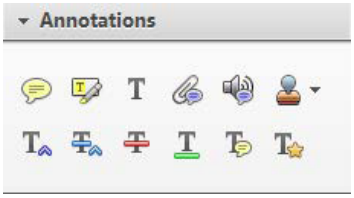
Smart Proof System Instructions

It is recommended that you read all instructions below; even if you are familiar with online review practices.

Using the Smart Proof system, proof reviewers can easily review the PDF proof, annotate corrections, respond to queries directly from the locally saved PDF proof, all of which are automatically submitted directly to **our database** without having to upload the annotated PDF.

- ✓ **Login into Smart Proof** anywhere you are connected to the internet.
- ✓ **Review the proof** on the following pages and mark corrections, changes, and query responses using the **Annotation Tools**.



Note: Editing done by replacing the text on this PDF is not permitted with this application.

- ✓ **Save your proof corrections** by clicking the "Publish Comments" button.
  Corrections don't have to be marked in one sitting. You can publish comments and log back in at a later time to add and publish more comments before you click the "Complete Proof Review" button below.

- ✓ **Complete your review** after all corrections have been published to the server by clicking the "Complete Proof Review" button below.

Before completing your review.....

Did you reply to all author queries found in your proof?

Did you click the "Publish Comments" button to save all your corrections? Any unpublished comments will be lost.

Note: Once you click "Complete Proof Review" you will not be able to add or publish additional corrections.

Airbnb research: an analysis in tourism and hospitality journals

AQ:au Luisa Andreu, Enrique Bigne, Suzanne Amaro and Jesús Palomo

AQ: 1

Abstract

Purpose – *The purpose of this study is to examine Airbnb research using bibliometric methods. Using research performance analysis, this study highlights and provides an updated overview of Airbnb research by revealing patterns in journals, papers and most influential authors and countries. Furthermore, it graphically illustrates how research themes have evolved by mapping a co-word analysis and points out potential trends for future research.*

Design/methodology/approach – *The methodological design for this study involves three phases: the document source selection, the definition of the variables to be analyzed and the bibliometric analysis. A statistical multivariate analysis of all the documents' characteristics was performed with R software. Furthermore, natural language processing techniques were used to analyze all the abstracts and keywords specified in the 129 selected documents.*

Findings – *Results show the genesis and evolution of publications on Airbnb research, scatter of journals and journals' characteristics, author and productivity characteristics, geographical distribution of the research and content analysis using keywords.*

Research limitations/implications – *Despite Airbnb having a history of 10 years, research publications only started in 2015. Therefore, the bibliometric study includes papers from 2015 to 2019. One of the main limitations is that papers were selected in October of 2019, before the year was over. However, the latest academic publications (in press and earlycite) were included in the analysis.*

Originality/value – *This study analyzed bibliometric set of laws (Price's, Lotka's and Bradford's) to better understand the patterns of the most relevant scientific production regarding Airbnb in tourism and hospitality journals. Using natural language processing techniques, this study analyzes all the abstracts and keywords specified in the selected documents. Results show the evolution of research topics in four periods: 2015-2016, 2017, 2018 and 2019.*

Keywords *Airbnb, Sharing economy, Collaborative economy, Peer-to-peer accommodation, Bibliometric study, Co-word analysis*

Paper type *Research paper*

Luisa Andreu is based at the Department of Marketing, University of Valencia, Valencia, Spain.
Enrique Bigne is based at the University of Valencia, Valencia, Spain.
Suzanne Amaro is based at the Polytechnic Institute of Viseu, Viseu, Portugal.
Jesús Palomo is based at the Department of Business Administration, Rey Juan Carlos University, Madrid, Spain.

1. Introduction

Since Airbnb was founded in 2008, it has expanded from a single air mattress on the floor of the founders' apartment to 6 million private accommodation listings in over 191 countries worldwide (Airbnb, 2019), giving Airbnb more supply than the number of rooms of the top 5 hotel chains combined (Phocuswright, 2018). Airbnb is the leading provider of travel accommodation within the sharing economy. The rapid growth of sharing economy and its dramatic impacts on various aspects of today's social economic system have stimulated growing public interest in the past 10 years (Cheng, 2016; Belarmino and Koh, 2020; Sutherland and Jarrahi, 2018; Aruan and Felicia, 2019). Scholarly research is devoting increasing attention to Airbnb from different angles and interesting directions. Popular topics have been analyzing Airbnb as a disruptive innovation (Guttentag, 2015; Guttentag and Smith, 2017), its impact on the hotel industry and the locals (Zervas *et al.*, 2017; Li *et al.*, 2019), examining travelers' motivations to use Airbnb (Amaro *et al.*, 2019; Guttentag *et al.*, 2018; Young *et al.*, 2017; Tussyadiah, 2015; Tussyadiah, 2016) and their behaviour

Received 18 June 2019
Revised 22 October 2019
19 November 2019
Accepted 24 November 2019

and preferences (Ranson and Guttentag, 2019), trust in hosts' and their reputation (Ert *et al.*, 2016; Baute-Díaz *et al.*, 2019), pricing issues (Wang and Nicolau, 2017; Chatterjee *et al.*, 2019), among others. These examples exemplify the wide range of topics that have been discussed regarding Airbnb research.

Sharing economy is an emerging research area that has attracted scholars' attention to identify research topics and future trends (Cheng, 2016; Dolnicar, 2019; Sutherland and Jarrahi, 2018). According to several authors (Kim *et al.*, 2015; Puschmann and Alt, 2016), the term sharing economy was first mentioned by Lessig in 2008 to describe "the collaborative consumption made by the activities of sharing, exchanging, and rental of resources without owning the goods" (Lessig, 2008, p. 143). Coincidentally or not, this was the year that Airbnb, one of the most popular sharing economy businesses, was launched. Numerous definitions have been proposed since then and many other terms are often used interchangeably with sharing economy, such as collaborative consumption or peer-to-peer (P2P) exchange. Regardless of the term used, these business models are characterized by no ownership transfer taking place and by relying on the internet and mobile applications to facilitate the transactions. Indeed, sharing goods and services have existed for a long time, but the networking that has been empowered by social media and community platforms, for example, have enabled consumers to easily share their goods or service with other people (Puschmann and Alt, 2016). Another reason for the success of this business model is that consumers have changed and prefer to access goods temporarily rather than owning things (Bardhi and Eckhardt, 2012).

The sharing economy has disrupted many mature industries, such as office supplies (e.g. coworking), transport (e.g. Zipcar, Getaround and Uber) and accommodation (e.g. HomeExchange and Sabbaticalhomes) (Eckhardt and Bardhi, 2015). In fact, Zervas *et al.* (2017) provide evidence that a 10 per cent increase in Airbnb listings is associated with a 0.39 per cent decrease in monthly hotel room revenue. Sharing accommodation, also referred to as P2P accommodation, allow people to rent out proprietaries or part of their properties (e.g. a room). They have attracted not only the demand side, for offering economic benefits (Hamari *et al.*, 2016), but also the supply side with hosts renting out spare rooms or houses and obtaining extra income. Indeed, the accommodation sector is where sharing economy platforms have one of the most significant presences (Petropoulos, 2016) and are the largest sector of the sharing economy in Europe, by total transaction value, above other popular P2P platforms such as transportation (Vaughan and Daverio, 2016). Although P2P accommodation has existed for many years, hosts did not have the internet technologies they have today to make their accommodations known to potential guests (Guttentag, 2015). Airbnb can be considered one of the most successful examples of P2P accommodation.

As a phenomenon that has had significant impacts and has received considerable attention from researchers, after 10 years of existence it is of paramount importance to analyze published articles addressing this topic. Recently there has been a growing interest in examining how sharing economy and P2P accommodation research has evolved using different approaches such as literature reviews (Altinay and Taheri, 2019; Cheng, 2016), critical reviews (Dolnicar, 2019; Belarmino and Koh, 2020), content analysis (Cheng and Edwards, 2019; Guttentag, 2019) and systematic reviews (Prayag and Ozanne, 2018; Dann *et al.*, 2019). While these studies have made important contributions in identifying Airbnb's thematic research categories (Guttentag, 2019; Dann *et al.*, 2019), the sharing economy's research areas (Cheng, 2016; Cheng and Edwards, 2019) and P2P accommodation sharing research themes (Prayag and Ozanne, 2018; Dolnicar, 2019), the present study extends and updates these literature reviews by using bibliometric indicators and mapping the conceptual structure of Airbnb research published in tourism and hospitality journals. Although systematic reviews of the sharing economy exist (Prayag and Ozanne, 2018; Dann *et al.*, 2019), with some differences regarding the period of analysis, research areas AQ: 2

(general or tourism journals) and the foci of the literature review, no prior evidence of an Airbnb literature review using bibliometric tools in the field of tourism and hospitality has been found.

The aim of this study is to examine Airbnb research using bibliometric methods. First, by using research performance analysis, which includes selected productivity and impact indicators, this study highlights and provides an updated overview of Airbnb research by revealing patterns in journals, articles and most influential authors and countries. Second, by mapping a co-word analysis, the study graphically illustrates how research themes have evolved and points out potential trends for future research. Thus, the findings of our study contribute to a deeper understanding of Airbnb research with valuable insights to researchers. With the overwhelming number of publications, an analysis of relevant research and the interconnections between studies is very valuable (Gurzki and Woisetschläger, 2017).

The structure of the paper is as follows. Section 2 describes the methodology applied in this study's analysis, followed by the discussion of the results for the activity indicators and the science mapping analysis in Section 3. Section 4 discusses the study's conclusions and limitations, and proposals for future research.

2. Research methodology

The methodological design for this study involves three phases:

1. the document source selection;
2. the definition of the variables to be analyzed; and
3. the bibliometric analysis.

The steps performed in each phase are detailed in the following sections.

2.1 Document source selection

The literature search and selection process followed the methodological suggestions of Cheng and Edwards (2019) and Palmatier *et al.* (2018). This systematic review specifically focuses on Airbnb published and in press from tourism and hospitality journals indexed in Scopus. This database has been used in other systematic reviews (Palomo *et al.*, 2017; Cheng and Edwards, 2019) and has been found to contain a greater number of journals and papers than Web of Science (Sánchez *et al.*, 2017). As the review only focuses on original, double-blind-reviewed research, it did not include book reviews, commentaries, conference papers, journal introductions and editorials. The data search was conducted including all articles and reviews until October 4th, 2019. Apart from "Airbnb" as a main keyword, sharing economy, collaborative economy/consumption, peer-to-peer/P2P accommodation and platform economy were also identified as main keywords in published related literature (Cheng, 2016; Dolnicar, 2019; Prayag and Ozanne, 2018; Guttentag, 2019; Dann *et al.*, 2019). Therefore, this study searched for and analyzed research on Airbnb together with one of the following keywords: sharing economy, collaborative economy/consumption, peer-to-peer/P2P accommodation and platform economy. The query performed in the "titles, abstract or keywords" sections produced 421 articles. Further screening was applied to these results and only "article or review" in the type of document, with source type "journal" and in "English" language were considered. As a result, 278 documents were identified. Finally, only articles published in tourism and hospitality journals were selected. These journals are recognized as leading journals in bibliometric studies in the tourism field (Koseoglu *et al.*, 2016). Using these search criteria, the study obtained 129 articles that formed the basis of the bibliometric analysis. The search and article count in the database was conducted on October 4th, 2019.

AQ: 3

2.2 Defining the variables to be analyzed in each publication

As the main objective of this article is to evaluate scientific production measured by publications in journals, following Palomo *et al.* (2017), the variables analyzed are related to authors' characteristics (name and country of the institutional affiliation), genesis of the research publications (year of publication), publications characteristics (journal and number of citations received by the article) and content characteristics (authors' keywords, keywords of the Scopus database and abstracts).

2.3 Bibliometric analysis

The bibliometric analysis allows evaluating, among others, the following areas in the realm of interest (Ye *et al.*, 2012):

- the intellectual structure and how Airbnb research has evolved over time;
- the scatter of journals publishing related articles and their impacts;
- the authors' productivity and collaboration index; and
- the conceptual structure of Airbnb research.

Quantitative analysis was then performed for related bibliometric analysis methods (Palomo *et al.*, 2017). A statistical multivariate analysis of all the documents' characteristics was performed with R software (Team, 2013; Palomo *et al.*, 2017; Aria and Cuccurullo, 2017). Furthermore, natural language processing techniques were used (e.g. stemming and *n*-grams detection) to analyze all the abstracts and keywords specified in the defined corpora of documents (Palomo and Montalvo, 2011). Crosstab tables were also used to measure relationships and assess the degree of association among the variables considered. Furthermore, following Palomo *et al.* (2017), well-known bibliometric set of laws (Price's, Lotka's and Bradford's) were analyzed to better understand the patterns that govern the scientific production on Airbnb in tourism and hospitality journals. Table I summarizes the objectives that will be covered by the bibliometric analysis. In the following section, these aspects will be evaluated in the Airbnb and tourism and hospitality context. T1

3. Results

This section addresses all the questions listed in Table I and presents the statistical methods used to calculate the different indicators. First, the genesis and evolution of Airbnb research productivity is presented. Second, a scatter of journals along with their characteristics is described. Third, an analysis of the authors' productivity and characterization is conducted. Finally, the research topic and the location of the research are analyzed.

3.1 Genesis and evolution of publications on Airbnb research

3.1.1 Number of articles and year of publication of the first article. The first paper addressing Airbnb research to be included in a peer-reviewed tourism and hospitality journal indexed in Scopus was by Guttentag (2015). Since this first publication until October 4th, 2019, the total number of documents published on Airbnb in Scopus database is 129, including 127 articles and 2 reviews. These documents were published by 270 authors, in 30 journals, with an average citation of 18.6 per document.

3.1.2 Evolution of the number of articles in Airbnb and Price's law. Research activity was measured by the number of publications. Figure 1 shows (blue line) the evolution of Airbnb publications since the first one in 2015. The initial stage, which spans 2015-2016, covers six articles. For the rest of the study, these two years are combined to form Period 1, the pre-expansion stage. The following years are considered separately to deeply analyze the F1

Table I Research objectives, questions and indicators

Objective	*Question*	*Indicator*
1. Genesis and evolution of publications on Airbnb research	When was the first article published on Airbnb?	1.1. Number of articles and year of publication of the first article
	What is the evolution of Airbnb articles over time?	1.2. Evolution of the number of articles in Airbnb and Price's law
2. Scatter of journals and journals' characteristics	Which are the tourism and hospitality journals publishing articles in Airbnb?	2.1. Number of journals and average of articles per journal
		2.2. Co-citation network of journals
	Which are the most relevant journals in Airbnb?	2.3. List of the most important journals in Airbnb research, according to the number of articles published
	Can journals be clustered based on the number of articles published in Airbnb?	2.4. Bradford's Law
3. Author and productivity characteristics	Who are the most prolific authors?	3.1. Most cited articles
	What is the level of citation in Airbnb research?	3.2. Most productive authors: number of publications and average citations received
	What is the level of collaboration among authors?	3.3. Collaboration index and authors' collaboration network
	Does the level of contribution of the authors follow a particular pattern?	3.4. Distribution of authorships – Lotka's law
4. Geographical distribution of the research	Which are the most prolific research affiliations of research in Airbnb?	4.1. Research affiliations of the research
	Which are the countries of affiliation of the authors publishing in Airbnb?	4.1. Countries of affiliation of the authors publishing in Airbnb
5. Content analysis using keywords	Which are the keywords that describe Airbnb research?	5.1. List of keywords based on Scopus, authors' keywords and abstract
	Can keywords be clustered based on their occurrence in articles published about Airbnb?	5.2. Co-occurrence networks of authors' keywords in the analyzed periods

evolution of research topics in Airbnb research. Therefore, this study distinguished the following periods:

- 2015-2016 with 6 documents;
- 2017 with 26 documents;
- 2018 with 34 documents; and
- January-October 2019 with 63 documents.

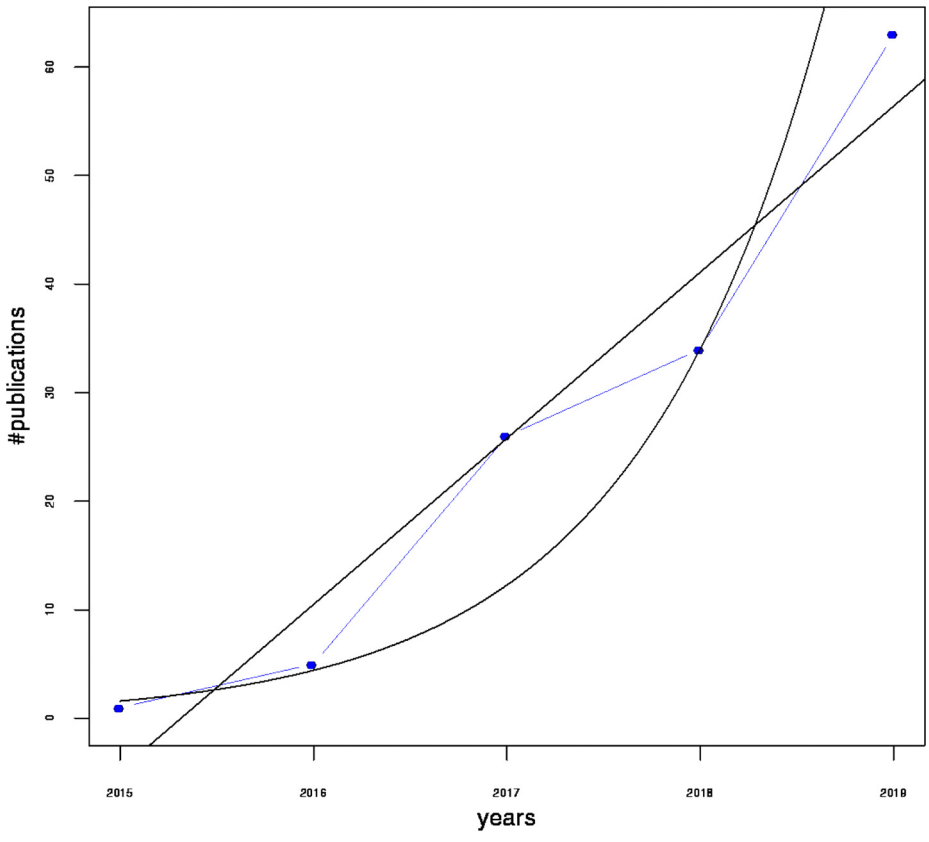
The evolution of the number of articles per year over a period of time is influenced by many factors, including the increased number of digital journals. In general, the increasing number of published papers characterizes the progression from "little science" to "big science". Based on bibliometric indicators (Palomo *et al.*, 2017), Price's law (1963) states that the productivity growth pattern fits an exponential function, i.e. the bigger the set of authors the faster the productivity grows. Figure 1 also presents the fitting models (black lines) for the publications in the considered period (see Table II for full details of the fitting). The proportion of variance explained by both models is high, being the linear model (adjusted-R^2 = 0.916) the highest. As the publications span a short period, almost five years, it is reasonable that the scientific production follows a linear growth; hence, it does not fit Price's law. However, as in other similar research fields at an early stage, it is expected that in the future it will grow exponentially; hence, fitting Price's law.

T2

3.2 Scatter of journals and journals' characteristics

The average citations per year of papers published in the first period (2015-2016) are 109.25 – mainly affected by the seminal article published in 2015 (Guttentag, 2015) that has

Figure 1 Evolution of scientific research on Airbnb in tourism and hospitality journals (2015-2019)



Note: Evolution of scientific research on Airbnb in tourism and hospitality journals (in blue) and the two fitted regression models (in black)

Table II Results of the fitting of two different models for the publication growth

Model	*Adjusted*-R^2	F-*test (d.f.)*	*Estimates (a,b)*	p
Linear	0.916	44.48 (3)	a = −30834.5, b = 15.30	0.007
Exponential	0.887	32.52 (3)	a = −2055.5, b = 1.02	0.011

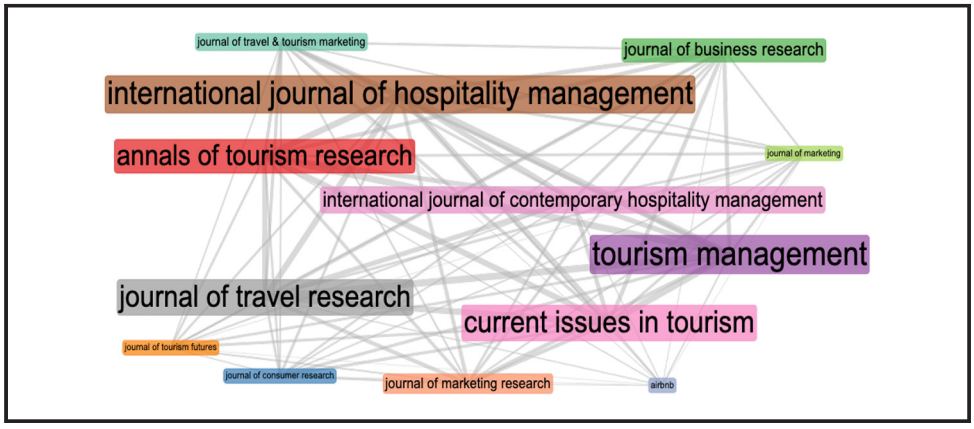
355 citations. In 2017, the mean citations per year are 15.75 and almost the same, 15.42, in year 2018. In year 2019, the average citation per article is 1.78.

3.2.1 Number of journals and average of articles per journal. To characterize the tourism and hospitality journals that have published more profusely in the field of Airbnb and provide insights on the core journals in the field, productivity was globally measured for the period 2015-2019. A total of 30 different journals have published the 129 documents, an average of 4.3 articles per journal. Almost half (14 journals) of the sources have published only 1 article and 13 journals (43.3 per cent) have published more than 2 articles (Table III). T3
This indicates a great diversification of the scientific production across the journals. The impact of the journals, measured through the h-index and total citations, is presented in Table III for those sources that have published more than two articles.

Table III Journals with more than three articles published in the field

Source	*Year start*	*# articles*	*h-index*	*Total citations*	*Zone*
International Journal of Hospitality Management	2016	28	10	458	Zone 1
International Journal of Contemporary Hospitality Management	2017	19	13	370	Zone 1
Tourism Management	2016	12	7	510	Zone 2
Annals of Tourism Research	2017	11	3	64	Zone 2
Journal of Travel and Tourism Marketing	2017	8	5	113	Zone 2
Journal of Travel Research	2016	7	3	203	Zone 2
Current Issues in Tourism	2015	5	3	422	Zone 2
Journal of Tourism Futures	2016	4	3	119	Zone 3
Tourism Economics	2018	3	1	17	Zone 3
Tourism Analysis	2018	3	1	2	Zone 3
Tourism Management Perspectives	2018	3	2	11	Zone 3
Journal of Hospitality and Tourism Technology	2018	3	1	9	Zone 3
Tourism Recreation Research	2017	3	2	15	Zone 3

Figure 2 Co-citation network of journals



3.2.2 Co-citation network of journals. The level of co-citation indicates the level of coupling of the journals regarding Airbnb research. Figure 2 shows that the main connected journals are: *The International Journal of Hospitality Management*, *Tourism Management*, *Annals of Tourism Research*, *Journal of Travel Research* and *Current Issues in Tourism*. Furthermore, the journals with larger font sizes in this Figure are the ones that have been more referenced. Figure 3 shows the cumulative growth of publications per journal over the period considered (only journals with more than three articles are shown).

3.2.3 Bradford's law. To analyze the distribution of articles among the different journals, Bradford's law (Bradford, 1948) of scattering (see Palomo *et al.*, 2017, for a complete description) was tested. The journals are distributed in 3 zones and the expected number of papers in each zone is 43 and, on average, the number of articles per journal in each zone is 28, 11.4 and 1.83, respectively. This implies that the *nucleus zone*, the highly productive on Airbnb, has 1 journal (3.33 per cent) with 28 articles, the second *zone* (moderately productive) has 5 journals (16.67 per cent) with 57 articles, and the third *zone* has 24 journals (80 per cent) with 44 articles. As the relationship of each *zone* [1:5:24] does not fit into Bradford's original distribution, the Leimkuhler model (Leimkuhler, 1980; Egghe, 1990) was tested to redefine the zones. In this case, the number of journals in the *nucleous* (r_0) and Bradford's multiplier (k) are 1.65 and 3.68, respectively. Based on the Leimkuhler model, Table IV presents the modified distribution of the journals into the three *zones*, the

Figure 3 Cumulative growth over time of journals with more than three articles

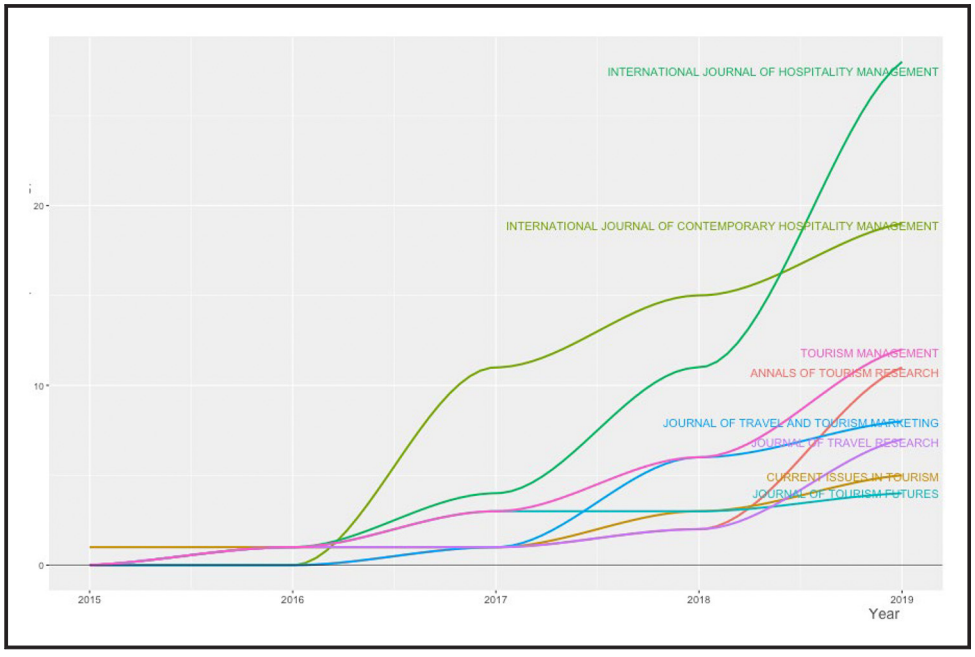


Table IV Bradford's law (Leimkuhler model) scattering of journals in Airbnb

Zone	*#Journals*	*%Journals*	*#Articles*	*Expected #articles per journal*	*k**
1	2	6.67	47	23.5	
2	6	20.00	47	7.83	3
3	22	73.33	39	1.59	3.3
Total	30	100	129		

number of journals in the *nucleus* is 2 and Bradford's distribution can be rewritten in terms of the multiplier 2: 2·3.68: $2 \cdot 3.68^2$ with error $(36.46 - 30)/30 = 0.215$. These results reveal that although a similar number of articles are distributed among the three clusters (approximately 47 papers) the limited number of journals affects the error, and currently Airbnb fits reasonably to the Bradford's law, under the Leimkuhker model.

3.3 Author and productivity characteristics

3.3.1 Most-cited articles. The h-index of the productivity in this field is 24 (as there are 24 articles with at least 24 citations). Table V shows these articles. The first two papers stand out as they have had over 80 citations per year. T5

3.3.2 Most productive authors: number of publications and average citations received. In Table VI, the most productive authors are presented along with their impact indexes (h-index, g-index and m-index), the total citation number, the number of publications and the year that started to publish in the field. Cheng and Guttentag appear as top authors, with six papers each. However, Guttentag clearly stands out with the highest number of citations (462) and the highest g-index. Tussyadiah also stands out as the author with the highest h-index and the second author with more citations regarding Airbnb research (335). T6

Table V List of the 24 most-cited papers

Ranking	*Paper*	*Total citations (TC)*	*TC per year*
1	Guttentag D., 2015, *Curr Issues Tour*	355	88.8
2	Ert E., 2016, *Tour Manage*	260	86.7
3	Tussyadiah I.P., 2016, *J Travel Res*	125	41.7
4	Tussyadiah I.P., 2016, *Int J Hosp Manage*	105	35
5	Wang D., 2017, *Int J Hosp Manage*	95	47.5
6	Oskam J., 2016, J *Tour Futur*	94	31.3
7	Gutirrez J., 2017, *Tour Manage*	93	46.5
8	Guttentag D.A., 2017, *Int J Hosp Manage*	73	36.5
9	Guttentag D., 2018, *J Travel Res*	61	61
10	Liang S, 2017, *Tour Manage*	59	29.5
11	Tussyadiah I.P., 2017, *J Travel Tour Mark*	47	23.5
12	Tussyadiah I.P., 2018, *Curr Issues Tour*	45	45
13	Mody M.A., 2017, *Int J Contemp Hosp Manage*	42	21
14	Camilleri J., 2017, *Int J Contemp Hosp Manage*	38	19
15	Karlsson L., 2017, *Ann Tour Res*	37	18.5
16	Xie K., 2017, *Int J Contemp Hosp Manage*	34	17
17	Mao Z., 2017, *Int J Contemp Hosp Manage*	34	17
18	Chen Y., 2017, *Int J Contemp Hosp Manage*	34	17
19	So K.K.F., 2018, *Tour Manage*	33	33
20	Gibbs C., 2018, *J Travel Tour Mark*	31	31
21	Priporas C.V., 2017, *Int J Contemp Hosp Manage*	31	15.5
22	Paulauskaite D., 2017, *Int J Tour Res*	28	14
23	Xie K.L., 2017, *Int J Hosp Manage*	28	14
24	Gunter U., 2018, *Tour Manage*	25	25

Note: List of papers in format author, year and journal abbreviation

Table VI The most productive and cited authors (total and years)

Author	*h-index*	*g-index*	*m-index*	*Total citations*	*#Papers*	*Publication year start*
Cheng M.	2	4	1	24	6	2016
Guttentag D.	4	6	0.8	462	6	2015
Mody M.	2	3	2	13	5	2019
Tussyadiah I.P.	5	5	1.25	335	5	2016
Xie K.L.	4	5	1.33	86	5	2017
Suess C.	3	4	1	53	4	2017
Chen Y.	1	3	0.33	35	3	2017
Dolnicar S.	1	3	0.33	39	3	2017
Gunter U.	2	3	1	42	3	2018
Hanks L.	1	2	1	7	3	2019
Koo C.	2	3	1	10	3	2018
Lehto X.	2	3	0.67	50	3	2017
So K.K.F.	2	3	1	36	3	2018
Viglia G.	3	3	1.5	30	3	2018
Volgger M.	1	2	0.5	5	3	2018

3.3.3 Collaboration index and authors' collaboration network. Another bibliometric indicator related to the authors is the collaboration index which measures the average number of co-authors per document. The 270 authors have published, on average, 0.48 documents with 2.1 authors per document. There are 15 single-authored documents and 12 authors that have a single-authored document (the other 258 authors have multi-authored documents); this leads to a collaboration index of 2.26, therefore, each document, on average, is signed by 2-3 authors.

3.3.4 Distribution of authorships – Lotka's law. To identify the productivity patterns among authors, Lotka's law says that there is an inverse square ratio on author productivity where a

single publication is contributed by a big set of authors and a limited selected group publishes more prolifically, accounting for most of the scientific production in the field. Table VII presents the productivity of the 270 authors. There are six levels of contribution, with researches that authors from one to six papers. In the lowest level of contribution, 214 authors published a single paper (either as single author or as co-author) and, on the opposite side, 2 authors have published 6 papers. The authors with more contributions on Airbnb are: Guttentag (6), Cheng (6), Tussyadiah (5), Mody (5), Xie (5) and Suess (4). Finally, there are 12 authors (4.44 per cent) that have never collaborated with other authors and the individual publication's average citation is 26.2. T7

Whether or not the pattern of productivity of Airbnb during 2015-2019 verifies Lotka's law (Lotka, 1926; Poiter, 1981) was tested for $y_x = C \cdot x^{-n}$, x = 1,. . .l, where n corresponds to the relative number of authors at each productivity level x up to the constant C, and l is the level with most contributions ($l = 6$ in the case of Airbnb). Following Palomo *et al.* (2017), although Lotka initially proposed $C = 0.6$ and $n = 2$, there is a better fit with $C = 0.793$ and $n = 2.884$. Table VIII presents the proportion of authors based on Lotka's law. T8

The root-mean-square deviation (RMSD) of the error in estimating the number of authors is 5.07 and in the proportion of authors is 0.0188. After applying a Kolmogorov–Smirnov two-sample goodness-of-fit test with the expected values in Table VIII, the maximum deviance between the observed and estimated values is 0.0445 and the critical value at the $\propto = 0.01$ level is 0.98. Therefore, it is possible to conclude that the data fits Lotka's law. Put differently, a significant number of authors produce single contributions and constitute the largest group, while a smaller number of authors contribute with more than one paper.

3.4 Affiliations and geographical distribution of the research

In terms of affiliations of the authors, Table IX presents the institutions where the authors produced more than three articles. In addition, it shows the countries where Airbnb research has been published. The USA stands out with the highest number of publications, with 79 publications, China (28), Australia (27), UK (24), Canada (15), Spain (10), Austria (9), South Korea (9), Germany (8), Italy (8), New Zealand (5), Cyprus (4) and Netherlands (4). T9

Table VII Distribution of authorships

#Authors	*Level of contribution*	*Average citations*	*Total papers*
214	1	17.6	102
41	2	16.9	57
9	3	9.4	27
1	4	13.2	4
3	5	28.1	17
2	6	43	13

Table VIII Proportion of authors based on Lotka's law

Proportion of authors (%)	*Level of contribution*	*Expected #authors*	*Error #authors*	*Expected proportion (%)*
79.3	1	214	0.00	79.3
15.2	2	29	12.01	10.7
3.3	3	9	0.00	3.3
0.4	4	4	−2.93	1.4
1.1	5	2	0.94	0.76
0.7	6	1	0.78	0.45
			RMSD = 5.07	RMSD = 1.88

Table IX Institutions based on affiliation of the authors that have produced more than three articles

Affiliations	*Country*	*Articles*
Curtin University	USA	11
The Hong Kong Polytechnic University	Hong Kong	8
Ryerson University	Canada	7
University of Denver	USA	7
University of South Carolina	USA	7
Boston University	USA	6
Florida State University	USA	5
Kyung Hee University	South Korea	5
Modul University Vienna	Austria	5
Southeast University	China	5
The University of Queensland	Australia	5
Bournemouth University	UK	4
Oklahoma State University	USA	4
Purdue University	USA	4
University of Central Florida	USA	4
Washington State University Vancouver	USA	4
Catholic University of Eichsttt-Ingolstadt	Germany	3
Shenzhen University	China	3
Temple University	USA	3
University of Houston	USA	3
University of Otago	New Zealand	3
University of Portsmouth	UK	3
Wuhan University	China	3

3.5 Content analysis using keywords

F4 *3.5.1 List of keywords in total.* Figure 4(a) presents a tag cloud with the 50 most frequent keywords associated by Scopus, and Figure 4(b) presents a tag cloud with the 50 most frequent authors' keywords. Based on natural language processing techniques (Montalvo *et al.*, 2018 and Manning *et al.*, 2014), the distribution of the most frequent words in the abstracts of the articles are presented in Figure 4(c).

F5 *3.5.2 Co-occurrence networks of authors' keywords.* The authors' keywords network allows to connect the different keywords and establish the most frequent relationships (Figure 5).

F6 3.5.2.1 Period 2015-2016. In period 2015-2016, the research themes related to Airbnb and sharing economy can be classified in three groups based on the co-occurrence analysis of

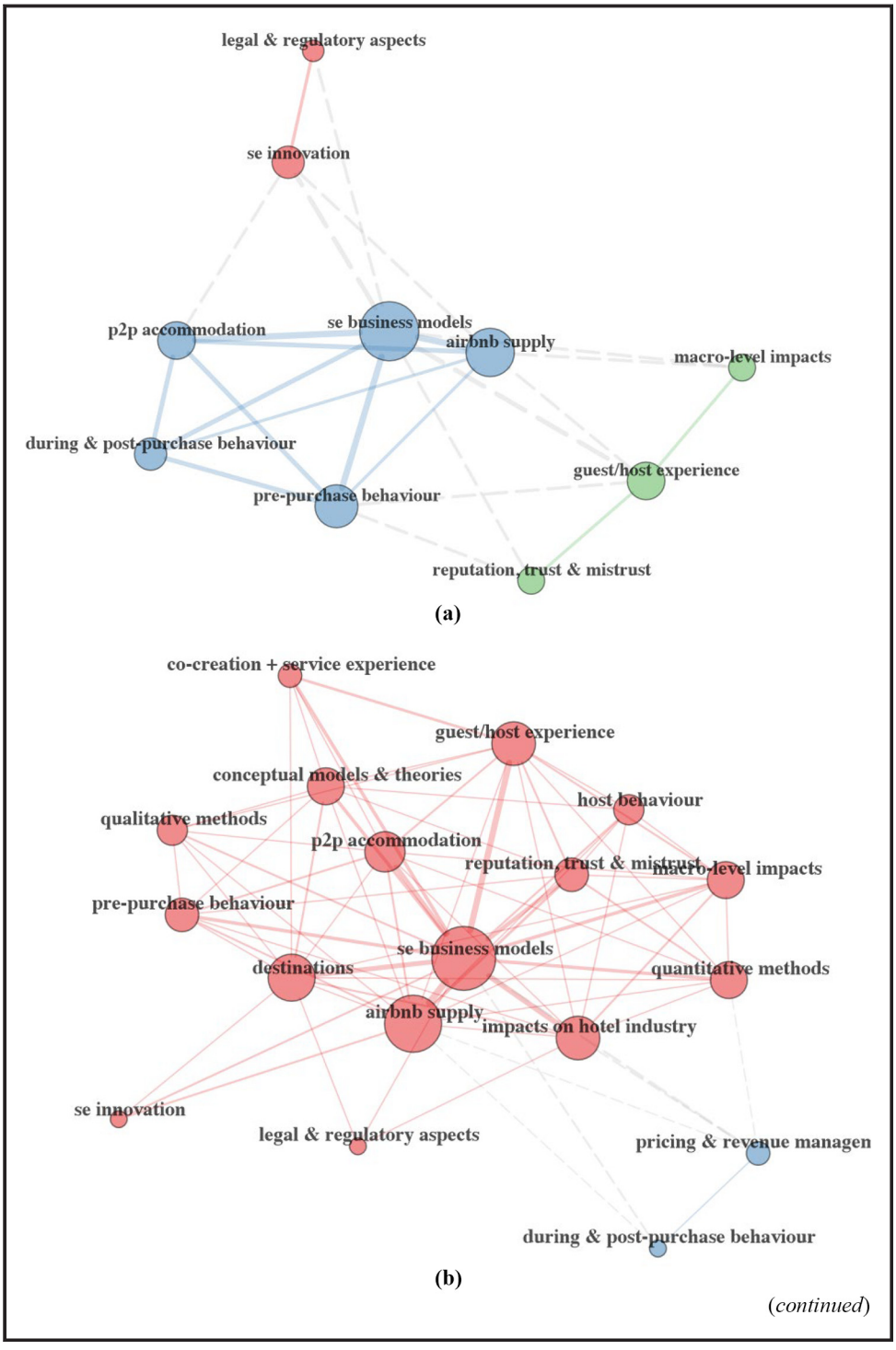
Figure 4 Tag cloud with keywords assigned by Scopus, authors and abstracts

(a) (b) (c)

Notes: (a) keywords associated by Scopus; (b) authors' keywords; (c) natural language processing of the abstracts

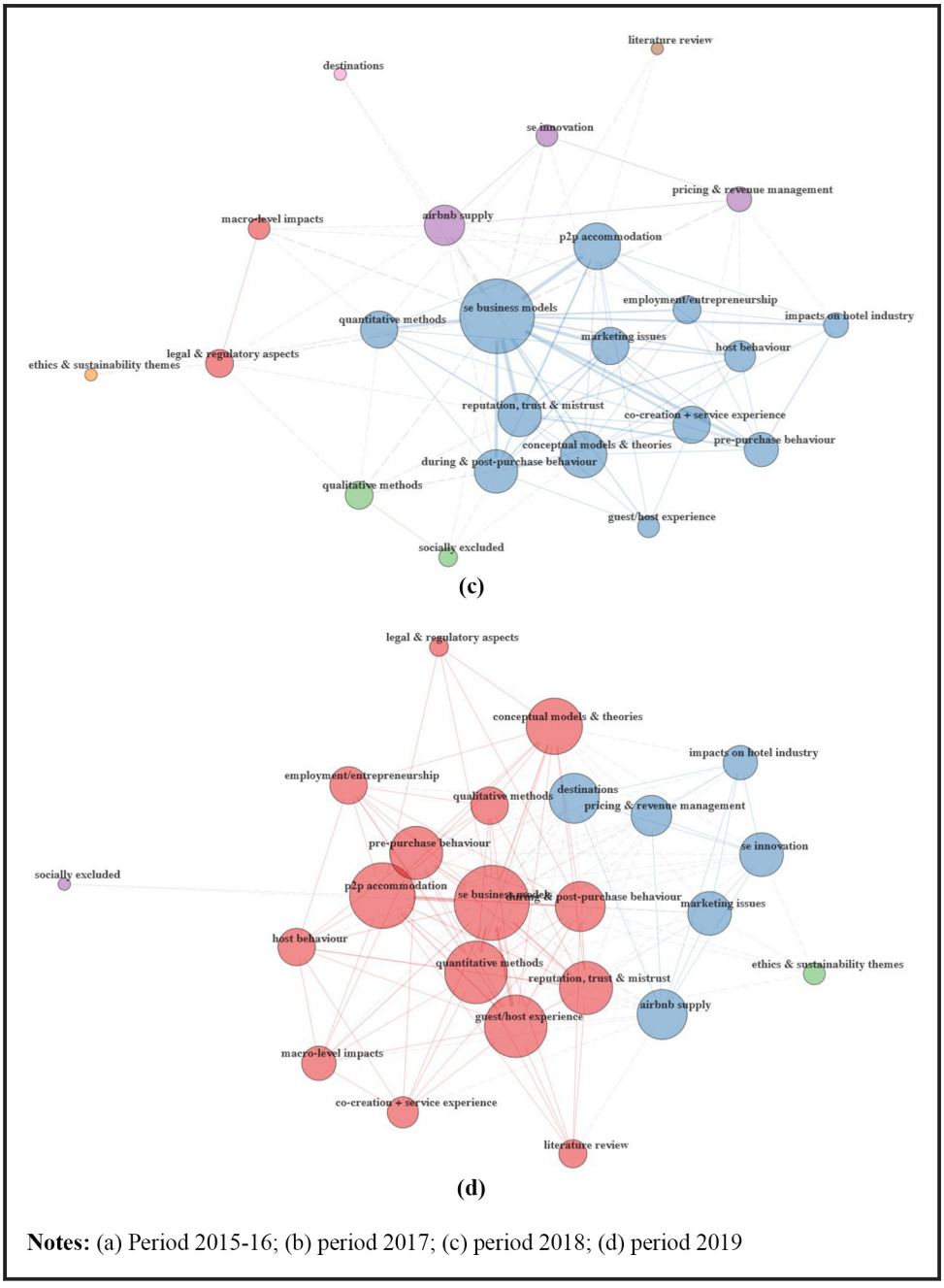
authors' keywords [Figure 5(a)]. The first group (in blue) refers to sharing economy business models (that clusters keywords such as collaborative consumption), Airbnb supply, P2P accommodation (with keyword such as Airbnb supply, P2P platforms, P2P networks and P2P accommodations) and consumer behavior topics, including

Figure 5 Co-occurrence network of authors' keywords



(*continued*)

Figure 5



Notes: (a) Period 2015-16; (b) period 2017; (c) period 2018; (d) period 2019

pre-purchase behavior (e.g. traveler preferences) and during/post-purchase behavior (e.g. repurchase intention). The second group (green color) includes research topics related to macro-level impacts (that cluster keywords such as over-tourism, mass-tourism, city tourism and tourism impact); guest/host experience (that clusters keywords such as authenticity and memorable); and reputation, trust and mistrust (that cluster keywords such as ratings, review volume and online reputation). The third group focuses sharing economy innovation (e.g. disruptive innovation) and legal and regulatory aspects.

3.5.2.2 Period 2017. In the period 2017, the research themes related to Airbnb and sharing economy can be classified in two main groups based on the co-occurrence analysis of authors' keywords [Figure 5(b)]. The first group (in red) includes the topic of sharing economy business models and P2P accommodation (e.g. couch surfing); Airbnb supply (e.g. hospitality exchange network, room-sharing service, Airbnb listings and accommodation attributes); reputation, trust and mistrust (perceived trust and consumer review); host behavior; guest–host experience (host–guest framework and online friendships); co-creation and service experience; pre-purchase behavior (holidaymakers, motivation, past experience, travel personality and tripographics); qualitative methods (e.g. fuzzy-set qualitative comparative analysis); conceptual models and theories (e.g. chaos and complexity theory); quantitative methods (e.g. business analytics, social network analysis and text mining); and impacts on hotel industry and destinations. The second group refers to themes about pricing and revenue management (with authors' keywords such as price model and hedonic price) and during and post-purchase behavior (e.g. customer valuation).

3.5.2.3 Period 2018. In period 2018, the research themes related to Airbnb and sharing economy can be classified in seven main groups based on the co-occurrence analysis of authors' keywords [Figure 5(c)]. The larger group refers to research topics such as sharing economy business models (e.g. accommodation-sharing, collaborative economy and non-traditional accommodation); P2P accommodation (e.g. P2P accommodation, P2P accommodation platform, informal economy and couch surfing); reputation, trust and mistrust (e.g. trust, trust formation, online trust, superhost, trustworthiness, popularity, personal reputation, e-word of mouth, online customer reviews and shopping risks); conceptual models and theories (e.g. cost theory, Aristoteles rhetorical theory, transaction cost theory and complexity theory); marketing issues (e.g. segmentation, brand personality, self-marketing and persuasion); pre-purchase consumer behavior (e.g. travel behavior, reveling preferences, self-efficacy and decision-making); during and post-purchase consumer behavior (e.g. involvement, customer satisfaction, customer loyalty, hedonic value and utilitarian value); co-creation and service experience (e.g. value co-creation); quantitative methods (e.g. binary response index models, big data, structural equation modeling [SEM], text mining, support vector machine and demand modeling); impacts on hotel industry (e.g. hotels); host behavior (e.g. Airbnb hosts, host characteristics and host self-presentation); guest–host experience (e.g. memorable hospitality experience, social interaction and perceived authenticity); and employment/entrepreneurship (e.g. entrepreneurship, micro-entrepreneurship, e-micro-entrepreneurship and tourism entrepreneurship). The second group refers to studies on Airbnb supply (e.g. transient vacation rental); sharing economy innovation (e.g. innovation, disruptive innovation and diffusion of innovations); and pricing and revenue management (e.g. revenue management, dynamic pricing, willingness to pay a premium price, accommodation pricing and hedonic pricing). The third group refers to topics about macro-level impacts (e.g. residents and city tourism) and legal and regulatory aspects (e.g. regulation, politics of scale and digital discrimination). The fourth group refers to qualitative studies (with keywords such as co-stakeholder analysis, discourse analysis and FSQCA) and socially excluded consumers (e.g. disabled tourist and orthopedic). A fifth group refers to literature review studies of sharing economy (e.g. systematic review and multi-level perspective). Another group refers to studies with case studies on tourism destinations. Finally, another topic of Airbnb and sharing economy refers to the ethics and sustainability theme with authors' keywords such as ethics.

3.5.2.4 Period 2019. In period 2019, the research themes related to Airbnb and sharing economy can be classified into four main clusters [Figure 5(d)]. The larger group refers to topic about sharing economy business models, with authors' keywords such as collaborative economy, Uber mobile application; P2P accommodation (e.g. second home, P2P accommodation and P2P platform); guest–host experience (e.g. authenticity, psychological distances, psychological closeness, social presence, home feeling, psychological closeness, intercultural service encounter, empathy, social distance and

intercultural service encounter); reputation, trust and mistrust (trust, online trust, online reviews, crime pattern, rating score determinants, reputation, superhost, perceived risks, personal reputation and reviewing behavior); conceptual models and theories (e.g. innovation diffusion theory, social-technical theory, cognitive appraisal theory, chaos and complexity, resource-based view, technology acceptance model and epistemic culture); quantitative methods (e.g. k-means, decision tree, random forest, SEM, convolutional neural networks, regional heterogeneity, variable importance, stochastic frontier, GWR, mixed method, impact range performance analysis and impact asymmetry analysis); qualitative methods (text classification, text clustering, FSQCA and content analysis); pre-purchase behavior (e.g. motivations); during and post-purchase behavior (e.g. customer-perceived value, positive emotions, post-failure loyalty, customer loyalty, customer satisfaction and behavioral intentions); host behavior (e.g. host); employment/entrepreneurship (e.g. micro-entrepreneurship); legal-regulatory aspects; macro-level impacts; co-creation and service experience (e.g. value co-creation, value facilitation and customer participation); and literature review. The second group refers to topics about sharing economy innovation (e.g. smart tourism, information and communication technologies), Airbnb supply (e.g. Airbnb listing, amenities, rental platform, lodging, P2P rental, short-term rental, P2P lodging and site attributes); marketing issues (e.g. Aristotle's appeals, brand love, brand loyalty and service behavior); pricing and revenue management (e.g. hedonic prices, revenue optimization, room pricing, revenue management, behavioral pricing, price fairness, pricing and spatial hedonic pricing models); case studies on tourism destinations (e.g. impact perception, guest-community contact, tourism impacts and residents attitudes); and impacts on hotel industry. The third and fourth cluster refers to the topic of socially excluded markets and ethics and sustainability themes (e.g. well-being, sustainability and sustainable development goals).

AQ: 4

4. Conclusion

The purpose of this paper was to examine Airbnb research trends by conducting a bibliometric analysis, 10 years after this P2P accommodation platform appeared. The bibliometric analysis of the 129 papers published in tourism and hospitality journals, and indexed by Scopus, has shed some light on Airbnb research in tourism and hospitality journals, which is of greatest interest to researchers. These types of studies help researchers to identify the most productive and influential papers (Merigó *et al.*, 2015; Mulet-Forteza *et al.*, 2018) and to examine the development of a certain field (Hall, 2011). Furthermore, it is also useful to editorial boards of journals in recognizing authors and institutions with potential (Mulet-Forteza *et al.*, 2018).

Some of the main conclusions can be summarized into the following:

4.1 Genesis and evolution of publications on Airbnb research

The first Airbnb paper published and indexed by Scopus was published in 2015, seven years after Airbnb was founded. Since then, there has been a strong increase in the number of publications. However, according to Price's law, it has not reached the exponential growth stage yet, anticipating an igniting area of research.

4.2 Scatter of journals and journals' characteristics

The results comply with the Bradford's law, i.e. the ratio of related articles published in journals follows a known pattern. The *International Journal of Hospitality Management* and the *International Journal of Contemporary Hospitality Management* are the most used journals by the authors to publish Airbnb research. A total of 47 of the 129 articles (36 per cent) were published in just these 2 journals.

4.3 Author and productivity characteristics

A small number of researchers (around 20 per cent of the authors) have written more than one paper addressing Airbnb, confirming Lotka's law, and a large number of authors contribute with a single authorship, accounting for a significant number of papers written. Guttentag is the most influential author, with six papers published, with the highest number of citations (462) and the highest g-index. Tussyadiah is another influential author with the highest h-index and the second author with the most citations.

4.4 Geographical distribution of the research

Most Airbnb research comes from authors and universities in the USA.

4.5 Content analysis using authors' keywords

Using co-occurrence analysis, this study analyzes the evolution of the keywords that authors choose to describe their articles. Considering previous literature review on sharing economy and the authors' keywords in the 129 articles published in hospitality and tourism journals, research findings show the diversity of topics related to Airbnb and sharing economy: consumer behavior (motivations, customer satisfaction, customer loyalty, travel behavior, emotions and perceived value); guest/host experience (authenticity, empathy and host–guest interactions); Airbnb supply (listings, lodging and short-term rental); reputation, trust and mistrust (online trust, review rating and shopping risk); quantitative and qualitative methods; pricing and revenue management; impacts on destinations; legal and regulatory aspects; and ethics and sustainability. In the first period of analysis (2015-2016), the main focus of research publications was the sharing economy as a new business model and the Airbnb supply, followed by the analysis of consumer behavior, guest–host interactions, macro-level impacts and legal and regulations issues. The second period of analysis (2017) continues with the analysis of the previous period, while introducing three relevant topics in the study of Airbnb research: value co-creation, pricing issues and the impact on the hotel industry. The third period of analysis (2018) continues with the analysis of the themes studied in previous years, but there are new topics such as entrepreneurship, impacts on destinations and sustainability issues. In the last period, although the analysis of previous topics is maintained, there is more emphasis on conceptual models and theories applied to Airbnb research and higher attention to the guest–host experience and trust issues.

In sum, sharing economy is an emerging research area and there are still underexplored topics such as ethics and sustainability, legal and regulatory issues and socially excluded consumers. In addition, there is a growing interest on special issues on Airbnb research in academic journals. Therefore, it could be interesting to conduct further systematic review using a longitudinal perspective.

One of the limitations of the study was that the data source was limited to only journals in hospitality/tourism fields. Thus, papers on Airbnb published in journals from other fields were not considered. Future research could consider including journals from other fields and analyze the relationships between different research areas. Further research might also use social network analysis as a tool for analyzing interconnectivity of each set of contributions (Litterio *et al.*, 2017).

References

Airbnb (2019), "Fast facts", available at: https://press.airbnb.com/fast-facts/ (accessed 23 August 2019).

Amaro, S., Andreu, L. and Huang, S. (2019), "Millennials' intentions to book on Airbnb", *Current Issues in Tourism*, Vol. 22 No. 18, pp. 2284-2298.

Aria, M. and Cuccurullo, C. (2017), "Bibliometrix: an R-tool for comprehensive science mapping analysis", *Journal of Informetrics*, Vol. 11 No. 4, pp. 959-975.

Aruan, D.T.H. and Felicia, F. (2019), "Factors influencing travelers' behavioral intentions to use P2P accommodation based on trading activity: Airbnb vs Couchsurfing", *International Journal of Culture, Tourism and Hospitality Research*, Vol. 13 No. 4, doi: 10.1108/IJCTHR-03-2019-0047.

Bardhi, F. and Eckhardt, G.M. (2012), "Access-based consumption: the case of car sharing", *Journal of Consumer Research*, Vol. 39 No. 4, pp. 881-898.

Baute-Díaz, N., Gutiérrez-Taño, D. and Díaz-Armas, R. (2019), "Interaction and reputation in Airbnb: an exploratory analysis", *International Journal of Culture, Tourism and Hospitality Research*, Vol. 13 No. 4, doi: 10.1108/IJCTHR-10-2018-0149.

Belarmino, A. and Koh, Y. (2020), "A critical review of research regarding peer-to-peer accommodations", *International Journal of Hospitality Management*, Vol. 84, p. 102315.

Bradford, S.C. (1948), *Documentation*, Crosby, Lockwood, London.

Chatterjee, D., Dandona, B., Mitra, A. and Giri, M. (2019), "Airbnb in India: comparison with hotels, and factors affecting purchase intentions", *International Journal of Culture, Tourism and Hospitality Research*, Vol. 13 No. 4, doi: 10.1108/IJCTHR-05-2019-0085.

Cheng, M. (2016), "Sharing economy: a review and agenda for future research", *International Journal of Hospitality Management*, Vol. 57, pp. 60-70.

Cheng, M. and Edwards, D. (2019), "A comparative automated content analysis approach on the review of the sharing economy discourse in tourism and hospitality", *Current Issues in Tourism*, Vol. 22 No. 1, pp. 35-49.

Dann, D., Teubner, T. and Weinhardt, C. (2019), "Poster child and guinea pig – insights from a structured literature review on Airbnb", *International Journal of Contemporary Hospitality Management*, Vol. 31 No. 1, pp. 427-473.

Dolnicar, S. (2019), "A review of research into paid online peer-to-peer accommodation: launching the annals of tourism research curated collection on peer-to-peer accommodation", *Annals of Tourism Research*, Vol. 75, pp. 248-264.

Eckhardt, G.M. and Bardhi, F. (2015), "The sharing economy isn't about sharing at all", *Harvard Business Review*, available at: https://hbr.org/2015/01/the-sharing-economy-isnt-about-sharing-at-al

Egghe, L. (1990), "Applications of the theory of Bradford's law to the calculation of Leimkuhler's law and to the completion of bibliographies", *Journal of the American Society for Information Science*, Vol. 41 No. 7, pp. 469-492.

Ert, E., Fleischer, A. and Magen, N. (2016), "Trust and reputation in the sharing economy: the role of personal photos in Airbnb", *Tourism Management*, Vol. 55, pp. 62-73.

Gurzki, H. and Woisetschläger, D.M. (2017), "Mapping the luxury research landscape: a bibliometric citation analysis", *Journal of Business Research*, Vol. 77, pp. 147-166.

Guttentag, D. (2015), "Airbnb: disruptive innovation and the rise of an informal tourism accommodation sector", *Current Issues in Tourism*, Vol. 18 No. 12, pp. 1-26.

Guttentag, D. (2019), "Progress on Airbnb: a literature review", *Journal of Hospitality and Tourism Technology*, Vol. 10 No. 4, doi: 10.1108/JHTT-08-2018-0075.

Guttentag, D. and Smith, S.L. (2017), "Assessing Airbnb as a disruptive innovation relative to hotels: substitution and comparative performance expectations", *International Journal of Hospitality Management*, Vol. 64, pp. 1-10.

Guttentag, D., Smith, S., Potwarka, L. and Havitz, M. (2018), "Why tourists choose Airbnb: a motivation-based segmentation study", *Journal of Travel Research*, Vol. 57 No. 3, pp. 342-359.

Hall, C.M. (2011), "Publish and perish? Bibliometric analysis, journal ranking and the assessment of research quality in tourism", *Tourism Management*, Vol. 32 No. 1, pp. 16-27.

Hamari, J., Sjöklint, M. and Ukkonen, A. (2016), "The sharing economy: why people participate in collaborative consumption", *Journal of the Association for Information Science and Technology*, Vol. 67 No. 9, pp. 2047-2059.

Kim, J., Yoon, Y. and Zo, H. (2015), "Why people participate in the sharing economy: a social exchange perspective", Paper presented at the Pacis 2015.

Koseoglu, M.A., Rahimi, R., Okumus, F. and Liu, J. (2016), "Bibliometric studies in tourism", *Annals of Tourism Research*, Vol. 61, pp. 180-198.

Leimkuhler, F.F. (1980), "An exact formulation of Bradford's law", *Journal of Documentation*, Vol. 36 No. 4, pp. 285-292.

Lessig, L. (2008), *Remix: making Art and Commerce Thrive in the Hybrid Economy*, Penguim, New York, NY.

Li, J., Hudson, S. and So, K.K.F. (2019), "Exploring the customer experience with Airbnb", *International Journal of Culture, Tourism and Hospitality Research*, Vol. 13 No. 4, doi: 10.1108/IJCTHR-10-2018-0148.

Litterio, A.M., Nantes, E.A., Larrosa, J.M. and Gómez, L.J. (2017), "Marketing and social networks: a criterion for detecting opinion leaders", *European Journal of Management and Business Economics*, Vol. 26 No. 3, pp. 347-366.

Manning, C., Surdeanu, M., Bauer, J., Finkel, J., Bethard, S. and McClosky, D. (2014), "The Stanford core NLP natural language processing toolkit", *Proceedings of 52nd Annual Meeting of the Association for Computational Linguistics: System Demonstrations*, pp. 55-60.

Merigó, J.M., Gil-Lafuente, A.M. and Yager, R.R. (2015), "An overview of fuzzy research with bibliometric indicators", *Applied Soft Computing*, Vol. 27, pp. 420-433.

Montalvo, S., Palomo, J. and de la Orden, C. (2018), "Building an educational platform using NLP: a case study in teaching finance", *Journal of Universal Computer Science*, Vol. 24 No. 10, pp. 1403-1423.

Mulet-Forteza, C., Martorell-Cunill, O., Merigó, J.M., Genovart-Balaguer, J. and Mauleon-Mendez, E. (2018), "Twenty-five years of the journal of travel & tourism marketing: a bibliometric ranking", *Journal of Travel & Tourism Marketing*, Vol. 35 No. 9, pp. 1201-1221.

Palmatier, R.W., Houston, M.B. and Hulland, J. (2018), "Review articles: purpose, process, and structure", *Journal of the Academy of Marketing Science*, Vol. 46 No. 1, pp. 1-5.

Palomo, J., Figueroa-Domecq, C. and Laguna, P. (2017), "Women, peace and security state-of-art: a bibliometric analysis in social sciences based on SCOPUS database", *Scientometrics*, Vol. 113 No. 1, pp. 123-148.

Petropoulos, G. (2016), "An economic review on the collaborative economy", available at: www.europarl.europa.eu/RegData/etudes/IDAN/2016/595358/IPOL_IDA(2016)595358_EN.pdf

Phocuswright (2018), "Airbnb: a look back and a look ahead", available at: www.phocuswright.com/Travel-Research/Consumer-Trends/Airbnb-A-Look-Back-and-a-Look-Ahead

Poiter, W.G. (1981), "Lotka's law revisited", *Library Trends*, Vol. 30 No. 1, pp. 21-39.

Prayag, G. and Ozanne, L.K. (2018), "A systematic review of peer-to-peer (P2P) accommodation sharing research from 2010 to 2016: progress and prospects from the multi-level perspective", *Journal of Hospitality Marketing & Management*, Vol. 27 No. 6, pp. 649-678.

Puschmann, T. and Alt, R. (2016), "Sharing economy", *Business & Information Systems Engineering*, Vol. 58 No. 1, pp. 93-99.

Ranson, P. and Guttentag, D. (2019), "Please tidy up before leaving': nudging Airbnb guests toward altruistic behavior", *International Journal of Culture, Tourism and Hospitality Research*, Vol. 13 No. 4, doi: 10.1108/IJCTHR-06-2019-0101.

Sánchez, A.D., Del Río, M.D.L.C. and García, J.Á. (2017), "Bibliometric analysis of publications on wine tourism in the databases Scopus and WoS", *European Research on Management and Business Economics*, Vol. 23 No. 1, pp. 8-15.

Sutherland, W. and Jarrahi, M.H. (2018), "The sharing economy and digital platforms: a review and research agenda", *International Journal of Information Management*, Vol. 43, pp. 328-341.

Tussyadiah, I.P. (2015), "An exploratory on drivers and deterrents of collaborative consumption in travel", in Tussyadiah, I. and Inversini, A. (Eds), *Information & Communication Technologies in Tourism 2015*, Springer International Publishing, Cham, pp. 817-830.

Tussyadiah, I.P. (2016), "Factors of satisfaction and intention to use peer-to-peer accommodation", *International Journal of Hospitality Management*, Vol. 55, pp. 70-80.

Vaughan, R. and Daverio, R. (2016), "Assessing the size and presence of the collaborative economy in Europe", available at: http://ec.europa.eu/DocsRoom/documents/16952/attachments/1/translations

Wang, D. and Nicolau, J.L. (2017), "Price determinants of sharing economy based accommodation rental: a study of listings from 33 cities on Airbnb.com", *International Journal of Hospitality Management*, Vol. 62, pp. 120-131.

Ye, Q., Song, H. and Li, T. (2012), "Cross-institutional collaboration networks in tourism and hospitality research", *Tourism Management Perspectives*, Vol. 2, pp. 55-64.

Young, C.A., Corsun, D.L. and Xie, K.L. (2017), "Travelers' preferences for peer-to-peer (P2P) accommodations and hotels", *International Journal of Culture, Tourism and Hospitality Research*, Vol. 11 No. 4, pp. 465-482.

Zervas, G., Proserpio, D. and Byers, J. (2017), "The rise of the sharing economy: estimating the impact of Airbnb on the hotel industry", *Journal of Marketing Research*, Vol. 54 No. 5, pp. 687-705.

Further reading

Cheng, M. and Zhang, G. (2019), "When Western hosts meet Eastern guests: Airbnb hosts' experience with Chinese outbound tourists", *Annals of Tourism Research*, Vol. 75, pp. 288-303.

Cheng, X., Fu, S., Sun, J., Bilgihan, A. and Okumus, F. (2019), "An investigation on online reviews in sharing economy driven hospitality platforms: a viewpoint of trust", *Tourism Management*, Vol. 71, pp. 366-377.

Ertz, M. and Leblanc-Proulx, S. (2018), "Sustainability in the collaborative economy: a bibliometric analysis reveals emerging interest", *Journal of Cleaner Production*, Vol. 96, pp. 1073-1085.

Mody, M., Suess, C. and Lehto, X. (2019), "Going back to its roots: can hospitableness provide hotels competitive advantage over the sharing economy?", *International Journal of Hospitality Management*, Vol. 76, pp. 286-298.

Pao, M.L. (1985), "Lotka's law: a testing procedure", *Information Processing and Management*, Vol. 21 No. 4, pp. 305-320.

Corresponding author

Luisa Andreu can be contacted at: luisa.andreu@uv.es

AUTHOR QUERIES

AUTHOR PLEASE ANSWER ALL QUERIES

AQau— Please confirm the given-names and surnames are identified properly by the colours.
■=Given-Name, ■= Surname
The colours are for proofing purposes only. The colours will not appear online or in print.

AQ1— Please check affiliation for "Enrique Bigne" and "Suzanne Amaro" and provide Department/School/Faculty details.

AQ2— Please note that following citations are missing from reference list. Please provide complete reference for: Altinay and Taheri, 2019; Team, 2013; Palomo and Montalvo, 2011; Lotka, 1926.

AQ3— Please note that the following sentence is unclear as given. Please consider revising the sentence for clarity: "This systematic review specifically focuses on Airbnb published and in press from tourism and hospitality journals indexed in Scopus."

AQ4— Please provide the spelled-out forms of the following abbreviations: GWR; FSQCA.