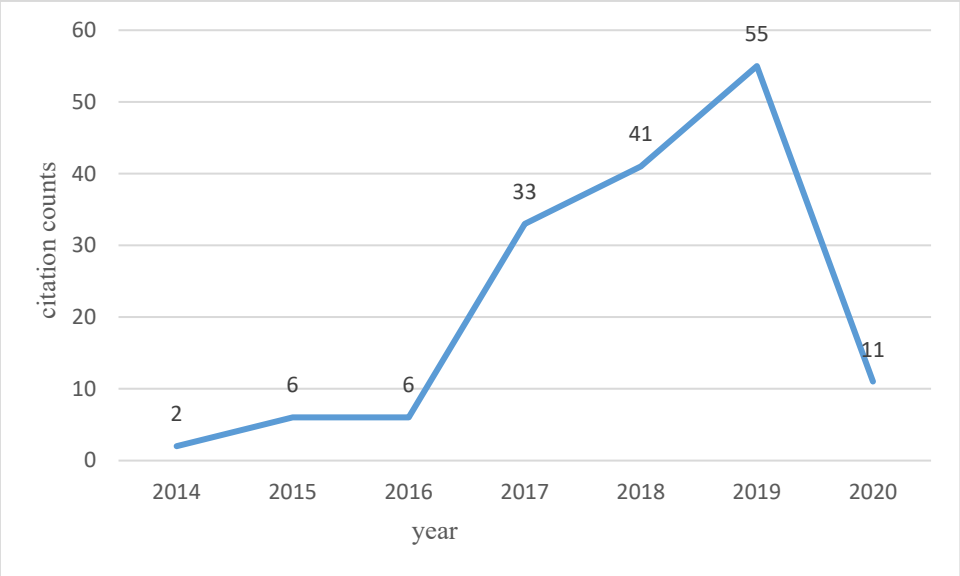

Figure 7 Botsman's (2010) Citation History up to the End of February 2020

4 Conclusions and Implications

The sharing economy is growing in terms of the number of firms, wealth creation, and job generation, and it is therefore a driver of economic development. Major economic crises such as the current COVID-19 pandemic (Kraus et al., 2020) might further push the concept of sharing due to some customer segments' (Lutz and Newlands, 2018) increasing frugality. In accordance with the practical relevance of the sharing economy, growing research interest has focused on this phenomenon. Qualitative literature reviews have provided illuminating insights surrounding the patterns,

processes, and contributions explored in sharing economy studies. The latter reviews, however, have failed to monitor the population of all sharing economy publications. Our study has sought to close this research gap by employing an array of quantitative bibliometric approaches to monitor patterns in sharing economy publications. The utilization of several quantitative bibliometric approaches enabled the identification of themes and patterns that would have been missed if only one approach had been employed.

We detected that studies focusing upon the sharing economy were initially published in the fields of business and economics, but over time the outlets have become more diverse, and now include social sciences, environmental sciences, engineering and other fields. Notably, we found that the sharing economy research field is now multi-disciplinary (i.e., several disciplines are involved) and inter-disciplinary (i.e., publications can be assigned to more than one discipline). The journal citation analysis identified the five most frequently cited journals (i.e., Journal of Business Research, Journal of Consumer Research, Journal of Marketing Research, and Journal of Marketing). According to the journal co-citation analysis journals were found to focus on key research clusters relating to products liability, organizing framework, profile characteristics, diverse economies, consumption system, and everyday life. The two leading clusters relate to products liability and organizing framework. Author co-citation analysis revealed distinct research themes relating to profile characteristics, sharing economy organization, social connections, first principle, and diverse economies. Botsman who is a member of the diverse economies cluster was found to have generated the most citations. Interestingly, the institution co-operation analysis detected that no single institution was dominant in terms of citations. The University of Utrecht, however, was the most frequently cited institution. Keyword co-occurrence analysis revealed the following clusters: engagement platform, organizing framework, tourism industry, consumer behavior, food waste, generous exchange, and quality cue. The top five popular keywords are “sharing economy,” “consumption,” “Airbnb,” “collaborative consumption,” and “trust”. Most of them occurred in the last five years. This further indicates that sharing

economy is an emerging field. Document co-citation analysis found distinct research themes relating to the tourism industry, exploring public acceptability, agri-food system, commercial orientation, products liability, and social connection. Document citation analysis shows that eight out of the ten most cited references related to journal articles rather than book chapters. The most citing article in the tourism industry cluster was by Casado-Diaz et al. (2020), and the most cited reference was by Zervas et al. (2017). Further, the most citing article in the exploring public acceptability cluster was by Gurău and Ranchhod (2020), and the most cited reference was by Belk (2014). Burst detection analysis detected that the publications by Botsman (2010), Belk (2010), Schor (2014), Martin (2015), and Gansky (2010) had the strongest citation bursts in terms of strength. Notably, Botsman's (2010) book reported the highest strength value, and its strength has increased over time. This seminal publication is the key foundation pillar of research focusing upon the sharing economy phenomenon.

Despite the important findings from the presented bibliometric analysis, our study is associated with limitations that provide opportunities for additional research attention. First, the presented analyses explored a combined population of studies relating to top-tier journals as well as less renowned journals. Future reviews could run analyses relating to top-tier journals alone, and then run analyses relating to less renowned journals alone. This would then allow the detection of similarities and differences between the two broad types of publication outlets. Second, the inter-disciplinary approach employed might have led to the presentation of fuzzy results. To address this potential concern, future reviews could focus on publications relating to business and/or management research alone. Third, recent publications generally with no significant immediate citation impact yet were included in our review. There is, therefore, a need for longitudinal quantitative bibliometric reviews to be conducted over several points in time. Fourth, findings from quantitative bibliometric approaches could be distorted by the 'Matthew effect', where publications might be more cited just because they were cited by respected scholars before (Kruggel et al., 2020). Consequently, future studies should combine qualitative

and qualitative approaches.

The sharing economy field is still at an infancy stage. Nevertheless, there is a growing scholarly interest in the sharing economy phenomenon. Several new scholars have entered the research field, and is anticipated that they will extend the research field by building upon the insights provided by pioneering scholars such as Botsman (2010). We anticipate that the sharing economy research field will mature when more leading international scholars drawn from top global universities exhibit a track record of publishing sharing economy studies in top-tier journals. Currently, the research topics within the field are highly specialized. The research field will mature when more multi-disciplinary and inter-disciplinary studies are conducted. Whilst there is a need for more empirical studies, there is also the need for the exploration of normative research questions relating to ethical and environmental issues (Filser et al., 2020).

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