



# Foundations of hospitality performance measurement research: A co-citation approach

Ruggero Sainaghi<sup>a,\*</sup>, Mehmet Ali Köseoglu<sup>b</sup>, Francesca d'Angella<sup>a</sup>, Issaka Lawerh Tehheh<sup>c</sup>

<sup>a</sup> Università IULM, Department of Business, Law, Economics, and Consumer Behaviour, Via Carlo Bo, 1, I-20143 Milan, Italy

<sup>b</sup> School of Hotel and Tourism Management, The Hong Kong Polytechnic University, Kowloon, Hong Kong

<sup>c</sup> Business School, Yıldırım Beyazıt University, Ankara, Turkey

## ARTICLE INFO

### Keywords:

Co-citation analysis  
Network cluster analysis  
Hotel performance measurement  
VOSviewer software program  
Hospitality

## ABSTRACT

Studies related to hospitality performance measurement have expanded and matured, leading to diversity in the themes and topics of papers published on the subject. Though many papers have highlighted the trends, clusters, and topics, the present article is the first known academic study attempting to explore the architectural structure of this research stream. Using a database with 56,163 citations, the authors categorized the empirical evidence into four different time periods and an overall representation. Consequently, this paper adopts a co-citation approach to explore the number of articles published in the field of hotel performance studies. Finally, using the VOSviewer software program, this article identifies the most popular cross-cited journals and authors. The study focuses only on the foundation papers identified using co-citations and network cluster analysis, thereby revealing the architectural structure of this literature stream and contributing to the literature on hotel performance measurement.

## 1. Introduction

Performance lies at the heart of strategic management (Bititci et al., 2012) and plays a pivotal role for many approaches and disciplines (Choong, 2014). Given its centrality in the strategy and management field, the concept of performance has changed over time and has been variously defined (Neely, 2005) and differently measured in concrete research projects (Kennerley and Neely, 2002). During the 1980s, increasing dissatisfaction with traditional accounting and financial measures emerged (Chakravarthy, 1986; Venkatraman and Ramanujam, 1986).

The need to align the performance measurement systems with the increasing changing environment has also interested the field of hospitality, where problems with measuring firm results created two related research streams: performance measurement and determinants of performance. The first area of inquiry is primarily based on technical disciplines, such as management (Chen and Chang, 2012), accounting (Sainaghi, 2011), finance (Kim and Jang, 2012), and efficiency (Assaf and Agbola, 2014). Studies frequently develop new performance measurement systems, signal the limitations of current performance indicators, or propose new dimensions of results (Brander Brown and McDonnell, 1995; Denton and White, 2000; Harris and Mongiello,

2001; Phillips, 1999; Sainaghi, 2010a; Yilmaz and Bititci, 2006). Determinants of performance is a second area of research. While performance is the central goal of the first research stream and represents the dependent variable, the heart of such studies includes the factors (determinants or antecedents) able to influence firm performance (Atkinson and Brander Brown, 2001; Bergin-Seers and Jago, 2007; Mia and Patiar, 2001; Sainaghi et al., 2013).

The first stream (performance measurement) can be visualized as a small, medieval city well-protected by walls, where only a few, specialized researchers have access to the topics and are able to develop and propose new systems (Sainaghi et al., 2018). By contrast, the second area of inquiry (determinants of performance) is wide and increasing in terms of published papers (Sainaghi, 2010a). In fact, these studies employ many different independent variables, such as competitive advantage (Sharma and Christie, 2010), price strategies (Abrate and Viglia, 2016), customer satisfaction (Mohsin and Lengler, 2015), social capital (Sainaghi and Baggio, 2014), service quality (Giritlioglu et al., 2014), social media (Bore et al., 2017), brand management (Wang and Chung, 2015), environmental strategies (Pereira-Moliner et al., 2015), corporate social responsibility (Zhu et al., 2014), human resource management (Lee et al., 2015), and external variables, such as macroeconomic indicators (Dewally et al., 2013), effectiveness of

\* Corresponding author.

E-mail addresses: [ruggero.sainaghi@iulm.it](mailto:ruggero.sainaghi@iulm.it) (R. Sainaghi), [MehmetAli.Koseoglu@polyu.edu.hk](mailto:MehmetAli.Koseoglu@polyu.edu.hk) (M.A. Köseoglu), [francesca.dangella@iulm.it](mailto:francesca.dangella@iulm.it) (F. d'Angella), [155203411@ybu.edu.tr](mailto:155203411@ybu.edu.tr) (I. Lawerh Tehheh).

<https://doi.org/10.1016/j.ijhm.2018.12.006>

Received 8 June 2018; Received in revised form 29 November 2018; Accepted 4 December 2018

0278-4319/ © 2018 Elsevier Ltd. All rights reserved.

**Table 1**  
Previous literature reviews published in H&T field.

Paper	Journal	Sample size	Sample selection	Databases	Years considered	Method	Object	Google citations (09/14/18)
Sainaghi (2010a)	IJCHM	152	Keywords: hotel & performance	Science direct; Business source complete; EbscoHost EJS	20	Content analysis	It distinguishes between "performance measurement systems" and "determinants of results" research streams. The study identifies 14 contributors pertaining to the first group (Table 1) and classifies dependent and independent variables of 138 articles belonging to "determinants of performance" studies	156
Sainaghi (2010b)	TR	138	Keywords: hotel & performance	Science direct; Business source complete; Emerald	20	Content analysis	The article develops a meta-analysis of performance literature and identifies three different research styles, primarily based on continental geographic basis (European, American and Asiatic style). It reports key characteristics and trends for each style	27
Jang and Park (2011)	IJCHM	113	N.A.	Four leading hospitality journals	20	Content analysis	The purpose of this study is to understand hospitality finance research through content analysis. It identifies subject areas, methodologies, and citations from hospitality finance papers	49
Tsai, Pan & Lee (2011)	IJCHM	98	Keywords: 19 pre-identified keywords	ABI/INFORM database via ProQuest	12	Content analysis	The purpose of this paper is to review and synthesize published contemporary hospitality financial management research and provide future research directions. The major categories of papers include hospitality financing, investing, dividend policy, financial condition, and performance	39
Sainaghi et al. (2013)	IJHM	138	Keywords: hotel & performance	Seven leading tourism and hospitality journals	20	Content analysis	It applies the four balanced scorecard perspectives to the performance literature and identifies topic segmentation and evolutionary trends. Dependent variables are articulated based on the use of financial or non-financial indicators	95
Janković and Krivačić (2014)	T&HM	29 (Based on Table 1, 2, 3)	N.A.	N.A.	10 (Based on Table 1, 2, 3)	Content analysis	The purpose of this paper is to determine the development of hotel environmental accounting practices, based on previous research and literature review. It provides an overview of current research	14
Park and Jang (2014)	IJCHM	24	N.A.	Four leading hospitality journals; six accounting journals; 3 financial journals	17	Content analysis	The purpose of this study is to present a brief overview of hospitality finance/accounting research and to propose the utility of interdisciplinary research in the this field	17
Phillips and Moutinho (2014)	ATR	77	Keywords: strategic & planning	Seven leading tourism and hospitality journals	19	Content analysis	The study provides a holistic view of hospitality and tourism strategic planning literature and shows trends. It develops a segmentation based on method, topics and strategy	68
Pnevmatikoudi and Stavrinooudis (2016)	EJTR	79	Keywords: hotel & performance	Major databases	29	Content analysis	The paper studies and classifies the different performance variables and measures of hotels, recorded in international scientific journals. It introduces a codification of performance indicators distinguishing between 10 different categories of financial and 10 non-financial indicators	6
Sainaghi, et al. (2017)	TM	978	Keywords: hotel & performance	Scopus	19	Computer-aided text analysis (CATA)	It performs a meta-analysis of tourism performance measurement by synthesizing tourism and hospitality research. The paper presents a framework based on three variables: unit of analysis, approaches and disciplines; it reports trends	34
Altin et al. (2018)	IJCHM	N.A.	Keywords based on Bititci et al. (2012) and Choong (2014), plus	Ten leading tourism and hospitality journals - Journal of Citations Reports	Any time restriction	Content analysis	The study provides acritical literature review based on three dimensions: progress on ontological and epistemological issues, on the purpose of performance	0

(continued on next page)

Table 1 (continued)

Paper	Journal	Sample size	Sample selection	Databases	Years considered	Method	Object	Google citations (09/14/18)
Sainaghi et al. (2018)	IJHM	734	Keywords: hotel & performance “hotel performance”, “tourism performance”	Scopus	20	Network, cluster analysis, co-citation	measurement and on the emerging contexts. Findings reveal that the performance management literature in the hospitality and tourism industry has not had any concrete structure It develops a literature review of hotel performance studies, provides insights by adopting a cross-citation network approach. Two research questions are defined. First question focuses on the most cross-cited papers and journals, and identifies salient trends. Second question considers who are the most popular cross-cited and citing authors	1

destination positioning (Sainaghi and Baggio, 2017), or destination events (Sainaghi and Mauri, 2018).

It is not surprising, therefore, that several recent literature reviews, mentioned below, have defined “hotel performance” as a relevant research stream for the hospitality industry. This area of inquiry includes hundreds of papers. A recent study published by Sainaghi et al. (2018) is based on a gross sample of 1515 articles, while a previous review by Sainaghi et al. (2017) includes 978 papers.

The development of determinants studies has opened the first research stream (performance measurement systems) to many researchers, making this area of inquiry an increasingly popular topic. The recent rise in the overall number of reviews published on this topic also confirms the area’s growth (see Table 1).

Given the relative novelty of the hotel performance research stream, previous studies have focused their attention only on the visible part of the literature. In fact, they identify trends, clusters, and topics developed by the published papers of performance research stream. A clear gap has emerged, however, as no one study has explored the architectural structure of this research stream. Using a metaphor, the hospitality performance measurement can be thought of as a house. This study identifies the foundation papers and the key pillars, represented by the proposed clusters. This paper, based on the co-citation approach, contributes to filling this gap by exploring the reference structure of a large sample of hotel performance studies.

Two research questions guide the inquiry. The first focuses on the foundation studies (identified using cluster analysis), while the second identifies the top-cited journals (2.A) and when these papers were published (2.B). The foundation studies are the most co-cited papers that have acquired a central position in their clusters.

**Research question 1.** What are the main foundation studies of hotel performance? What are the trends within them?

**Research question 2.A** What are the top-cited journals?

**Research question 2.B** Where and when were these foundation studies published?

## 2. Literature review

This chapter discusses the relevance of two research streams: the hotel performance literature and its related findings (2.1), and the bibliometric approach later used to develop the two research questions (2.2).

### 2.1. Hotel performance studies

Hotel performance is a wide and growing area of inquiry, including both performance measurement studies and determinants of results. Table 1 introduces the previous literature reviews, promoting understanding regarding the existing knowledge in this field. Twelve studies, covering nine years of research, from 2010 to 2018, are presented. The authors identified these papers by considering the authors’ experience, analyzing the references of previous papers, and using keywords in the Scopus and Web of Science database.

These works are deeply rooted in the hotel performance streams and are built around a content analysis approach, with the partial exception of Sainaghi et al. (2018), which is based on network theory and a cross-citation approach. Given their ties with the hotel industry, the *International Journal of Contemporary Hospitality Management (IJCHM)* and *International Journal of Hospitality Management (IJHM)* account for the publication of most of the studies, with seven and two of the twelve total papers, respectively.

The reviews reported in Table 1 aim to organize the literature. Sainaghi (2010a) distinguishes between performance measurement research streams and determinants of performance. Concerning the last topic, a classification of 138 studies is proposed, using the balanced scorecard model – the well-known performance measurement framework developed by Kaplan and Norton (1992). Sainaghi (2010b)

identifies three different research styles, showing the methodological differences between papers on performance in the European, American, and Asiatic traditions. Jang and Park (2011) explore finance in the hospitality field, revealing important differences related to areas of inquiry, methodologies, and citations. Tsai et al., (2011) synthesize published, contemporary hospitality financial management research and provide future research directions. Sainaghi et al. (2013) trace trends in the performance literature and articulate independent variables of performance determinants using the balanced scorecard model. Janković and Krivačić (2014) focus on hotel environmental accounting practices, providing an overview of current studies. Park and Jang (2014) examine studies published in leading hospitality, accounting, and finance literature. They propose an interdisciplinary approach, mixing these three different disciplines (hospitality, accounting, and finance). Phillips and Moutinho (2014) concentrate their analysis on strategic planning, an adjacent topic of performance measurement. They reveal some trends and develop a segmentation of strategic planning studies based on method, topics, and strategy. Pnevmatikoudi and Stavrinoudis (2016) classify performance indicators and produce codification distinguishing between ten different categories of financial and non-financial indicators. Sainaghi et al. (2017) perform meta-analysis of performance studies based on three variables: the unit of analysis (destinations; clusters; firms), approaches (competitiveness; efficiency; metrics in use; performance measurement systems; tourism productivity), and disciplines (accounting and financial management; economics; strategy). The study reports some trends related to the year of publication, top ten journals, leading journals, tourism and non-tourism journals, and number of citations. Altin et al. (2018) provide a critical literature review based on three dimensions: progress in ontological and epistemological issues, the purpose of performance measurement, and the emerging contexts. Finally, Sainaghi et al. (2018) explore trends in performance measurement using cross-citation and network analysis. Their study identifies the most popular cross-cited journals and authors.

After the short presentation of each paper included in Table 1, it is interesting now to identify some cross issues: i) the sources used to select the sample; ii) the sample size; iii) the publication year; iv) the method used to analyze the paper; v) the main topic analyzed. Concerning the information sources used to select the sample, the previous reviews can be classified mainly in two groups. The first set includes the majority of studies (six) that have used keywords researched in some databases (Sainaghi, 2010a, 2010b; Tsai et al., 2011; Pnevmatikoudi and Stavrinoudis, 2016; Sainaghi et al., 2017, 2018). In contrast, three studies focus their attention on some leading journals (Jang and Park, 2011; Sainaghi et al., 2013; Phillips and Moutinho, 2014). There are other papers that use mixed methods (database and leading journals) (Altin et al., 2018) or have not specified the criteria used (Janković and Krivačić, 2014; Park and Jang, 2014). The focus on leading journals reduces the sample size. In fact, the three studies based on this information source span from 77 (Phillips and Moutinho, 2014) to 138 (Sainaghi et al., 2013). In contrast, the use of a large database (i.e. Scopus) increases the sample size. The minimum amount is 79 (Pnevmatikoudi and Stavrinoudis, 2016), while the maximum is 978 (Sainaghi et al., 2017). The year of publication shows that the majority of papers were published between 2010 and 2011 (four studies), while in the following biennial (2013–2014) the studies are three; the 2012 is not included because no paper appeared. In the last biennial (2016–2017) two articles were published. There is not a clear correlation between the publication year and the sample size. In fact, the average number of articles included in the three studies of 2010 is 145, while the mean of 2014 is 51 and in 2016 is 79. However, in the last two years the maximum number is recorded (978 in 2017, 734 in 2018). The method used to analyze the papers is a key variable to understanding the sample size and, more generally, the ability of researchers to consider the wider literature. In fact, the reviews based on manual content analysis (ten studies, with the exception of Sainaghi

et al., 2017 and Sainaghi et al., 2018) show a considerably lower amount of papers (102) than the studies based on computer-aided text analysis (978) and network cluster analysis (734). This variable clearly segments the previous reviews that are based on only a few studies, showing the inevitable shortcomings of the papers based on manual content analysis. Finally, the main topic analyzed distinguishes between studies focused on intellectual structure (co-citation or architectural structure) and reviews focused on topics segmentation (as clusters or trends). All the papers reported in Table 1 explore topics segmentation, propose clusters of hotel performance topics, or identify trends. No one study has explored the architectural structure. This knowledge gap is incorporated into the first research question and represents the most important focus of the present paper.

## 2.2. Bibliometric and co-citation approach

Scientific publications include bibliographic information, such as author affiliations, keywords, and references. Researchers have used this information to identify the evolution in intellectual structure, social structure, and conceptual structures of a discipline or field, and to evaluate research outputs (Nerur et al., 2008). This method of research is called a bibliometric study, which is “the quantitative study of physical published units, or of bibliographic units, or of the surrogates for either” (Broadus, 1987, p. 376). Bibliometric studies are complementary to traditional methods of review and structured literature review, increasing the objectivity of these studies (Zupic and Cater, 2015). Three techniques—review, evaluative, and relational—are used to conduct bibliometric studies (Koseoglu et al., 2016). Review techniques, such as structured literature reviews, systematic literature reviews, or meta-analysis deal with the assessment of a given field by focusing on bibliographies or output content examined via the qualitative approach (Zupic and Cater, 2015). Evaluative techniques investigate the impact of output or ranking of related output bibliographies (Benckendorff and Zehrer, 2013; Hall, 2011). Finally, relational techniques look at the patterns of co-occurrence in bibliographies, such as authors (co-authorship analysis), keywords (co-word analysis), and references (co-citation or bibliographic coupling analysis) among a field’s output (Koseoglu et al., 2016).

In the current study, co-citation analysis to determine the relationships among references (Pilkington and Lawton, 2014) was utilized to address the research questions. The results obtained from co-citation analysis help to clarify the changes in a discipline’s intellectual structure over time, decipher which belongs to the same school, paradigm, or theory, and to identify the most influential research—or the central, peripheral, or bridging studies of the field—since output references represent the theoretical and empirical foundations of the material (Acedo et al., 2006; Zupic and Cater, 2015). The validity, power, and usefulness of co-citation analysis has been proven in many studies (see Batistić et al., 2017; Zhao et al., 2017). Further details related to how co-citation is utilized are provided in the methodology section.

In hospitality and/or tourism literature, the number of bibliometric studies has increased over time. Several articles have utilized review and evaluative techniques; however, limited papers (Benckendorff, 2009; Hu and Racherla, 2008; Li et al., 2017; Racherla and Hu, 2010; Ye et al., 2013) have used relational techniques to explore the intellectual, contextual, and social structure of the field (Koseoglu et al., 2016). Recently, co-citation analysis has been used to visualize the intellectual structure of hospitality management (García-Lillo et al., 2016), tourism crisis and disaster management research (Jiang et al., 2017), social media research in hospitality (Leung et al., 2017), and human resources in hospitality management (García-Lillo et al., 2018). However, as indicated by Koseoglu et al. (2016) and Zarezadeh, Benckendorff and Gretzel (2018), more bibliometric studies with relational techniques are needed to improve understanding and help researchers with theory development.



### 3. Methodology

#### 3.1. Sample selection

The sample used in the present study was defined according to previous reviews published in the field. As reported in Table 1, a longitudinal approach is widely used and papers are identified using keywords in leading journals or in large databases. The focus on databases rather than a few leading journals assures wider coverage, as shown by recent studies, such as Sainaghi et al. (2017) and Sainaghi et al. (2018). This last literature review (Sainaghi et al., 2018) researched hotel and performance keywords in the Scopus database, selecting 1515 papers from the last 20 years (1996–2015). After an analytical inspection, the net sample consisted of 734 papers. The authors of the present paper asked Sainaghi et al. (2018) for their reference list, and the present study is based on this sample.

In order to explain how the sample was identified, three criteria were applied: i) keywords; ii) journals; iii) year of publication. Two keywords were used: hotel and performance, as suggested in some reviews reported in Table 1. Concerning the journals, as previously discussed, the reviews that focused only on leading journals significantly reduced the sample size. For this reason, the present article has used a large database (Scopus). The empirical study was carried out at the beginning of August 2016, and these keywords (“hotels and performance”) were researched in abstract, title, and keywords. This approach is widely used in review and bibliometric papers (Gross et al., 2013; Hua, 2016; Sourouklis and Tsagdis, 2013; Tsai et al., 2011). Only journals published in English were included in the sample. The time horizon embraces 20 years, from 1996 to 2015, inclusively. This choice is coherent to some previous reviews realized in this field, as reported in Table 1. Four time periods were identified in order to map trends: first slice 1996–2000, second slice 2001–2005, third slice 2006–2010, and fourth slice 2011–2015).

Overall, these choices assure a wide coverage of the literature. Using these three criteria, the gross sample includes 1155 papers. All the papers were analyzed to verify the relationship with the “hotel performance” research stream. Only articles that explored determinants of results (Sainaghi, 2010a) or, on the other hand, proposed performance measurement systems (Phillips, 1999; Phillips and Louvieris, 2005) were included in the final sample. This choice is consistent with previous studies (i.e. Tsang and Hsu, 2011; Yoo et al., 2011). The final sample includes 734 papers.

This choice assures both reliability and comparability. Reliability is guaranteed, as the sample is identified by keywords, and future studies can use these to update the papers in question. Comparability is assured from the architectural structure perspective (present study). Additionally, it is possible to compare what emerges from analyzing the sample related to cluster of topics (as reported in Sainaghi et al., 2018).

#### 3.2. Co-citation approach

Co-citation analysis deals with how output references are interconnected where they have been considered together (Fernandes et al., 2017) to highlight any similarities or differences in the content of the two documents (Koseoglu et al., 2015). These reference-based relationships generate networks depicting the positions of the references in the field (Serrat, 2017). Fig. 1 (created with the VOSviewer software program) provides an example that considers seven articles' references. For example, Reference 1 and Reference 3 appear together in Articles 1, 2, and 3. This shows that the co-citation number is three for these two references. Based on these co-citations, the number of articles within the network is drawn. The thickness of the lines and the sizes of the circles or nodes show who occupies a strong position within the network, while the color of the nodes and the lines highlight the incidence of clustering within the network (Van Eck and Waltman, 2010). Consequently, this visualization of the networks can help researchers clarify

the strength of the ties within the entire network and the positioning of a given citation within the field (Koseoglu, 2016).

This study's database contained 56,163 citations. To gain a clear understanding from the co-citation analysis, the authors established cutoff points for each period to select the most influential papers, as suggested by Leung et al. (2017) and García-Lillo et al. (2016). Thus, this study selected the studies (references) that had been cited at least 15 times in the overall period. The analysis considered cited academic journal articles. To understand the intellectual structure of the studies, the authors conducted co-citation analysis for each period by using the smart local moving (SLM) algorithm as a method for cluster analysis (Waltman and Van Eck, 2013). The networks generated from the co-citation analysis for each period were visualized. In the visualization generated by the VOSviewer software program, the size of the circle shows the normalized number of citations for the articles. The thickness of the lines shows the strength of the co-citation ties. The link between and proximity of two cited articles indicates the co-citation relationship between them. The color of the circle indicates the cluster with which the cited article is associated (Leung et al., 2017). The visualization (grey-colored) is based on the Fruchterman–Reingold algorithm, which is “a force-directed method using both attractive and repulsive forces in order to place the nodes of a network over a 2D or 3D space” (Silva et al., 2013). Each circle was labeled with the code given by this study's researchers for each cited article. The code list is provided in Appendix 1.

Some network measures were calculated in order to catch additional details about the relevance of each paper. In particular, Appendix 2, 3, and 4 reports the first 40 papers for each period ranked in the first 40 positions according to each single measure. The indices calculated are three and represent well-known network indicators: i) betweenness; ii) degree centrality; iii) closeness. The measure of betweenness represents a bridge or channel between several citations or references: When a reference has more channels, it has more power (Zhang, 2015). Degree centrality is the most common and simplest measurement for representing strong collaboration by references. Yet, despite its commonness and simplicity, degree centrality is very important for academic evaluation insofar as it gauges the strength of collaboration of a reference by looking at the total number of collaborations it has had. Hence, according to degree centrality, when a reference has a strong collaboration network, it will tend to be more active and influential in the literature (Ye et al., 2013). Closeness explains the proximity of references within the literature (Zhang, 2015).

### 4. Results

The empirical findings are reported and articulated in two Section: §4.1 focuses on co-citation clusters and develops the first research question (What are the main foundation studies of hotel performance? What are the trends within them?), while §4.2 identifies the relevant journals and discusses the second research question, analyzing the leading cited journal (What are the top-cited journals?) and the trends (Where and when were these foundation studies published?).

#### 4.1. Co-citation clusters

The first research question aims to identify the foundation papers of the hospitality performance literature. Empirical evidence is articulated in four different time periods: 1996–2000; 2001–2005; 2006–2010; 2011–2015, and an overall representation (1996–2015). For each temporal slice, the co-citation network is reported, the clusters are identified, and the most relevant papers are shown. These results are reported in Appendix 1 and are listed in the references of this paper.

##### 4.1.1. The embryonic phase: 1996–2000

Fig. 2 reports the full network of this period (Panel A), while Panel B shows the most cited studies. During the embryonic phase, 32 papers

Articles

Article 1	Article 2	Article 3	Article 4	Article 5	Article 6	Article 7
Reference 1	Reference 1	Reference 10	Reference 11	Reference 1	Reference 10	Reference 1
Reference 2	Reference 11	Reference 2	Reference 12	Reference 2	Reference 12	Reference 2
Reference 3	Reference 3	Reference 15	Reference 3	Reference 13	Reference 3	Reference 3
Reference 4	Reference 16	Reference 16	Reference 14	Reference 4	Reference 14	Reference 4
Reference 5	Reference 5	Reference 5	Reference 5	Reference 5	Reference 15	Reference 5
Reference 6	Reference 17	Reference 6	Reference 16	Reference 6	Reference 6	Reference 6
Reference 7	Reference 18	Reference 18	Reference 7	Reference 17	Reference 17	Reference 7
Reference 8	Reference 8	Reference 8	Reference 18	Reference 18	Reference 18	Reference 8
Reference 9	Reference 19	Reference 19	Reference 9	Reference 9	Reference 9	Reference 9
Reference 10	Reference 20	Reference 20	Reference 10	Reference 10	Reference 20	Reference 10

Simple Co-citation Network of the articles

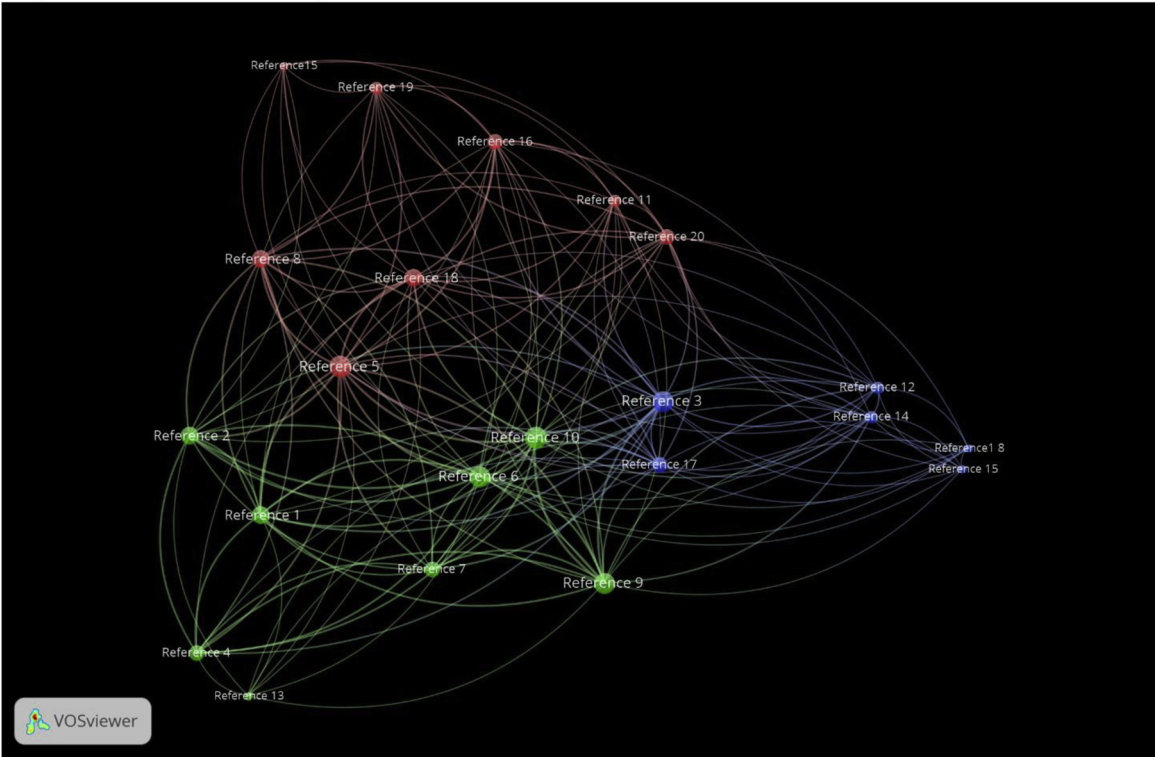


Fig. 1. Co-citation network for seven articles as an example.

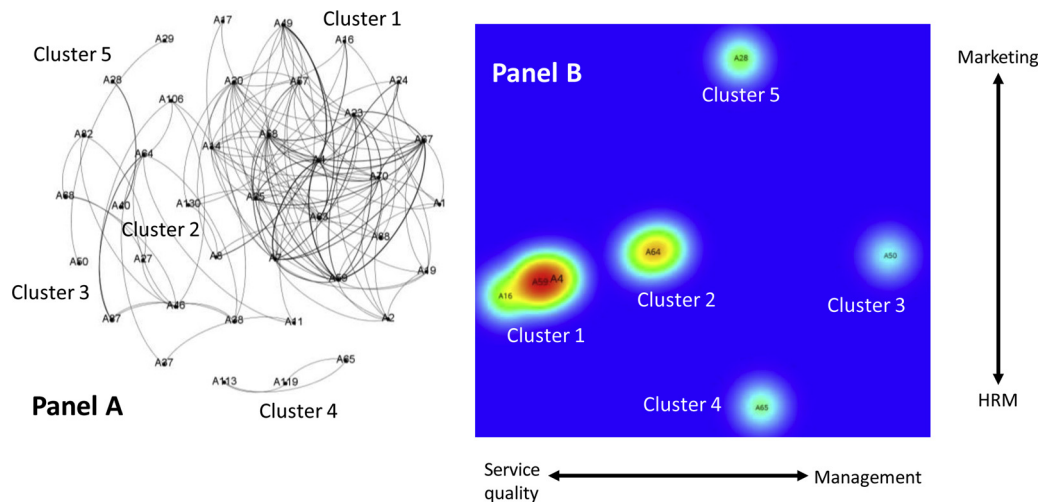


Fig. 2. Co-citation network: 1996-2000.

were published. Consequently, the co-citation network (Fig. 2, Panel A) appears sparse (39). Focusing on the most relevant articles (Panel B), an important observation concerns the journals where these papers were published, as none of them were positioned in hospitality journals. Essentially, in this period, the foundation papers of hotel performance literature are linked with the broader fields of management and marketing.

Panel B reports five very small clusters. Given the sparse structure of this network, the editing of Panel B (heat map) is different than those used for the other periods (clusters). For the embryonic phase, the heat map is more readable than the cluster map. Focusing on Panel B, four of the five clusters show only one relevant co-cited work. The leftmost group (labeled Cluster 1) includes three studies related to the broad topic of service quality. These articles are well-known in the field of service management as “A4” (Parasuraman et al., 1988) or “A59” (Carman, 1990). Service quality represents a stable theoretical foundation in each period and for the overall co-citation network.

The central group of Panel B, Cluster 2, depicts only one relevant work but is positioned strategically in the middle of Fig. 2. “A64” is Kaplan and Norton’s famous 1992 work: the balanced scorecard. In the following periods, this seminal article remains a touchstone for hotel performance literature.

To the extreme right (Cluster 3), another influential study is reported. Paper “A59” represents the contributions of Baum and Mezias (1992) dedicated to localized competition in the Manhattan hotel industry. The relevance of location is a central topic for hospitality researchers. In the lower-side of Fig. 2 (Panel B, Cluster 4), “A65” contains another seminal work and, most importantly, another key topic for the hospitality industry: the link between human resource management practices and firm performance (Huselid, 1995). Finally, in the upper-side of Fig. 2 (Cluster 5), a methodological paper is reported (“A28”), dedicated to the development of “better marketing constructs” (Churchill, 1979). This co-citation is interesting because it shows the strong tie between hotel performance and the marketing discipline as it emerges in the next temporal period (2001–2005).

The network measures add some interesting additional details. Appendix 2 reports the betweenness centrality, an index able to identify the bridging articles. The work of Parasuraman, Zeithaml and Berry (1988, “A4”) plays this strategic role, as clearly identified by Panel A of Fig. 2. The degree centrality (Appendix 3) reveals a wide group of papers (those ranging from rank 1 to rank 13) with a higher score. The first four positions report the same papers as in Appendix 2 (“A67”, “A59”, “A4”, “A20”), but there are some changes in the rank position. Finally, the closeness centrality (Appendix 4) is less discriminant. In fact, the first 12 papers account for the same value (1.00).

#### 4.1.2. The foundational phase: 2001–2005

During this second period, the number of published papers included in our sample increases significantly from 32 to 72. This trend generates a more complex and interconnected group composed of 70 studies. Panel A in Fig. 3 shows the entire co-cited network. The picture can be divided into three blocks that approximately correspond to the left area of Panel B—that is, the split of the upper side of Panel A articulated in Clusters 3, 4, and 5—and to the right side, where two groups are identified (Clusters 1 and 2) corresponding to the lower part of Panel A. The left side includes some clusters related to management and efficiency, while the right part focuses on marketing and service management, as will be later discussed.

This period is a “foundation” stage of the field. During this time, two primary disciplines emerge: marketing on the right side of Panel B and management on the left. *Marketing* includes two connected Clusters, 1 and 2. The first group comprises several relevant co-cited works belonging to the service quality field. Most of these studies are well-known contributions of the service management literature stream, such as Cronin and Taylor (1992, “A25”); Parasuraman, Zeithaml, and Berry (1988, “A4”); Bitner, Booms, and Tetreault (1990, “A19”); and

Gronroos (1984, “A49”).

The second cluster, labeled Cluster 2, contains relevant, non-hospitality articles related to the broader area of the relationship between market orientation and firms’ competitive advantage and, in some papers, with firms’ performance. Anderson, Fornell and Lehmann (1994, “A37”) explore the relationships between customer satisfaction, market orientation, and firm performance; similarly, Jaworski and Kohli (1993, “A46”) illustrate antecedents and outcomes of market orientation. In their work, Day and Wensley (1988, “A106”) investigate competitive superiority primarily based on market positioning. Therefore, Cluster 2 investigates the ties between competitive advantage based on external (market) positioning, and firm performance. Unsurprisingly, the most central article is the work of Venkatraman and Ramanujam (1986, “A17”), which examines the different approaches useful for measuring business performance. This group of papers is principally inspired by the “positioning school,” based on Porter’s work; however, the leftmost paper (“A99”) is based on the resource-based view (Day, 1994) and studies the capabilities of market-driven organizations. Looking at the marketing side of Panel B, at Clusters 1 and 2, shows a peculiarity: none of the most relevant studies are published in hospitality journals. Instead, most of the papers originated in marketing journals. Therefore, the foundation articles for hospitality researchers are external to their field.

The left part of Panel B includes studies rooted in the *management* disciplines and pertaining to three different clusters, identified as Clusters 3, 4, and 5. The first paper belonging to Cluster 3 and located in the middle (“A89”) creates a link between management and marketing. The leftmost article of Cluster 2 (“A99”) is based on resource-based view. Unsurprisingly, “A89” is Grant’s (1991) foundational work dedicated to examining the link between resources and competitive advantage. The three most central papers of this cluster are important articles related to resource-based view theory: “A32” investigates the link between the resource-based perspective and firm performance (Russo and Fouts, 1997); “A3” (Barney, 1991) looks at the relationship between resource-based view and competitive advantage; and “A43” proposes the resource-based view theory (Wernerfelt, 1984). Interestingly, the two remaining papers report on studies centered on hospitality firms: “A29” is Ingram and Baum’s (1997) famous work that develops the link between chain affiliation and the failure rate of Manhattan hotels, while “A129” examines the need to go beyond revenue per available room (RevPAR) (Brown and Dev, 1999). Cluster 3 creates a bridge between marketing and management, starting from resource-based view and moving to performance measurement.

Cluster 4 includes studies related to the efficiency approach. The most relevant contribution is “A8,” a foundational study measuring the efficiency of decision-making units (Charnes et al., 1978) and “A38,” a case study paper measuring the results of a hotel group (Morey and Dittman, 1995). Interestingly, while in the marketing area, all the relevant articles are published in non-hospitality journals; in the efficiency clusters, significant research comes from hospitality magazines, such as “A36” (Johns et al., 1997) and “A48” (Tsaur, 2001). All the papers (except for “A8”) are studies within the hospitality field.

Finally, Cluster 5 is composed of a group of studies related to the performance measurement research stream. The foundational work is the balanced scorecard of Kaplan and Norton (1992, “A64”). The remaining papers are based on the hospitality industry and are published in hospitality journals, such as “A96” (Phillips, 1999) and “A55” (Harris and Mongiello, 2001), or in management (Baum and Mezias, 1992, “A50”).

Looking comprehensively at the left side of Panel B, some common observations emerge concerning the “management approach.” Few papers are based on theoretical frameworks developed in the broad managerial area and, therefore, these studies do not report any empirical findings related to the hospitality field. These papers are mainly located in Cluster 3 and belong to the resource-based view theory. However, these non-hospitality-based contributions usually occupy



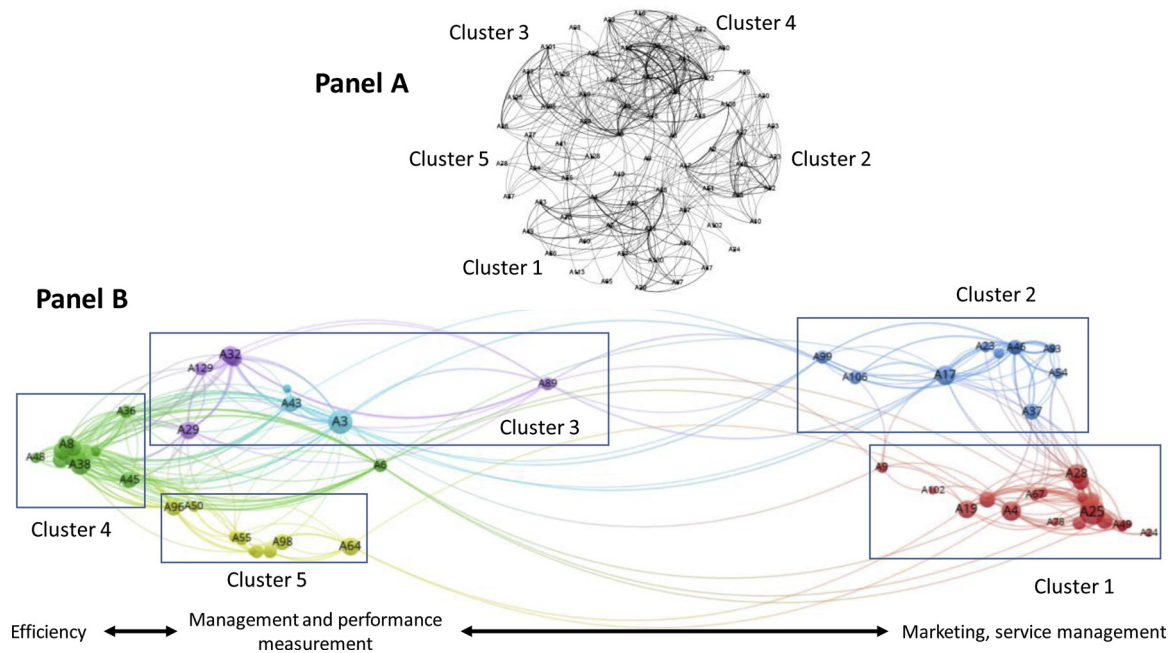


Fig. 3. Co-citation network: 2001–2005.

central positions within the three clusters (Cluster 3: “A3” and “A32”; Cluster 4: “A8”; Cluster 5: “A64”) and confirm that foundation studies vital to hotel performance measurement stream are external to this field. However, in contrast to the marketing approach (right side of Panel B), many articles of the management discipline (left side of Panel B) are based on hospitality evidence and are primarily published in hospitality journals.

The network measures add some additional details. The betweenness centrality (Appendix 2) reveals, on the one hand, the relevancy assured by marketing studies (“A28”) and service quality (“A25”), but on the other hand, it exposes the emerging role played by the resource based-view theory (“A89”, “A3”). The degree centrality (Appendix 3) confirms the relevancy of resource based-view approach (“A3”, “A43”) and also the rising attention to some hospitality papers, as the work of Ingram and Baum (1997, “A29”) and Phillips (1999, “A96”). Finally, the closeness centrality (Appendix 4) reports some interesting indications. In the first seven positions (all accounting and index of 1.00), five articles are based on hospitality studies (“A38”, “A48”, “A96”, “A6”, “A80”).

#### 4.1.3. The development phase: 2006–2010

During the five years of this period, the number of articles included in the sample triples, moving from 72 to 221. The co-citation network increases both in terms of studies (120) and links, as Panel A (Fig. 4) clearly suggests. The network appears as a ball divisible in three parts: one small, right-side, densely connected cluster (Cluster 1); one larger, lower-side area less densely linked (Clusters 2 and 3); and the upper-left area, which represents the largest part and is articulated in Clusters 4, 5, and 6. Panel B reports the main disciplines: efficiency on the right-side; environmental management and performance management in the center; human resource management, service quality and marketing on the left-side.

This third period can be defined as “development phase” and is primarily characterized by two different evolutionary patterns. On the one hand, the number of disciplines rise, as suggested by the increased complexity of the network (in terms of the number of papers, links, and clusters); on the other, many of the relevant articles are based on hospitality studies or are published in hospitality journals.

On the left side of Panel B, Cluster 1 includes a group of relevant papers strongly related to the efficiency research stream. Three central

articles are bigger and, therefore, more important. “A44” (Barros, 2005b) evaluates the efficiency of a Portuguese hotel chain and is published in a hospitality journal. The relevance of “A38” (Morey and Dittman, 1995) and “A8” (Charnes et al., 1978) were presented in Section 4.1.2. The remaining three articles (“A36”, “A85.” and “A48”) are all hospitality-based papers published in hospitality journals, except for “A85.” Therefore, the internal structure of Cluster 1 clearly suggests an important evolutionary pattern: the theoretical bases of this research stream are now strongly related to hospitality papers and journals.

The central area of Panel B is populated by two different but adjacent and related Clusters, 2 and 3. Cluster 2 is theoretically anchored to the resource-based view (Barney, 1991, “A3”) and firm performance (Venkatraman and Ramanujam, 1986, “A17”). Curiously, this last paper (“A17”), which is a methodological study, was associated with market orientation in Section 4.1.2, while in the present period (2006–2010), it is cited to operationalize the performance measurement of the resource-based view approach. Cluster 2 contains a group of articles (left-side) focused on environmental management. “A32” (Russo and Fouts, 1997) represents the theoretical foundation of this research sub-stream because it creates a connection between resource-based view and environmental performance. Other studies within the environmental management subtopic are primarily based on hospitality evidence and published in related journals, such as “A107” (Kirk, 1998), “A26” (Kirk, 1995), and “A123” (Bohdanowicz, 2006). The right side of Cluster 2 presents several papers related to performance measurement, published both in hospitality journals, such as “A86” (Israeli, 2002) and “A56” (Pine and Phillips, 2005), or in management journals, such as “A50” (Baum and Mezias, 1992) and “A45” (Baum and Haveman, 1997).

Cluster 3 focuses on performance measurement and is centered around the work of Kaplan and Norton (1992, “A41”; 1996, “A77”). The remaining studies are well-rooted in the accounting discipline and propose performance measurement systems, such as “A96” (Phillips, 1999), “A131” (Haktanir and Harris, 2005), and “A98” (Harris and Brander Brown, 1998). The link between these contributions and the balanced scorecard is relevant; in fact, as Kaplan and Norton’s framework examines the limits of traditional accounting measures (unbalanced, past-oriented, focused on short-term, centered on shareholders), these hospitality studies develop new performance measurement systems more oriented to the future, inspired by a balanced, multi-dimensionality approach able to represent different



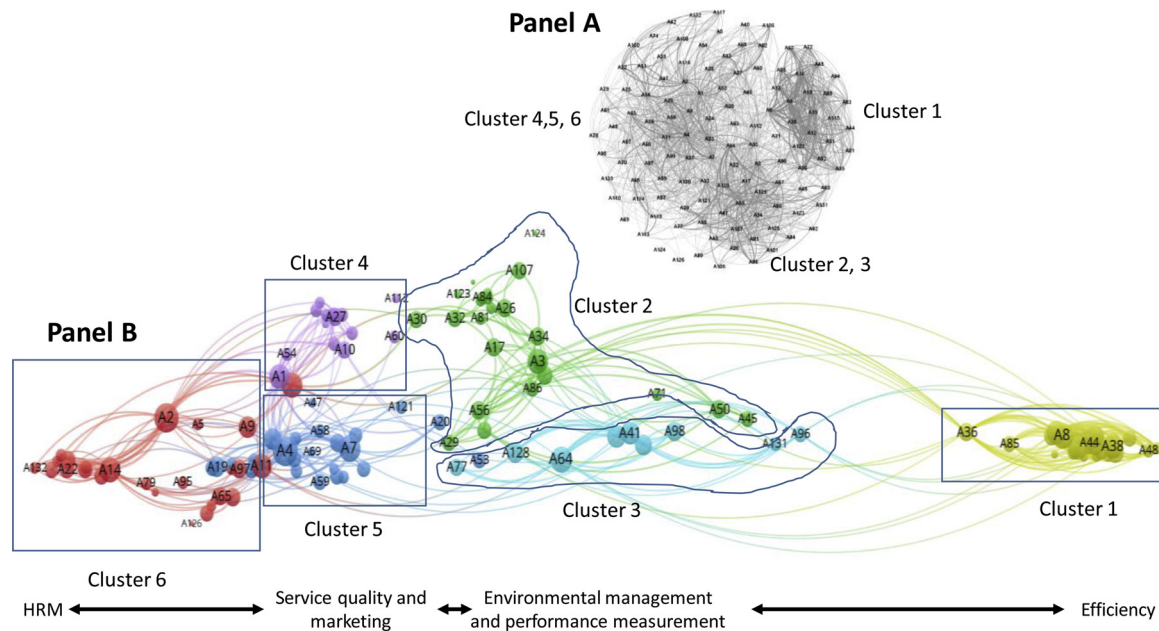


Fig. 4. Co-citation network: 2006–2010.

stakeholders. Finally, “A128” (Denton and White, 2000) operationalizes the Kaplan and Norton model for hotel firms.

In the leftmost area of Panel B there are three strongly connected Clusters, 4, 5, and 6. Cluster 4 is the smallest and includes papers exploring innovation in tourism. Not surprisingly, given the novelty of this topic and, therefore, the need for new methodologies to examine this area of inquiry, this group is primarily populated by methodological studies with a strong link to structural equation modelling. In fact, “A1” (Fornell and Larcker, 1981) and “A10” (Bagozzi and Yi, 1988) develop criteria to evaluate structural equation modelling, a framework widely used by hospitality researchers. Similarly, “A54” (Hu and Bentler, 1999) proposed cutoff criteria in covariance structure analysis. These contributions are neither developed nor published in the hospitality field. The two rightmost papers of Cluster 4 are two applied works. “A60” (Ottenbacher and Gnoth, 2005) is rooted in the hotel industry.

Cluster 5 contains studies pertaining to service quality (variously interrelated with customer satisfaction), a research stream that emerged in the first (4.1) and in second (4.2) periods. This group is centered around the framework of SERVQUAL proposed by Parasuraman, Zeithaml and Berry (1988, “A4”; 1985, “A7”); Zeithaml (1988, “A58”), or used in empirical studies (Carman, 1990). If the theoretical foundation remains strongly related to service management, this cluster includes some papers based on hospitality evidence, such as “A69” (Choi and Chu, 2001), “A53” (Kandampully and Suhartanto, 2000), and “A121” (Chu and Choi, 2000).

Finally, Cluster 5 is rooted in the organization disciplines and is broadly linked with human resource management. Panel B shows three central works: one methodological paper (Anderson and Gerbing, 1988, “A2”) based on structural equation modelling, and two technical studies (Heskett et al., 1994, “A11”; Hartline and Ferrell, 1996, “A14”). Generally speaking, papers included in Cluster 5 stress the centrality of customers and employees. Interestingly, the remaining papers are primarily empirical studies related to human resource management practices, such as role stressors and customer orientation (Bettencourt and Brown, 2003, “A132”), differences of employee behaviors comparing men and women (Babin & Boles, 1988, “A22”), and the determinants of prosocial service behaviors of contact employees (Bettencourt and Brown, 1997, “A79”). Overall, this cluster is largely populated by papers neither rooted nor published in the hospitality field. This is

consistent with the evolutionary paths described in other research streams, such as service quality or market orientation. The first phase of most studies pertains to the broad general management literature, with hospitality articles gaining centrality later.

The network indices enrich the analysis. The betweenness centrality (Appendix 2) shows four relevant papers. The first three are not hospitality-based studies and focus on methodology in marketing (“A23”), environmental management (“A32”) and service quality (“A4”). By contrast, there is one hospitality-based paper (“A34”) that applies the environmental approach to this industry (Álvarez-Gil et al., 2001). The degree centrality (Appendix 3) confirms the relevance of some studies (“A23”, “A4”), and adds another important work focused on service management (“A7”). All three articles are not based on the hospitality industry. Finally, the closeness centrality (Appendix 4), as usual, adds some additional and different insights. In the first four ranks there are three papers based on the broad management and marketing area (“A43”, resource based-view; “A5” a methodological study; “A57”, service quality). The only hospitality study is the article “A48”, based on efficiency theory.

#### 4.1.4. The specialization phase: 2011–2015

Fig. 5 reveals the last evolution of the co-citation network. The number of papers published in this period and included in the sample nearly doubles, moving from 221 to 409. The increase (188 articles) is the highest registered. The network represented in Fig. 5 (Panel A) includes 128 papers and identifies five clusters. While in the previous periods, Panel A (Figs. 1, 2, and 3) shows some vacuum spaces between the identified clusters, Fig. 5 shows a more densely connected network.

This period is defined as the “specialization phase” because the clusters are now well-defined and, with some exceptions, the foundation papers are primarily based on hospitality papers. Relevant articles tend to be less important. Graphically, there are more small circles and fewer big balls, except for in emerging areas of inquiry (Cluster 5). Panel B reports the main disciplines: human resource management on the left; service quality and management in the center-left; performance measurement in the center-right; efficiency on the right.

Cluster 1 focuses on efficiency and is characterized by many links, and for the first time, all relevant papers in Panel B are both rooted in the hospitality industry and published in this field. Papers playing pivotal roles, including many new, relevant studies (compared with the

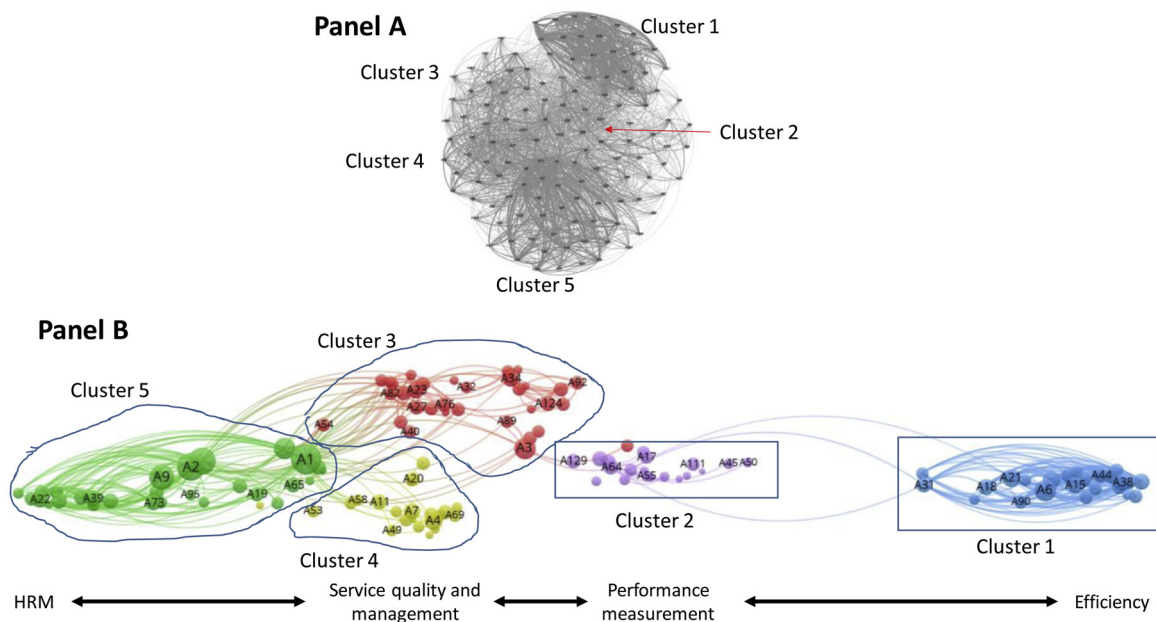


Fig. 5. Co-citation network: 2011–2015.

previous period), primarily centered on data envelopment analysis (Chiang et al., 2004, “A15”; Hwang and Chang, 2003, “A6”; Hsieh and Lin, 2010, “A90”) or efficiency (Barros, 2005a, “A18”; Chen, 2007, “A18”; Barros and Mascarenhas, 2005, “A31”).

Cluster 2 contains a less connected cluster but is centrally positioned in the entire network. This group belongs to the performance measurement stream and includes a mixture of works based both on the hospitality industry and not. External articles are represented by the balanced scorecard framework (Kaplan and Norton, 1992, “A64”) and the methodological work of Venkatraman and Ramanujam (1986, “A17”). Studies related to the hospitality field include four papers described in previous time periods (“A129,” “A55,” “A45,” and “A50”). A new paper is the work of Sainaghi (2010a, “A111”), which provides a literature review on performance measurement. Despite being published only one year before the beginning point of this period, this study has gained high visibility and suggests that hospitality researchers are increasingly attentive to hospitality papers.

Cluster 3 is based on the marketing discipline and includes studies centered on market orientation, environmental management, and mixing theoretical and methodological papers on one side, and empirical contributions published in non-hospitality journals and realized in this field, on the other. The theoretical background remains the resource-based view (Barney, 1991, “A3”; Grant, 1991, “A89”; Russo and Fouts, 1997, “A32”). Market orientation (Babin & Boles, 1988, “A22”; Kohli and Jaworski, 1990, “A82”) and methodological contributions (Armstrong and Overton, 1977, “A23”) are built around contributions hosted in marketing journals. Finally, empirical works related to the hospitality industry are related to environmental management (Erdogan and Baris, 2007, “A92”; Bohdanowicz, 2005, “A124”). It is interesting to note that the external foundation studies tend to be old, while studies based on the hospitality field are often considerably more recent.

Cluster 4 mixes service quality and customer satisfaction, as previously observed. This group includes a majority of non-hospitality papers based in a central position and encountered in previous periods (such as Zeithaml, 1988, “A58”; Heskett et al., 1994, “A11”; Gronroos, 1984, “A49”; Parasuraman et al., 1988, “A4”; Parasuraman et al., 1985, “A7”). In this case, it is also evident that the external foundation papers are old. Some emerging studies related to the hospitality industry explore customer loyalty (Kandampully and Suhartanto, 2000, “A53”) and the antecedents of customer satisfaction (Choi and Chu, 2001,

“A69”).

Finally, Cluster 5 is a densely connected group focused on human resource management. Three central papers reveal some methodological bases, such as structural equation modelling (Fornell and Larcker, 1981, “A1”; Anderson and Gerbing, 1988, “A2”) or the roles played by mediator and moderator variables (Baron and Kenny, 1986, “A9”). The relevant empirical papers are all external (except for Kusluvan et al., 2010, “A73”) and, in some cases, were cited in previous time periods (Babin & Boles, 1988, “A22”; Bitner et al., 1990, “A19”), plus new works (Babakus et al., 2003, “A39”; Podsakoff et al., 2000, “A95”).

The network measures enlarge the evidences. The betweenness centrality (Appendix 2) identifies four relevant papers. The first (“A23”) records the first position in the previous period and is the methodological paper based on a marketing approach. But in the next three positions there are new articles showing some evolutionary trends. Two papers, in fact, belong to human resource management (“A126”, “A97”), while the fourth is a methodological study based on structural equation modelling (“A1”). The degree centrality (Appendix 3) measures collaboration by researchers. In the first three ranks there are two works unrelated to the hospitality industry (“A1”, “A3”) and one article rooted in this field and based on the performance measurement approach (“A56”). Finally, the closeness centrality (Appendix 4) shows similar results of the previous period with the adjunct of an efficiency study based on hospitality evidences (“A83”).

#### 4.1.5. The overall picture: 1996–2015

Fig. 6 depicts the entire network created when considering all the papers included in the sample (734) and based on the co-citation network (128 contributions). Panel A shows the complexity network, which is so densely connected that it is difficult to identify the five clusters reported in Panel B. Of these five groups, Cluster 1 is related to efficiency, Cluster 2 to performance measurement, Cluster 3 to market orientation and environmental management, Cluster 4 to service quality and customer satisfaction, and Cluster 5 to human resource management. The basic characteristics are very similar to those reported in Section 4.4.

The network metrics, overall, suggest the increasing importance assured mainly by methodological studies (as later presented). The foundation papers ranked in the first four positions are mainly based on non-hospitality articles, with very few exceptions. The betweenness centrality (Appendix 2) reports two methodological studies in the first

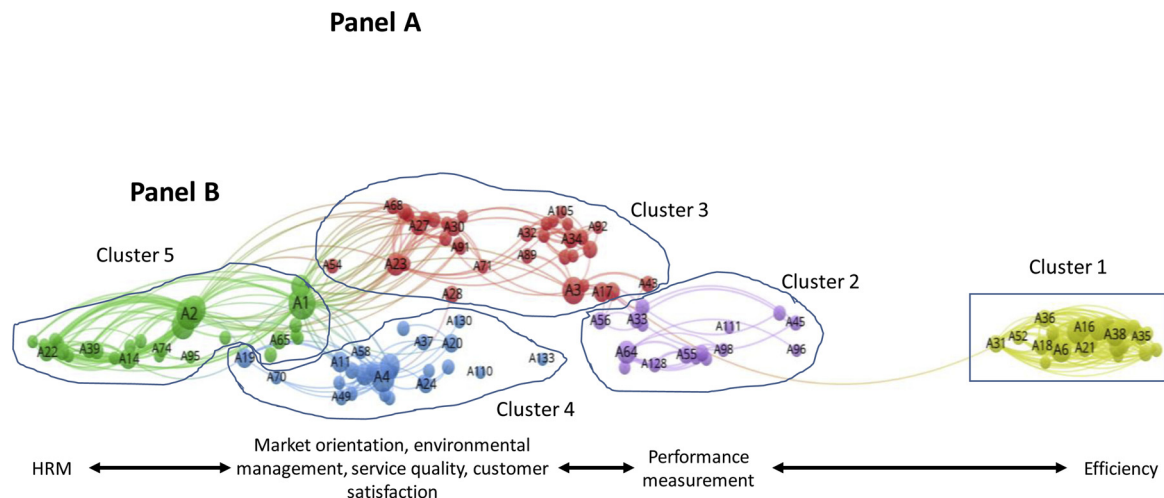


Fig. 6. Co-citation network:1996–2015.

four ranks (“A23”, “A1”). There are two hospitality papers, one linked to the environmental management approach (“A34”) and one related to the human resource management field (“A97”). The degree centrality (Appendix 3) illustrates four non-hospitality studies in the first four ranks. Two of them are methodological papers (“A1”, “A23”); one is rooted in the service management approach (“A4”) and one in the resource based-view (“A3”). Similarly, the degree centrality (Appendix 4) reports four studies unrelated to the hospitality industry: two based on methodology (“A1”, “A23”), one on service management (“A4”), and one on resource based-view (“A3”).

#### 4.2. Relevant journals

The second research question focuses on leading journals. Using the references of the 734 papers included in the sample, the researchers created a database that counted the frequencies (citation) collected by each journal. Based on these citations, the ranks and time trends of the top 25 journals are discussed (4.2.1). Based on co-citation analysis, some trends related to the journals which published the most co-cited studies (4.2.2).

##### 4.2.1. Leading cited journals

To identify top cited journals, the researchers considered the total references in the sample, equal to 56,163 studies. By filtering these contributions per journal, a database was created. Table 2 lists the first 25 journals and the citations retrieved in each period. As reported in the third column from the right, these 25 journals account for approximately 21,000 citations (37.35% of total).

Starting from the overall column, three hospitality journals appear in the top positions; they are *IJHM*, *Cornell Hospitality Quarterly* (*CHQ*), and *IJCHM*. Together, these journals account for 24% of the total number of citations registered by the first 50 journals. The clear majority of the 25 journals reported in Table 2 are not part of the hospitality industry; in fact, 18 journals are primarily related to marketing and management, accounting for 45% of the citations. By contrast, the seven hospitality (and tourism) journals attract 35% of the citations. The remaining 20% is collected by “other” papers.

Focusing on Table 2 and on the four temporal periods reported in columns 3 (1996–2000), 4 (2001–2005), 5 (2006–2010) and 6 (2011–2015) from the left, some trends can be identified. During the “embryonic phase” (1996–2000), *CHQ* (the oldest review) is ranked first (13%), while the remaining hospitality journals are far from top rank: *IJHM* is seventh (5%) and *IJCHM* is thirteenth (3%). The total number of citations collected by hospitality papers is 25% (compared with the 35% of the overall period); by contrast, non-hospitality studies

represent 65% (not considering the “other” line). This result is consistent with the findings previously discussed: the foundation studies fall mainly outside the hospitality field.

The second period was defined as the “foundational phase” (2001–2005) because some important papers were linked with hospitality papers. The citations partially confirm this trend: *CHQ* remains the first journal (11%), while *IJHM* is now third (7%), and *IJCHM* is sixth (6%). The total citations of the hospitality papers increase and move from 25% (1996–2000) to 32% (2001–2005).

During the “development phase” (2006–2010) the hospitality journals are well positioned, attracting 39% of the total citations. Furthermore, *IJHM*, with 10%, is ranked first; *CHQ* (9%) is third; and *IJCHM* is fourth (8%). For the first time, *Tourism Management* (*TM*) accounts for a significant percentage (6%) and occupies a significant rank (seventh). If hospitality journals acquire more centrality during the development phase, by contrast, non-hospitality papers significantly reduce their weight from 68% (2001–2005) to 61% (2006–2010).

The final period was defined as the “specialization phase” (2011–2015), as more centrality was acquired by hospitality studies. The citations confirm a strong decrease in the general management and marketing studies, whose overall weight collapses to 52% (from 61%). In contrast, hospitality papers move from 39% to 48%, the highest amount registered. Hospitality (and tourism) journals occupy the first four ranks: *IJHM* is first (14.6%), *IJCHM* is second (9.3%), *TM* is third (8.6%), and *CHQ* is fourth (8.1%). Also, the three remaining journals improve their ranks: *Annals of Tourism Research* (*ATR*) is now 12<sup>th</sup> (was 13<sup>th</sup>), the *Journal of Hospitality and Tourism Research* (*JH&TR*) moves from the 20<sup>th</sup> to the 15<sup>th</sup> position, and the *Journal of Travel Research* (*JTR*) moves from the 21<sup>st</sup> to the 17<sup>th</sup> rank.

##### 4.2.2. Where and when are the foundation papers published?

The second analysis centered on journals is based on co-citation. The researchers considered all the papers included in the networks reported in the previous chapter and included in the clusters. Panel A of Fig. 7 shows the number increase. While in Section 4, the attention was on articles, now the attention is on journals. This clarifies some insights that previously emerged concerning the increasing relationships between the foundation studies and hospitality journals on one side, and the different time necessary for knowledge diffusion for hospitality papers and non-hospitality articles on the other.

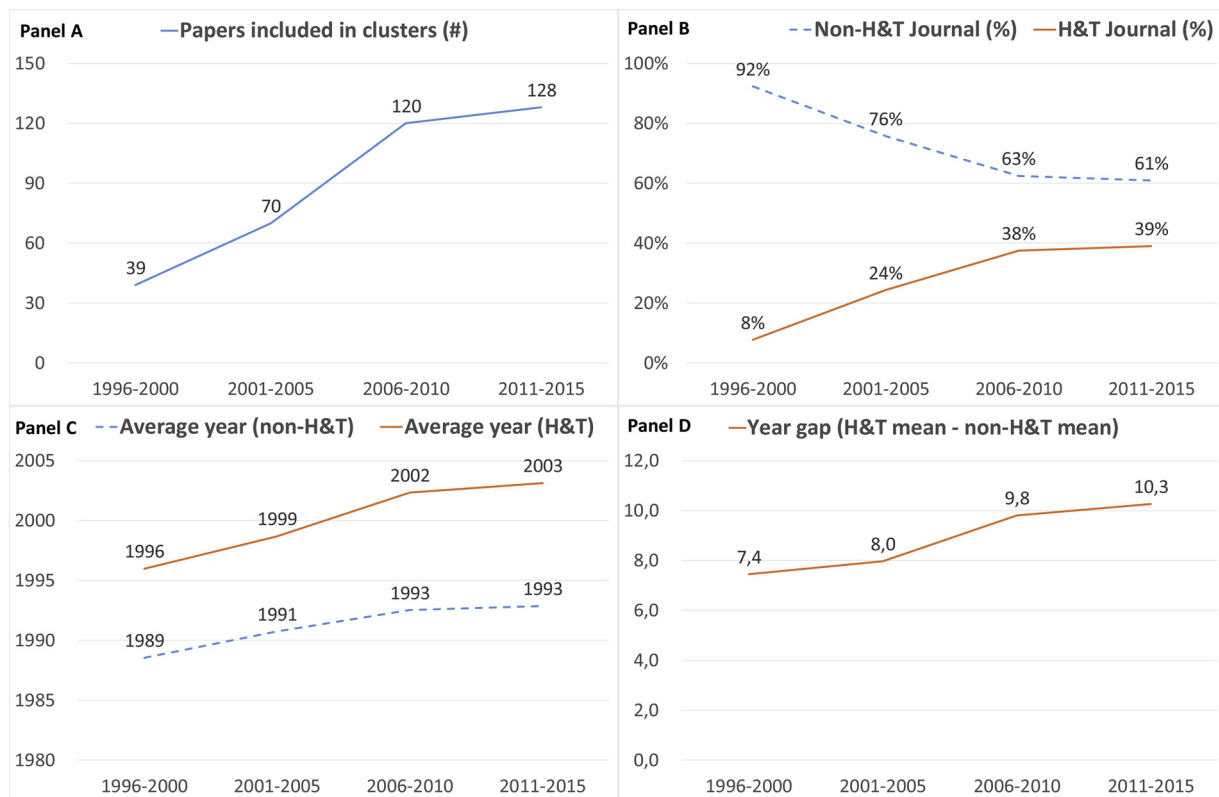
With reference to the first point (rising contribution of hospitality papers), as reported in Panel B, the role played by hospitality (and tourism) journals increases considerably over time. The percentages are based on the total number of papers – alternatively the percentages

**Table 2**  
The top 25 cited journals per period.

Rank	Journals	1996-2000	2001-2005	2006-2010	2011-2015	Overall	%	% (cum.)
1	International Journal of Hospitality Management	37	84	434	1.558	2.113	10%	10%
2	Cornell Hospitality Quarterly	97	126	425	862	1.510	7%	17%
3	International Journal of Contemporary Hospitality Management	22	69	347	988	1.426	7%	24%
4	Journal of Marketing	72	126	429	731	1.358	6%	30%
5	Tourism Management	10	19	257	918	1.204	6%	36%
6	Academy of Management Journal	52	77	314	640	1.083	5%	41%
7	Strategic Management Journal	37	74	265	536	912	4%	45%
8	Journal of Applied Psychology	53	65	203	544	865	4%	49%
9	Academy of Management Review	32	56	154	344	586	3%	52%
10	Journal of Marketing Research	26	48	177	278	529	2%	54%
11	Harvard Business Review	39	64	178	245	526	2%	57%
12	Journal of Business Research	8	27	107	332	474	2%	59%
13	Journal of Management	15	39	133	286	473	2%	61%
14	Journal of the Academy of Marketing Science	5	27	101	303	436	2%	63%
15	Annals of Tourism Research	7	20	115	291	433	2%	65%
16	Journal of Hospitality and Tourism Research	4	16	98	278	396	2%	67%
17	Management Science	17	42	112	211	382	2%	69%
18	Journal of Travel Research	15	28	86	233	362	2%	70%
19	Journal of Retailing	21	30	114	175	340	2%	72%
20	Administrative Science Quarterly	38	41	102	147	328	2%	74%
21	The Service Industries Journal	10	13	54	208	285	1%	75%
22	European Journal of Marketing	8	14	73	169	264	1%	76%
23	International Journal of Service industry Management	4	7	99	139	249	1%	77%
24	Personnel Psychology	29	18	78	122	247	1%	78%
25	Journal of Management Studies	27	14	59	130	230	1%	79%
	Other	87	279	1.238	2.791	4.395	21%	100%
	Total	772	1.423	5.752	13.459	21.406	100%	
	Total %	4%	7%	27%	63%	100%		

reported in Panel B can be based on the citations received by the total number of hospitality journals. The research team has verified that this second method (citations) produces results very similar to those reported in Fig. 7 (evidence not reported). While in the “embryonic phase

(1996–2000),” 92% of the foundation papers were published in the broad management and marketing field, and the relevance of hospitality journals increases rapidly and moves from 8% (1996–2000) to 39% (2011–2015).



**Legend:** H&T = Hospitality and Tourism

**Fig. 7.** Trends in the most relevant papers included in clusters.



The previous section showed that foundation papers taken from the broader literature tend to be old, while hospitality studies are generally more recent. To evaluate this perception, Panel C reports the average year of published papers, distinguishing between the two groups of journals. The broader literature was published between the end of the 1980s and the beginning of the 1990s. In contrast, hospitality journals host fresher studies, published between 1996 and 2003. The distance between these two groups is reported in Panel D, which describes an increasing time gap, moving from 7.4 years (1996–2000) to 10.3 years (2011–2015).

## 5. Conclusions

This study adopted the co-citation analysis approach to identify and analyze the literature on hospitality performance measurement published in scientific journals over a period of 20 years. As a first contribution, this research provides a clear depiction of the recent trends in the hospitality performance measurement literature.

The analyses of this study classify the content of the hotel performance literature into five co-citation clusters (Fig. 2). Moreover, the authors categorized the empirical evidence into different time periods: 1996–2000 (embryonic phase); 2001–2005 (foundational phase); 2006–2010 (development phase); 2011–2015 (specialization phase), and an overall representation (1996–2015). This paper provides an updated picture of the subject areas focused on by papers published within each of the co-citation clusters.

Three key conclusions are proposed based on the topics analysis previously presented in the findings section. The first conclusion refers to the relationship between hospitality and management studies. This article has illustrated that many researchers cite old or very old papers related to the broader management and marketing field (see Fig. 7, Panel C and D). This phenomenon can be interpreted in two perspectives. First, when an author introduces a model related to the management or marketing discipline, he/she usually reports a citation of a foundation study. For example, if the topic is the balanced scorecard, the author usually cites Kaplan and Norton (1992), and if the theme is service quality/service management, the work of Parasuraman et al. (1988) appears in the references. If the author ignores these studies, he/she may encounter problems during the reviewing process. This first perspective explains why the management and marketing foundation studies are so old. However, the time lag reported in Fig. 7 introduces a second explanation. In their studies, the hospitality researchers tend to refer to more recent works developed in their field. This choice can be explained in two different ways. First, the hospitality papers have modified the models developed in other disciplines, incorporating the distinctive features of the tourism field. Second, the researchers in the field of hospitality have not followed the development of these models and frameworks in the broader management and marketing discipline, and they cite only the original model. We propend to the first explanation, given the increasing customization of the models used in the hospitality field.

A second reflection is related to the increasing number of foundation studies related to the hospitality (and to some extent tourism) journals. This trend opens an interesting question: Is the field increasingly isolated from the wider literature or are researchers starting to develop their own endemic theories of performance measurement that better match the hospitality context? It is difficult to answer this question because the present paper identifies only the foundation studies. Therefore, these leading papers (composing the architectural structure) can also be associated with some emerging studies developed in other disciplines. But these emerging studies receive less citations and therefore are not classified as foundation studies. Furthermore, the answer may be influenced by the reviewing process. When an author submits a paper to a hospitality or tourism journal, he/she focuses more attention on the recent studies developed in this field, rather than the broader management and marketing area. In fact, the probability that

the reviewers belong to the hospitality and tourism field is considerably higher. This orientation may explain why a growing number of foundation studies relate to hospitality journals. In the long run, this process could create a progressive isolation between hospitality and the broader management and marketing field, especially if the researchers focus their attention only on the hospitality and tourism journals. Furthermore, this specialization is favored by the increasing number of hospitality researchers and journals that have considerably increased the total number of articles published per year (Park et al., 2011). This increasing and specialized literature attracts a higher number of foundation studies.

Finally, the findings indicate the new areas of inquiry versus those which have become stagnant. To identify the trends, we have excluded the first period of time, given the limited amount of papers. In the first group (emerging topics) there are the studies related to human resource management, performance measurement, and especially marketing. The rise of human resource management is a recent phenomenon; in fact, this theme is not recorded by the clusters during 2001–2005. The performance measurement stream signals a strong rise in the last period of time. Marketing is the largest area of inquiry. This trend is favored by the tendency of this discipline to include many topics, such as service quality, customer satisfaction and, more recently (2011–2015), environmental management and a mixture of methodological papers (as previously presented). By contrast, the stagnant topics are represented by management, environmental management, and methodological articles. Finally, efficiency is neither rising nor decreasing. This whole picture is coherent with the hospitality industry, where revenue (and therefore marketing) plays a pivotal role, given the fixed structure of costs. Therefore, an increase in revenue generates a rise in the economic margins.

Despite the fact that it is difficult to forecast future research trends, this study formulates some possible directions. The foundation studies will probably continue to be strongly related to the hospitality industry and even less linked to the broader management and marketing disciplines. This trend is triggered by the increasing attention of authors and reviewers to the hospitality specificities. Therefore, the role of hospitality (and tourism) journals will continue to increase their market share in terms of both papers and citations. In regard to topics, human resource management and marketing will gain more centrality, given the rising key role played by personnel on one side, and on the other, the relevance of revenue for hotel performance. Significant changes introduced by the new technology wave will probably attract more interest to the performance measurement streams.

This study has some practical implications for young researchers. Despite the actual trend to rely on the foundation papers in regard to the hospitality (and to some extent tourism) field, it is important to maintain a strong focus on the broader management and marketing studies. The ability to merge these areas could open up new insights and increase the efficacy of the hospitality framework. However, young researchers cannot ignore the wider hospitality literature and the increasing effort made by hospitality researchers to incorporate the key hospitality characteristics. In terms of hospitality disciplines, there is a clear trade-off. On one side, young researchers may work on the emerging topics previously identified. In contrast, these themes are often well-guarded by the senior researchers and, therefore, there may be high “entry barriers.” On the other side, young researchers may choose niche topics and completely new areas of research. A promising area could be represented by new performance measurement frameworks based on the technology advancements.

### 5.1. Limitations and further research

This work presents some limitations that are identified primarily to suggest future research agendas. First, the study uses the Scopus database which, despite being authoritative, will result in some research being inaccessible because of unavailability at the time of this research.

The Scopus database is not exhaustive of all the possible publications relating to hotel performance measurement, and the researchers did not include books in this sample. Second, the study focuses only on foundation papers identified using co-citations and network cluster analysis. Given how the sample overlaps with the work of Sainaghi et al. (2018),

a relationship between the visible (cluster analysis based on cross-cited papers) and the architectural structure (co-citation) can be traced. However, given the space constraints, this topic requires a separate paper.

### Appendix 1. The most relevant foundation papers

Code	Article	Hospitality and tourism journals	Acronym for hospitality and tourism journals	Prevalent topic of non-hospitality and non-tourism journals
A1	Fornell and Larcker (1981)	No		Marketing
A2	Anderson and Gerbing (1988)	No		Psychology
A3	Barney (1991)	No		Management
A4	Parasuraman et al. (1988)	No		Marketing
A5	Podsakoff et al. (2003)	No		Psychology
A6	Hwang and Chang (2003)	Yes	TM	
A7	Parasuraman et al. (1985)	No		Marketing
A8	Charnes et al. (1978)	No		Management
A9	Baron and Kenny (1986)	No		Psychology
A10	Bagozzi and Yi (1988)	No		Marketing
A11	Heskett et al. (1994)	No		Management
A12	Anderson et al. (1999a)	Yes	IJHM	
A13	Anderson et al. (1999b)	No		Management
A14	Hartline and Ferrell (1996)	No		Marketing
A15	Chiang et al. (2004)	Yes	ATR	
A16	Banker et al. (1984)	No		Management
A17	Venkatraman and Ramanujam (1986)	No		Management
A18	Barros (2005a)	Yes	ATR	
A19	Bitner, Booms & Tetreault (1990)	No		Marketing
A20	Reichheld and Sasser (1990)	No		Management
A21	Chen (2007)	Yes	TM	
A22	Babin and Boles (1998)	No		Marketing
A23	Armstrong and Overton (1977)	No		Marketing
A24	Martilla and James (1997)	No		Marketing
A25	Cronin and Taylor (1992)	No		Marketing
A26	Kirk (1995)	Yes	IJCHM	
A27	Narver and Slater (1990)	No		Marketing
A28	Churchill (1979)	No		Marketing
A29	Ingram and Baum (1997)	No		Management
A30	Podsakoff and Organ (1986)	No		Management
A31	Barros and Mascarenhas (2005)	Yes	IJHM	
A32	Russo and Fouts (1997)	No		Management
A33	Chung and Kalnins (2001)	No		Management
A34	Álvarez-Gil et al. (2001)	No		Management
A35	Barros and Dieke (2008)	Yes	IJHM	
A36	Johns et al. (1997)	Yes	PT&HR	
A37	Anderson et al. (1994)	No		Marketing
A38	Morey and Dittman (1995)	Yes	Cornell	
A39	Babakus et al. (2003)	No		Marketing
A40	Dess and Robinson (1984)	No		Management
A41	Atkinson and Brander Brown (2001)	Yes	IJCHM	
A42	Parameswaran and Yaprak (1987)	No		Management
A43	Wernerfelt (1984)	No		Management
A44	Barros (2005b)	Yes	IJTR	
A45	Baum and Haveman (1997)	No		Management
A46	Jaworski and Kohli (1993)	No		Marketing
A47	Morgan and Hunt (1994)	No		Marketing
A48	Tsaur (2001)	Yes	APJTR	
A49	Gronroos (1984)	No		Marketing
A50	Baum and Mezias (1992)	No		Management
A51	Boshoff and Allen (2000)	No		Management
A52	Barros (2004)	Yes	TE	
A53	Kandampully and Suhartanto (2000)	Yes	IJCHM	
A54	Hu and Bentler (1999)	No		Methodology
A55	Harris and Mongiello (2001)	Yes	IJCHM	
A56	Pine and Phillips (2005)	Yes	IJCHM	
A57	Zeithaml et al. (1996)	No		Marketing
A58	Zeithaml (1988)	No		Marketing
A59	Carman (1990)	No		Marketing
A60	Ottensbacher and Gnoth (2005)	Yes	Cornell	
A61	Akbaba (2006)	Yes	IJHM	
A62	Baker and Riley (1994)	Yes	IJHM	
A63	Parasuraman et al. (1994)	No		Marketing
A64	Kaplan and Norton (1992)	No		Management
A65	Huselid (1995)	No		Management
A66	Oliver (1980)	No		Marketing

A67	Boulding et al. (1993)	No								
A68	Deshpande et al. (1993)	No								Marketing
A69	Choi and Chu (2001)	Yes			IJHM					Marketing
A70	Bitner (1990)	No								Marketing
A71	Orfila-Sintes, Crespi-Cladera & Martínez-Ros (2005)	Yes			TM					
A72	Brown and Ragsdale (2002)	Yes			JH&TR					
A73	Kusluvan et al. (2010)	Yes			Cornell					
A74	William and Anderson (1991)	No								Management
A75	Mowday et al. (1979)	No								Psychology
A76	Wang et al., 2012	Yes			IJHM					
A77	Kaplan and Norton (1996)	No								Management
A78	Bettencourt et al., 2001	No								Psychology
A79	Bettencourt and Brown (1997)	No								Marketing
A80	Teece et al. (1997)	No								Management
A81	Carmona-Moreno et al. (2004)	No								Management
A82	Kohli and Jaworski (1990)	No								Marketing
A83	Wang et al. (2006)	Yes			TE					
A84	Chan and Wong (2006)	Yes			TM					
A85	Botti et al. (2009)	No								Management
A86	Israeli (2002)	Yes			IJHM					
A87	Brander Brown and McDonnell (1995)	Yes			IJCHM					
A88	Farrell (1957)	No								Methodology
A89	Grant (1991)	No								Management
A90	Hsieh and Lin (2010)	Yes			IJHM					
A91	Tajeddini (2010)	Yes			TM					
A92	Erdogan and Baris (2007)	Yes			TM					
A93	Han et al. (1998)	No								Marketing
A94	Sanjeev (2007)	Yes			IJCHM					
A95	Podsakoff et al. (2000)	No								Management
A96	Phillips (1999)	Yes			IJHM					
A97	Tsaur and Lin (2004)	Yes			TM					
A98	Harris and Brander Brown (1998)	Yes			IJHM					
A99	Day (1994)	No								Marketing
A100	Karatepe and Sokmen (2006)	Yes			TM					
A101	Klassen and McLaughlin (1996)	No								Management
A102	Schaufeli et al. (2002)	No								Psychology
A103	Schaufeli et al. (2006)	No								Psychology
A104	Liao and Chuang (2004)	No								Management
A105	Hart (1995)	No								Management
A106	Day and Wensley (1988)	No								Marketing
A107	Kirk (1998)	Yes			IJHM					
A108	Singh et al. (1996)	No								Marketing
A109	Schneider and Bowen (1985)	No								Psychology
A110	O'Neill and Mattila (2004)	Yes			JH&TR					
A111	Sainaghi (2010a)	Yes			IJCHM					
A112	Orfila-Sintes and Mattsson (2009)	No								Management
A113	Schuler and Jackson (1987)	No								Management
A114	Cho et al. (2006)	Yes			IJHM					
A115	Barros and Alves (2004)	No								Management
A116	Oh (2001)	Yes			TM					
A117	Grandey and Cropanzano (1999)	No								Psychology
A118	Conger and Kanungo (1988)	No								Management
A119	Becker and Gerhart (1996)	No								Management
A120	Mia and Patiar (2001)	Yes			IJHM					
A121	Chu and Choi (2000)	Yes			TM					
A122	Wijesinghe (1993)	No								Management
A123	Bohdanowicz (2006)	Yes			IJHM					
A124	Bohdanowicz (2005)	Yes			Cornell					
A125	Porter and Van der Linde (1995)	No								Management
A126	Sun et al. (2007)	No								Management
A127	Huckestein and Duboff (1999)	Yes			Cornell					
A128	Denton and White (2000)	Yes			Cornell					
A129	Brown and Dev (1999)	Yes			Cornell					
A130	Bowen and Shoemaker (1998)	Yes			Cornell					
A131	Haktanir and Harris (2005)	Yes			IJCHM					
A132	Bettencourt and Brown (2003)	No								Marketing
A133	Kim and Kim (2005)	Yes			TM					

## Appendix 2. Betweenness centrality (Betw. Centr.): Rank 1-40

Rank	1996-2000		2001-2005		2006-2010		2011-2015		Overall	
	Label	Betw. Centr.	Label	Betw. Centr.	Label	Betw. Centr.	Label	Betw. Centr.	Label	Betw. Centr.
1	A4	23.5	A28	193.1	A23	2,943.9	A23	1,790	A23	1,775
2	A20	8.0	A89	176.0	A32	2,241.3	A126	1,398	A34	737
3	A67	7.6	A25	167.6	A4	1,305.6	A97	1,386	A1	727

4	A59	7.6	A3	159.2	A34	1,097.0	A1	1,320	A97	716
5	A7	7.5	A129	154.2	A129	888.9	A39	909	A129	673
6	A46	6.0	A106	147.5	A125	743.7	A18	907	A32	598
7	A11	6.0	A29	144.2	A3	737.9	A86	766	A26	510
8	A64	2.0	A19	117.5	A7	723.4	A31	680	A18	457
9	A23	1.5	A37	112.3	A25	569.5	A5	603	A4	455
10	A70	1.5	A9	90.5	A60	540.3	A34	578	A123	447
11	A25	1.3	A6	84.4	A112	473.7	A65	565	A66	427
12	A58	0.4	A8	79.0	A16	447.0	A56	506	A25	419
13			A55	49.9	A45	443.6	A64	481	A126	393
14			A4	45.3	A1	424.9	A80	476	A33	371
15			A68	41.2	A88	399.0	A33	469	A53	361
16			A7	39.3	A17	350.4	A3	447	A86	354
17			A54	38.6	A96	343.6	A129	442	A71	331
18			A64	38.1	A30	332.6	A92	394	A79	313
19			A17	33.1	A71	320.6	A4	359	A45	294
20			A59	33.0	A56	298.2	A99	359	A64	283
21			A69	23.5	A27	296.2	A29	316	A31	282
22			A99	23.3	A107	279.5	A94	310	A5	272
23			A43	23.1	A53	268.8	A106	293	A125	267
24			A70	22.2	A11	256.8	A20	292	A65	265
25			A96	20.5	A64	254.3	A26	276	A57	261
26			A38	20.1	A97	237.2	A73	270	A29	252
27			A36	17.9	A26	235.2	A66	262	A39	246
28			A45	17.1	A123	231.0	A111	261	A3	246
29			A67	15.6	A85	230.0	A38	256	A60	242
30			A32	13.8	A38	182.6	A6	245	A19	223
31			A20	13.3	A14	180.9	A19	241	A80	216
32			A101	13.1	A79	165.2	A53	236	A27	215
33			A105	12.1	A33	161.2	A11	229	A56	212
34			A26	12.0	A121	159.9	A76	221	A84	208
35			A125	12.0	A8	156.7	A108	203	A7	198
36			A33	9.2	A87	152.7	A7	192	A8	186
37			A88	9.2	A19	145.2	A45	169	A20	183
38			A130	6.0	A130	139.1	A9	145	A11	183
39			A62	3.9	A66	132.6	A57	145	A38	151
40			A98	3.0	A9	130.4	A10	131	A6	143

### Appendix 3. Degree centrality (Degree Centr.): Rank 1-40

Rank	1996-2000		2001-2005		2006-2010		2011-2015		Overall	
	Label	Degree Centr.	Label	Degree Centr.	Label	Degree Centr.	Label	Degree Centr.	Label	Degree Centr.
1	A67	16	A3	34	A23	75	A1	101	A1	105
2	A59	16	A29	26	A4	65	A3	83	A23	104
3	A4	16	A43	25	A7	60	A56	83	A4	96
4	A20	16	A96	24	A3	54	A5	80	A3	93
5	A7	15	A36	23	A1	48	A10	80	A56	91
6	A23	14	A6	23	A25	47	A2	77	A7	88
7	A58	14	A28	21	A11	47	A33	75	A33	87
8	A25	14	A45	21	A129	47	A86	72	A10	85
9	A70	14	A12	20	A20	46	A4	68	A86	85
10	A49	12	A38	20	A32	45	A23	66	A129	84
11	A63	12	A62	20	A2	43	A129	66	A2	83
12	A57	12	A17	20	A53	42	A9	63	A5	82
13	A14	12	A25	19	A34	41	A31	63	A17	79
14	A46	7	A13	19	A64	40	A11	61	A9	77
15	A19	7	A129	19	A17	40	A18	60	A29	77
16	A2	7	A8	18	A9	40	A17	60	A26	77
17	A64	6	A122	18	A30	38	A7	59	A11	75
18	A24	5	A33	17	A56	38	A111	59	A64	71
19	A1	5	A37	17	A26	37	A65	58	A32	68
20	A16	4	A88	17	A130	37	A29	58	A34	68
21	A8	4	A72	16	A8	36	A26	56	A20	68
22	A87	4	A80	16	A36	36	A80	56	A53	68
23	A88	4	A16	16	A19	36	A97	55	A97	67
24	A38	4	A32	15	A37	36	A43	54	A37	67
25	A106	4	A59	14	A16	35	A19	54	A31	66
26	A130	4	A4	14	A107	35	A124	52	A25	65
27	A82	3	A46	14	A12	34	A84	52	A19	65
28	A27	3	A27	14	A96	34	A64	52	A18	64
29	A68	3	A82	14	A97	34	A6	51	A43	64
30	A11	3	A101	14	A6	33	A92	51	A65	64
31	A17	2	A68	14	A13	33	A91	50	A84	64
32	A65	2	A7	14	A14	33	A34	50	A130	64
33	A113	2	A89	13	A38	32	A8	48	A8	62
34	A119	2	A106	13	A125	32	A21	48	A6	62



35	A37	2	A125	13	A41	31	A30	48	A92	60
36	A28	1	A57	12	A55	31	A99	48	A80	60
37	A40	1	A26	12	A27	31	A126	48	A30	59
38	A50	1	A105	11	A31	31	A40	48	A71	59
39	A29	1	A54	11	A45	31	A52	47	A111	59
40			A64	10	A15	30	A37	47	A38	56

#### Appendix 4. Closeness centrality (Clos. Central.): Rank 1-40

Rank	1996-2000		2001-2005		2006-2010		2011-2015		Overall	
	Label	Clos. Central.	Label	Clos. Central.	Label	Clos. Central.	Label	Clos. Central.	Label	Clos. Central.
1	A4	1.00	A38	1.00	A48	1.00	A48	1.00	A48	1.00
2	A7	1.00	A4	1.00	A43	1.00	A83	1.00	A3	0.74
3	A58	1.00	A43	1.00	A5	1.00	A43	1.00	A23	0.74
4	A28	1.00	A48	1.00	A57	1.00	A3	0.71	A2	0.73
5	A63	1.00	A96	1.00	A23	0.67	A2	0.71	A10	0.71
6	A64	1.00	A6	1.00	A122	0.67	A10	0.70	A37	0.67
7	A20	1.00	A80	1.00	A83	0.67	A23	0.63	A122	0.67
8	A82	1.00	A36	0.86	A20	0.63	A34	0.61	A83	0.67
9	A50	1.00	A65	0.75	A3	0.60	A9	0.61	A9	0.63
10	A46	1.00	A46	0.67	A37	0.55	A37	0.61	A34	0.63
11	A65	1.00	A17	0.67	A34	0.54	A18	0.57	A16	0.60
12	A119	1.00	A113	0.67	A2	0.53	A31	0.55	A13	0.59
13	A67	0.93	A129	0.65	A41	0.52	A12	0.55	A12	0.58
14	A59	0.92	A64	0.64	A12	0.49	A129	0.55	A84	0.58
15	A25	0.92	A82	0.63	A16	0.49	A16	0.55	A18	0.58
16	A49	0.89	A7	0.62	A61	0.47	A39	0.54	A19	0.57
17	A14	0.88	A54	0.59	A26	0.47	A33	0.54	A130	0.57
18	A23	0.84	A27	0.57	A32	0.47	A1	0.54	A8	0.57
19	A70	0.83	A77	0.57	A84	0.47	A123	0.54	A33	0.57
20	A16	0.75	A20	0.57	A81	0.47	A13	0.53	A61	0.57
21	A87	0.75	A45	0.56	A10	0.47	A52	0.53	A1	0.56
22	A106	0.71	A33	0.56	A87	0.47	A61	0.52	A41	0.56
23	A68	0.71	A29	0.54	A101	0.47	A8	0.52	A31	0.56
24	A130	0.71	A62	0.54	A130	0.46	A19	0.52	A52	0.56
25	A8	0.67	A2	0.53	A125	0.46	A124	0.52	A123	0.56
26	A2	0.63	A49	0.53	A107	0.46	A78	0.51	A129	0.56
27	A88	0.60	A98	0.53	A9	0.45	A62	0.51	A39	0.55
28	A1	0.58	A68	0.52	A123	0.45	A65	0.50	A45	0.55
29	A19	0.58	A10	0.52	A129	0.45	A130	0.49	A81	0.55
30	A11	0.57	A105	0.51	A19	0.44	A115	0.49	A62	0.54
31	A24	0.55	A88	0.51	A13	0.44	A22	0.49	A92	0.53
32	A37	0.43	A32	0.50	A18	0.43	A44	0.49	A87	0.53
33			A66	0.50	A128	0.43	A35	0.49	A26	0.53
34			A30	0.50	A92	0.43	A84	0.49	A124	0.53
35			A101	0.49	A52	0.42	A92	0.49	A32	0.53
36			A26	0.49	A8	0.42	A53	0.48	A78	0.53
37			A93	0.48	A62	0.42	A73	0.48	A44	0.52
38			A72	0.48	A1	0.42	A45	0.47	A35	0.52
39			A8	0.48	A50	0.42	A41	0.47	A65	0.52
40			A125	0.48	A31	0.41	A81	0.47	A53	0.52

#### References

- Abrate, G., Viglia, G., 2016. Strategic and tactical price decisions in hotel revenue management. *Tour. Manag.* 55, 123–132.
- Acedo, F.J., Barroso, C., Galan, J.L., 2006. The resource-based theory: dissemination and main trends. *Strat. Manag. J.* 27 (7), 621–636.
- Akbaba, A., 2006. Measuring service quality in the hotel industry: a study in a business hotel in Turkey. *Int. J. Hosp. Manag.* 25 (2), 1–23.
- Altin, M., Koseoglu, M.A., Yu, X., Riasi, A., 2018. Performance measurement and management research in the hospitality and tourism industry. *Int. J. Contemp. Hosp. Manag.* 30 (2), 1172–1189.
- Álvarez-Gil, M.J., Burgos-Jimenez, J., Cespedes-Lorente, J.J., 2001. An analysis of environmental management, organizational context and performance of Spanish hotels. *Omega* 29 (6), 457–471.
- Anderson, J.C., Gerbing, D.W., 1988. Structural equation modeling in practice: a review and recommended two-step approach. *Psychol. Bull.* 103 (3), 411–423.
- Anderson, E.W., Fornell, C., Lehmann, D.R., 1994. Customer satisfaction, market share, and profitability: findings from Sweden. *J. Mark.* 58 (3), 53–66.
- Anderson, R.I., Fish, M., Xia, Y., Michello, F., 1999a. Measuring efficiency in the hotel industry: a stochastic frontier approach. *Int. J. Hosp. Manag.* 18 (1), 45–57.
- Anderson, R., Fok, R., Scott, J., 1999b. Hotel industry efficiency: an advanced linear programming examination. *Am. Bus. Rev.* 18 (1), 40–48.
- Armstrong, J.S., Overton, T.S., 1977. Estimating nonresponse bias in mail surveys. *J. Mark. Res.* 14 (3), 396–402.
- Assaf, A., Agbola, F., 2014. Efficiency analysis of the Australian accommodation industry: a bayesian output distance function. *J. Hosp. Tour. Res.* 38 (1), 116–132.
- Atkinson, H., Brander Brown, J., 2001. Rethinking performance measures: assessing progress in UK hotels. *Int. J. Contemp. Hosp. Manag.* 13 (3), 128–136.
- Babakus, E., Yavas, U., Karatepe, O.M., Avci, T., 2003. The effect of management commitment to service quality on employees' affective and performance outcomes. *J. Acad. Mark. Sci.* 31 (3), 272–286.
- Babin, B.J., Boles, J.S., 1998. Employee behavior in a service environment: a model and test of potential differences between men and women. *J. Mark.* 62 (2), 77–91.
- Bagozzi, R.P., Yi, Y., 1988. On the evaluation of structural equation models. *J. Acad. Mark. Sci.* 16 (1), 74–94.
- Baker, M., Riley, M., 1994. New perspectives on productivity in hotels: some advances and new directions. *Int. J. Hosp. Manag.* 13, 297–311.
- Banker, R.D., Charnes, A., Cooper, W., 1984. Some models for estimating technical and scale inefficiencies in data envelopment analysis. *Manage. Sci.* 30 (9), 1078–1092.
- Barney, J.B., 1991. Firm resources and sustained competitive advantage. *J. Manag.* 17 (1), 99–120.
- Baron, R.M., Kenny, D.A., 1986. The moderator-mediator variable distinction in social psychological research: conceptual, strategic, and statistical considerations. *J. Pers. Soc. Psychol.* 51 (6), 1173–1182.
- Barros, C.P., 2004. A stochastic cost frontier in the Portuguese hotel industry. *Tour. Econ.*

- 10 (2), 177–192.
- Barros, C.P., 2005a. Measuring efficiency in the hotel sector. *Ann. Tour. Res.* 32 (2), 456–477.
- Barros, C.P., 2005b. Evaluating the efficiency of a small hotel chain with malmquist productivity index. *Int. J. Tour. Res.* 7 (3), 173–184.
- Barros, C.P., Alves, F.P., 2004. Productivity in the tourism industry. *Int. Adv. Econ. Res.* 10 (3), 215–225.
- Barros, C.P., Dieke, P.U., 2008. Technical efficiency in the African hotels. *Int. J. Hosp. Manag.* 27, 438–447.
- Barros, C.P., Mascarenhas, M.J., 2005. Technical and allocative efficiency in a chain of small hotels. *Int. J. Hosp. Manag.* 24 (3), 415–436.
- Batistič, S., Černe, M., Vogel, B., 2017. Just how multi-level is leadership research? A document co-citation analysis 1980–2013 on leadership constructs and outcomes. *Leadership Q.* 28 (1), 86–103.
- Baum, J.A., Haveman, H.A., 1997. Love thy neighbor? Differentiation and agglomeration in the Manhattan hotel industry, 1898–1990. *Adm. Sci. Q.* 42 (2), 304–338.
- Baum, J.A., Mezas, S.J., 1992. Localized competition and organizational failure in the Manhattan hotel industry 1898–1990. *Adm. Sci. Q.* 37 (4), 580–604.
- Becker, B., Gerhart, B., 1996. The impact of human Resource management on organizational performance: progress and prospects. *Acad. Manage. J.* 39 (4), 779–801.
- Benckendorff, P., 2009. Themes and trends in Australian and New Zealand tourism research: a social network analysis of citations in two leading journals (1994–2007). *J. Hosp. Tour. Manag.* 16 (1), 1–15.
- Benckendorff, P., Zehrer, A., 2013. A network analysis of tourism research. *Ann. Tour. Res.* 43, 121–149.
- Bergin-Seers, S., Jago, L., 2007. Performance measurement in small motels in Australia. *Tour. Hosp. Res.* 7 (2), 144–155.
- Bettencourt, L.A., Brown, S.W., 1997. Contact employees: relationships among workplace fairness, job satisfaction and prosocial service behaviors. *J. Retail.* 73 (1), 39–61.
- Bettencourt, L., Brown, S., 2003. Role stressors and customer-oriented boundary-spanning behaviors in service organizations. *J. Acad. Mark. Sci.* 31 (4), 394–408.
- Bettencourt, L.A., Gwinner, K.P., Meuter, M.L., 2001. A comparison of attitude, personality, and knowledge predictors of service-oriented organizational citizenship behaviors. *J. Appl. Psychol.* 86 (1), 29–41.
- Bititci, U., Garengo, P., Dörfler, V., Nudurupati, S., 2012. Performance measurement: challenges for tomorrow. *Int. J. Manag. Rev.* 14, 305–327.
- Bitner, M.J., 1990. Evaluating service encounters: the effects of physical surroundings and employee responses. *J. Mark.* 54 (2), 69–82.
- Bitner, M.J., Booms, B.H., Tetreault, M.S., 1990. The service encounter: diagnosing favorable and unfavorable incidents. *J. Mark.* 54 (January), 71–84.
- Bohdanowicz, P., 2005. European hoteliers' environmental attitudes: greening the business. *Cornell Hotel Restaur. Adm. Q.* 46 (2), 188–204.
- Bohdanowicz, P., 2006. Environmental awareness and initiatives in the Swedish and Polish hotel industries - survey results. *Int. J. Hosp. Manag.* 25 (4), 662–682.
- Bore, I., Rutherford, C., Glasgow, S., Taheri, B., Antony, J., 2017. A systematic literature review on eWOM in the hotel industry: current trends and suggestions for future research. *Hosp. Soc.* 7 (1), 63–85.
- Boshoff, C., Allen, J., 2000. The influence of selected antecedents on frontline staff's perceptions of service recovery performance. *Int. J. Serv. Ind. Manag.* 11 (1), 63–90.
- Botti, L., Bric, W., Cliquet, G., 2009. Plural forms versus franchise and company-owned systems: a DEA approach of hotel chain performance. *Omega* 37 (3), 566–578.
- Boulding, W., Kalra, A., Staelin, R., Zeithaml, V.A., 1993. A dynamic process model of service quality: from expectations to behavioral intentions. *J. Mark. Res.* 30 (1), 7–27.
- Bowen, J.T., Shoemaker, S., 1998. Loyalty: a strategic commitment. *Cornell Hotel Restaur. Adm. Q.* 44 (5–6), 12–25.
- Brander Brown, J., McDonnell, B., 1995. The balanced score-card: short-term guest or long-term resident? *Int. J. Contemp. Hosp. Manag.* 7 (2/3), 7–11.
- Broadus, R., 1987. Toward a definition of "bibliometrics". *Scientometrics* 12 (5–6), 373–379.
- Brown, J.R., Dev, C.S., 1999. Looking beyond RevPar: productivity consequences of hotel strategies. *Cornell Hotel Restaurant Amin. Q.* 40 (2), 23–33.
- Brown, J.R., Ragsdale, C.T., 2002. The competitive market efficiency of hotel brands: an application of data envelopment analysis. *J. Hosp. Tour. Res.* 26 (4), 260–332.
- Carman, J.M., 1990. Consumer perceptions of service quality: an assessment of the SERVQUAL dimensions. *J. Retail.* 66 (1), 33–55.
- Carmona-Moreno, E., Cespedes-Lorente, J., De Burgos-Jiménez, J., 2004. Environmental strategies in Spanish hotels: contextual factors and performance. *Serv. Ind. J.* 24 (3), 101–130.
- Chakravarthy, B.S., 1986. Measuring strategic performance. *Strat. Manag. J.* 7 (5), 437–458.
- Chan, E., Wong, S., 2006. Motivations for ISO14001 in the hotel industry. *Tour. Manag.* 27 (3), 481–492.
- Charnes, A., Cooper, W.W., Rhodes, E., 1978. Measuring the efficiency of decision making units (1978). *Eur. J. Oper. Res.* 2 (6), 429–444.
- Chen, C., 2007. Applying the stochastic frontier approach to measure hotel managerial efficiency in Taiwan. *Tour. Manag.* 28 (3), 696–702.
- Chen, C.M., Chang, K.L., 2012. Diversification strategy and financial performance in the Taiwanese hotel industry. *Int. J. Hosp. Manag.* 31 (3), 1030–1032.
- Chiang, W.-E., Tsai, M.-H., Wang, L.-M., 2004. A DEA evaluation of taipei hotels. *Ann. Tour. Res.* 31 (3), 712–715.
- Cho, S., Woods, R.H., Jang, S., Erdem, M., 2006. Measuring the impact of human resource management practices on hospitality firms performances. *Int. J. Hosp. Manag.* 25 (2), 262–277.
- Choi, T.Y., Chu, R., 2001. Determinants of hotel guests' satisfaction and repeat patronage in the Hong Kong hotel industry. *Int. J. Hosp. Manag.* 20 (3), 277–297.
- Choong, K.K., 2014. Has this large number of performance measurement publications contributed to its better understanding? A systematic review for research and applications. *Int. J. Prod. Res.* 52 (14), 4174–4197.
- Chu, R.K., Choi, T.Y., 2000. An importance-performance analysis of hotel selection factors in the Hong Kong hotel industry: a comparison of business and leisure travellers. *Tour. Manag.* 21 (4), 363–377.
- Chung, W., Kalnins, A., 2001. Agglomeration effects and performance: a test of the Texas lodging industry. *Strat. Manag. J.* 22 (10), 969–988.
- Churchill, G.A., 1979. Paradigm for developing better measures of marketing constructs (1979). *J. Mark. Res.* XVI (February), 64–73.
- Conger, J.A., Kanungo, R.B., 1988. The empowerment process: integrating theory and practice. *Acad. Manage. Rev.* 13 (3), 471–482.
- Cronin, J.J., Taylor, S.A., 1992. Measuring service quality: a reexamination and extension. *J. Mark.* 56 (3), 55–68.
- Day, G.S., 1994. The capabilities of market driven organizations. *J. Mark.* 28 (4), 37–52.
- Day, G., Wensley, R., 1988. Assessing advantage: a framework for diagnosing competitive superiority. *J. Mark.* 52 (2), 1–20.
- Denton, G.A., White, B., 2000. Implementing a balanced-scorecard approach to managing hotel operations: the case of white lodging services. *Cornell Hotel Restaurant Admin. Q.* 41 (1), 94–107.
- Deshpande, R., Farley, J., Webster Jr., F., 1993. Corporate culture, customer orientation, and innovativeness in Japanese firms: a quadrad analysis. *J. Mark.* 57 (1), 23–37.
- Dess, G.G., Robinson, R.B., 1984. Measuring organizational performance in the absence of objective measures: the case of the privately-held firm and conglomerate business unit. *Strat. Manag. J.* 5 (3), 265–273.
- Dewally, M., Shao, Y., Singer, D., 2013. The liquidity crisis: evidence from the US hospitality industry. *Tour. Econ.* 19 (3), 545–563.
- Erdogan, N., Baris, E., 2007. Environmental protection programs and conservation practices of hotels in Ankara. *Tour. Manag.* 28 (2), 604–614.
- Farrell, M.J., 1957. The measurement of productivity efficiency. *J. R. Stat. Soc.* 120 (3), 253–290.
- Fernandes, C., Ferreira, J.J., Raposo, M.L., Estevão, C., Peris-Ortiz, M., Rueda-Armengot, C., 2017. The dynamic capabilities perspective of strategic management: a co-citation analysis. *Scientometrics* 112 (1), 529–555.
- Fornell, C., Larcker, D.F., 1981. Evaluating structural equation models with unobservable variables and measurement error (1981). *J. Mark. Res.* 28 (1), 39–50.
- García-Lillo, F., Úbeda-García, M., Marco-Lajara, B., 2016. The intellectual structure of research in hospitality management: a literature review using bibliometric methods of the journal international journal of hospitality management. *Int. J. Hosp. Manag.* 52, 121–130.
- García-Lillo, F., Claver-Cortés, E., Úbeda-García, M., Marco-Lajara, B., Zaragoza-Sáez, P.C., 2018. Mapping the "intellectual structure" of research on human resources in the "tourism and hospitality management scientific domain" reviewing the field and shedding light on future directions. *Int. J. Contemp. Hosp. Manag.* 30 (3), 1741–1768.
- Girtlioglu, I., Jones, E., Avcikurt, C., 2014. Measuring food and beverage service quality in spa hotels: a case study in balikesir. *Turkey. Int. J. Contemp. Hosp. Manag.* 26 (2), 183–204.
- Grandey, A.A., Copranzano, R., 1999. The conservation of resources model applied to work-family conflict and strain. *J. Vocat. Behav.* 54 (2), 350–370.
- Grant, R.M., 1991. The resource-based theory of competitive advantages. Implications for strategy formulation. *Calif. Manage. Rev.* 33 (3), 114–135.
- Gronroos, C., 1984. A service quality model and its marketing implications. *European J. Mark.* 78 (4), 36–44.
- Gross, M.J., Gao, H., Huang, S.S., 2013. China hotel research: a systematic review of the English language academic literature. *Tour. Manag. Perspectives* 6, 68–78.
- Haktanir, M., Harris, P., 2005. Performance measurement practice in an independent hotel context. *Int. J. Contemp. Hosp. Manag.* 17 (1), 39–50.
- Hall, C.M., 2011. Publish and perish? Bibliometric analysis, journal ranking and the assessment of research quality in tourism. *Tour. Manag.* 32 (1), 16–27.
- Han, J.K., Kim, N., Srivastava, R.K., 1998. Market orientation and organizational performance: is innovation a missing link? *J. Mark.* 62 (4), 30–45.
- Harris, P.J., Brander Brown, J., 1998. Research and development in hospitality accounting and finance management. *Int. J. Hosp. Manag.* 17 (3), 161–181.
- Harris, P.J., Mongiello, M., 2001. Key performance indicators in European hotel properties: general managers' choices and company profiles. *Int. J. Contemp. Hosp. Manag.* 13 (3), 120–128.
- Hart, S.L., 1995. A natural-resource-based view of the firm. *Acad. Manage. Rev.* 20 (4), 986–1014.
- Hartline, M.D., Ferrell, O., 1996. The management of customer-contact service employees: an empirical investigation. *J. Mark.* 60 (4), 52–70.
- Heskett, J.L., Jones, T.O., Loveman, G.W., Sasser, W.E., Schlesinger, L.A., 1994. Putting the service-profit chain to work. *Harv. Bus. Rev.* 72 (2), 164–174.
- Hsieh, L.F., Lin, L.H., 2010. A performance evaluation model for international tourist hotels in Taiwan: an application of the relational network DEA. *Int. J. Hosp. Manag.* 29, 14–24.
- Hu, L., Bentler, P.M., 1999. Cutoff criteria for fit indexes in covariance structure analysis: conventional criteria versus new alternatives. *Structural Equation Modeling: A Multidisciplinary Journal* 6, 1–55.
- Hu, C., Racherla, P., 2008. Visual representation of knowledge networks: a social network analysis of hospitality research domain. *Int. J. Hosp. Manag.* 27 (2), 302–312.
- Hua, N., 2016. E-commerce performance in hospitality and tourism. *Int. J. Contemp. Hosp. Manag.* 28 (9), 2052–2079.
- Huckestein, D., Duboff, R., 1999. Hilton hotels: a comprehensive approach to delivering value for all stakeholders. *Cornell Hotel Restaur. Adm. Q.* 40 (4), 28–38.
- Huselid, M.A., 1995. The impact of human resource management practices on turnover,

- productivity, and corporate financial performance. *Acad. Manag.* 38 (3), 635–672.
- Hwang, S., Chang, T., 2003. Using data envelopment analysis to measure hotel managerial efficiency change in Taiwan. *Tour. Manag.* 24 (4), 357–369.
- Ingram, P., Baum, J.A., 1997. Chain affiliation and the failure of Manhattan hotels, 1898–1980. *Adm. Sci. Q.* 42 (1), 68–102.
- Israeli, A.A., 2002. Star rating and corporate affiliation: their influence on room price and performance of hotels in Israel. *Int. J. Hosp. Manag.* 21 (4), 405–424.
- Jang, S., Park, K., 2011. Hospitality finance research during recent two decades: subjects, methodologies, and citations. *Int. J. Contemp. Hosp. Manag.* 23 (4), 479–497.
- Janković, S., Krivačić, D., 2014. Environmental accounting as perspective for hotel sustainability: literature review. *Tour. Hosp. Manag.* 20 (1), 103–120.
- Jaworski, B.J., Kohli, A.K., 1993. Market orientation: antecedents and consequences. *J. Mark.* 57 (3), 53–70.
- Jiang, Y., Ritchie, B.W., Benckendorff, P., 2017. Bibliometric visualisation: an application in tourism crisis and disaster management research. *Current Issues in Tourism* 1–33.
- Johns, N., Howcroft, B., Drake, L., 1997. The use of data envelopment analysis to monitor hotel productivity. *Progress in Tour. Hosp. Res.* 3 (2), 119–127.
- Kandampully, J., Suhartanto, D., 2000. Customer loyalty in the hotel industry: the role of customer satisfaction and image. *Int. J. Contemp. Hosp. Manag.* 12 (6), 346–351.
- Kaplan, R.S., Norton, D.P., 1992. The balanced scorecard: measures that drive performance. *Harv. Bus. Rev.* 33 (7/8), 172–180.
- Kaplan, R.S., Norton, D.P., 1996. Using the balanced scorecard as a strategic management system. *Harvard Business Review*, January–February 75–85.
- Karatepe, O.M., Sokmen, A., 2006. The effects of work role and family role variables on psychological and behavioral outcomes of frontline employees (2006). *Tour. Manag.* 27 (2), 255–268.
- Kennerley, M., Neely, A., 2002. A framework of the factors affecting the evolution of performance measurement systems. *Int. J. Oper. Prod. Manag.* 22, 1222–1245.
- Kim, J., Jang, S., 2012. Comparative analyses of hotel REITs: examining risk-return and performance characteristics. *Int. J. Contemp. Hosp. Manag.* 24 (4), 594–613.
- Kim, H.B., Kim, W.G., 2005. The relationship between brand equity and firms' performance in luxury hotels and chain restaurants. *Tour. Manag.* 26 (4), 549–560.
- Kirk, D., 1995. Environmental management in hotels. *Int. J. Contemp. Hosp. Manag.* 7 (6), 3–8.
- Kirk, D., 1998. Attitudes to environmental management held by a group of hotel managers in Edinburgh. *Int. J. Hosp. Manag.* 17 (1), 33–47.
- Klassen, R.D., McLaughlin, C.P., 1996. The impact of environmental management on firm performance. *Manage. Sci.* 42 (8), 1199–1214.
- Kohli, A.K., Jaworski, B.J., 1990. Market orientation: the construct, research propositions, and managerial implications. *The J. Mark.* 54 (2), 1–18.
- Koseoglu, M.A., 2016. Growth and structure of authorship and co-authorship network in the strategic management realm: evidence from the strategic management journal. *BRQ* 19 (3), 153–170.
- Koseoglu, M.A., Sehitoglu, Y., Craft, J., 2015. Academic foundations of hospitality management research with an emerging country focus: a citation and co-citation analysis. *Int. J. Hosp. Manag.* 45, 130–144.
- Koseoglu, M.A., Rahimi, R., Okumus, F., Liu, J., 2016. Bibliometric studies in tourism. *Ann. Tour. Res.* 61, 180–198.
- Kusluvan, S., Kusluvan, Z., Ilhan, I., Buyruk, L., 2010. The human dimension: a review of human resources management issues in the tourism and hospitality industry. *Cornell Hospitality Quarterly* 51 (2), 171–214.
- Lee, C.S., Chao, C.W., Chen, H.L., 2015. The relationship between HRM practices and the service performance of student interns: industry perspective. *South African Journal of Business Management* 46 (3), 1–10.
- Leung, X.Y., Sun, J., Bai, B., 2017. Bibliometrics of social media research: a co-citation and co-word analysis. *Int. J. Hosp. Manag.* 66, 35–45.
- Li, X., Ma, E., Qu, H., 2017. Knowledge mapping of hospitality research – a visual analysis using CiteSpace. *Int. J. Hosp. Manag.* 60, 77–93.
- Liao, H., Chuang, A., 2004. A multilevel investigation of factors influencing employee service performance and customer outcomes. *Acad. Manage. J.* 47 (1), 41–58 pp., 47.
- Martilla, J.A., James, J.C., 1997. Importance-performance analysis. *J. Mark.* 41 (1), 77–79.
- Mia, L., Patiar, A., 2001. The use of management accounting systems in hotels: an exploratory study. *Int. J. Hosp. Manag.* 20 (2), 111–128.
- Mohsin, A., Lengler, J., 2015. Service experience through the eyes of budget hotel guests: do factors of importance influence performance dimensions? *J. Hosp. Tour. Manag.* 23, 23–34.
- Morey, R.C., Dittman, D.A., 1995. Evaluating a hotel GM's performance (1995). *Cornell Hotel Restaur. Adm. Q.* 36 (5), 30–35.
- Morgan, R.M., Hunt, S.D., 1994. The commitment-trust theory of relationship marketing. *The J. Mark.* 58 (3), 20–38.
- Mowday, R.T., Steers, R.M., Porter, L.W., 1979. The measurement of organizational commitment. *J. Vocat. Behav.* 14 (2), 224–247.
- Narver, J.C., Slater, S.F., 1990. The effect of a market orientation on business profitability. *J. Mark.* 54 (4), 20–35.
- Neely, A., 2005. The evolution of performance measurement research: developments in the last decade and a research agenda for the next. *Int. J. Oper. Prod. Manag.* 25 (12), 1264–1277.
- Nerur, S.P., Rasheed, A.A., Natarajan, V., 2008. The intellectual structure of the strategic management field: an author co-citation analysis. *Strat. Manag. J.* 29 (3), 319–336.
- O'Neill, J.W., Mattila, A.S., 2004. Hotel branding strategy: its relationship to guest satisfaction and room revenue. *J. Hosp. Tour. Res.* 28 (2), 156–165.
- Oh, H., 2001. Revisiting importance-performance analysis. *Tour. Manag.* 22 (6), 617–627.
- Oliver, R.L., 1980. A cognitive model of the antecedents and consequences of satisfaction decisions. *J. Mark. Res.* 17 (4), 460–469.
- Orfila-Sintes, F., Crespi-Cladera, R., Martínez-Ros, E., 2005. Innovation activity in the hotel industry: evidence from Balearic Islands. *Tour. Manag.* 26 (6), 851–865.
- Orfila-Sintes, F., Mattsson, J., 2009. Innovation behavior in the hotel industry. *Omega* 37 (2), 380–394 pp., 37.
- Ottensmeyer, M., Gnoth, J., 2005. How to develop successful hospitality innovation. *Cornell Hotel Restaur. Adm. Q.* 46 (2), 205–222.
- Parameswaran, R., Yaprak, A., 1987. A cross-national comparison of consumer research measures. *Journal of International Business Studies* 18 (1), 35–49.
- Parasuraman, A., Zeithaml, V.A., Berry, L.L., 1985. A conceptual model of service quality and its implications for future research. *J. Mark.* 49, 41–50.
- Parasuraman, A., Zeithaml, V.A., Berry, L.L., 1988. Servqual: a multiple-item scale for measuring consumer perceptions of service quality. *J. Retail.* 64 (1), 12–40.
- Parasuraman, A., Zeithaml, V.A., Berry, L.L., 1994. Reassessment of expectations as a comparison standard in measuring service quality: implications for further research. *J. Mark.* 58 (1), 111–124.
- Park, K., Jang, S., 2014. Hospitality finance and managerial accounting research: suggesting an interdisciplinary research agenda. *Int. J. Contemp. Hosp. Manag.* 26 (5), 751–777.
- Park, K., Phillips, W.J., Canter, D.D., Abbott, J., 2011. Hospitality and tourism research rankings by author, university, and country using six major journals: the first decade of the new millennium. *J. Hosp. Tour. Res.* 35 (3), 381–416.
- Pereira-Moliner, J., Font, X., Tari, J.J., Molina-Azorin, J.F., Lopez-Gamero, M.D., Pertusa-Ortega, E.M., 2015. The Holy grail: environmental management, competitive advantage and business performance in the Spanish hotel industry. *Int. J. Contemp. Hosp. Manag.* 27 (5), 714–738.
- Phillips, P.A., 1999. Performance measurement systems and hotels: a new conceptual framework. *Int. J. Hosp. Manag.* 18 (2), 171–182.
- Phillips, P.A., Louvieris, P., 2005. Performance measurement in the SME UK hospitality, tourism and leisure industry: a balanced scorecard perspective. *Journal of Travel Research* 44 (2), 201–211.
- Phillips, P.A., Moutinho, L., 2014. Critical review of strategic planning research in hospitality and tourism. *Ann. Tour. Res.* 48, 96–120.
- Pilkington, A., Lawton, T.C., 2014. Divided by a Common language? Transnational insights into epistemological and methodological approaches to strategic management research in English-speaking countries. *Long Range Plann.* 47 (5), 299–311.
- Pine, R., Phillips, P.A., 2005. Performance comparisons of hotels in China. *Int. J. Hosp. Manag.* 24 (1), 57–73.
- Pnevmatikoudi, K., Stavrinooudis, T., 2016. Classification of hotel performance measurement indicators presented in international scientific research. *European Journal of Tourism Research* 12, 82–98.
- Podsakoff, P.M., Organ, D.W., 1986. Self-reports in organizational research: problems and prospects. *J. Manag.* 12 (4), 531–544.
- Podsakoff, P.M., MacKenzie, S.B., Paine, J.B., Bachrach, D.G., 2000. Organizational citizenship behaviors: a critical review of the theoretical and empirical literature and suggestions for future research. *J. Manag.* 26 (3), 513–563.
- Podsakoff, P.M., MacKenzie, S.B., Lee, J.Y., Podsakoff, N.P., 2003. Common method biases in behavioral research: a critical review of the literature and recommended remedies. *J. Appl. Psychol.* 88 (5), 879–903.
- Porter, M., Van der Linde, C., 1995. Green and competitive. Ending the stalemate. *Harv. Bus. Rev.* 73 (Sept-Oct), 120–134.
- Rachler, P., Hu, C., 2010. A social network perspective of tourism research collaborations. *Ann. Tour. Res.* 37 (4), 1012–1034.
- Reichheld, F.F., Sasser Jr., W.E., 1990. Zero defects: quality comes to services. *Harv. Bus. Rev.* 68 (5), 105–111.
- Russo, M.V., Fouts, P.A., 1997. A resource-based perspective on corporate environmental performance and profitability. *Acad. Manage. J.* 40 (3), 534–559.
- Sainaghi, R., 2010a. Hotel performance: state of the art. *Int. J. Contemp. Hosp. Manag.* 22 (7), 920–952.
- Sainaghi, R., 2010b. A meta-analysis of hotel performance, continental or worldwide style? *Tourism Review* 65 (3), 46–69.
- Sainaghi, R., 2011. RevPAR determinants of individual hotels: evidences from Milan. *Int. J. Contemp. Hosp. Manag.* 23 (3), 297–311.
- Sainaghi, R., Baggio, R., 2014. Structural social capital and hotel performance: Is there a link? *Int. J. Hosp. Manag.* 37 (2), 99–110.
- Sainaghi, R., Baggio, R., 2017. Complexity traits and dynamics of tourism destinations. *Tour. Manag.* 63, 368–382.
- Sainaghi, R., Mauri, A., 2018. The Milan world expo 2015: hospitality operating performance and seasonality effects. *Int. J. Hosp. Manag.* 72, 32–46.
- Sainaghi, R., Phillips, P., Corti, V., 2013. Measuring hotel performance: using a balanced scorecard perspectives' approach. *Int. J. Hosp. Manag.* 34 (1), 150–159.
- Sainaghi, R., Phillips, P., Zavarrone, E., 2017. Performance measurement in tourism firms: a content analytical meta-approach. *Tour. Manag.* 59, 36–56.
- Sainaghi, R., Phillips, P., Baggio, R., Mauri, A., 2018. Cross-citation and authorship analysis of hotel performance studies. *Int. J. Hosp. Manag.* 73, 75–84.
- Sanjeev, G.M., 2007. Measuring efficiency of the hotel and restaurant sector: the case of India. *International of Contemporary Hospitality Management* 19 (5), 378–387.
- Schaufeli, W.B., Salanova, M., González-Romá, V., Bakker, A.B., 2002. The measurement of engagement and burnout: a two sample confirmatory factor analytic approach. *Journal of Happiness studies* 3 (1), 71–92.
- Schaufeli, W.B., Bakker, A.B., Salanova, M., 2006. The measurement of work engagement with a short questionnaire: a cross-national study. *Educational and Psychological Measurement* 66 (4), 701–716.
- Schneider, B., Bowen, D., 1985. Employee and customer perceptions of service in banks: replication and extension. *J. Appl. Psychol.* 70 (3), 423–433.
- Schuler, R., Jackson, S., 1987. Linking competitive strategies with human resource management practice. *Acad. Manage. Executive* 1 (3), 207–219.

- Serrat, O., 2017. Social network analysis. In: Serrat, O. (Ed.), *Knowledge Solutions: Tools, Methods, and Approaches to Drive Organizational Performance*. Springer Singapore, Singapore, pp. 39–43.
- Sharma, A., Christie, I.T., 2010. Performance assessment using value-chain analysis in Mozambique. *Int. J. Contemp. Hosp. Manag.* 22 (3), 282–299.
- Silva, F.N., Rodrigues, F.A., Oliveira, O.N., Costa, LucianodaFontoura, 2013. Quantifying the interdisciplinarity of scientific journals and fields. *Journal of Informetrics* 7 (2), 469–477.
- Singh, J., Verbeke, W., Rhoads, G.K., 1996. Do organizational practices matter in role stress processes? A study of direct and moderating effects for marketing-oriented boundary spanners. *J. Mark.* 60 (6), 69–86.
- Sourouklis, C., Tsagdis, D., 2013. Workforce diversity and hotel performance: a systematic review and synthesis of the international empirical evidence. *Int. J. Hosp. Manag.* 34, 394–403.
- Sun, L.-Y., Aryee, S., Law, K., 2007. High-performance human resource practices, citizenship behaviour, and organisational performance: a relational perspective. *Acad. Manage. J.* 50 (3), 558–577.
- Tajeddini, K., 2010. Effect of customer orientation and entrepreneurial orientation on innovativeness: evidence from the hotel industry in Switzerland. *Tour. Manag.* 31 (2), 221–231.
- Teece, D.J., Pisano, G., Shuen, A., 1997. Dynamic capabilities and strategic management. *Strat. Manag. J.* 18 (7), 509–533.
- Tsai, H., Pan, S., Lee, J., 2011. Recent research in hospitality financial management. *Int. J. Contemp. Hosp. Manag.* 23 (7), 941–971.
- Tsang, N., Hsu, C., 2011. Thirty years of research on tourism and hospitality management in China: a review and analysis of journal publications. *Int. J. Hosp. Manag.* 30 (4), 886–896.
- Tsaur, S.H., 2001. The operating efficiency of international tourist hotels in Taiwan. *Asia Pacific Journal of Tourism Research* 6 (1), 73–87.
- Tsaur, S.-H., Lin, Y.-C., 2004. Promoting service quality in tourist hotels: the role of HRM practices and service behavior. *Tour. Manag.* 25 (4), 471–481.
- Van Eck, N.J., Waltman, L., 2010. Software survey: VOSviewer, a computer program for bibliometric mapping. *Scientometrics* 84 (2), 523–538.
- Venkatraman, N., Ramanujam, V., 1986. Measurement of business performance in strategy research: a comparison of approach. *Acad. Manage. Rev.* 11 (4), 801–814.
- Waltman, L., Van Eck, N.J., 2013. A smart local moving algorithm for large-scale modularity-based community detection. *The European Physical Journal B* 86 (11), 471.
- Wang, Y.C., Chung, Y., 2015. Hotel brand portfolio strategy. *Int. J. Contemp. Hosp. Manag.* 27 (4), 561–584.
- Wang, F.C., Hung, W.T., Shang, J.K., 2006. Measuring the cost efficiency of international tourist hotels in Taiwan (2006). *Tour. Econ.* 12 (1), 65–85.
- Wang, C.H., Chen, K.Y., Chen, S.C., 2012. Total quality management, market orientation and hotel performance: the moderating effects of external environmental factors. *Int. J. Hosp. Manag.* 31 (1), 119–129.
- Wernerfelt, B., 1984. A resource-based view of the firm. *Strat. Manag. J.* 5 (2), 171–180.
- Wijeyesinghe, B.S., 1993. Breakeven occupancy for a hotel operation. *Management Accounting* 71 (2), 32–33.
- William, L.J., Anderson, S.E., 1991. Job satisfaction and organizational commitment as predictors of organizational citizenship and in-role behavior. *J. Manag.* 17 (3), 601–617.
- Ye, Q., Li, T., Law, R., 2013. A coauthorship network analysis of tourism and hospitality research collaboration. *J. Hosp. Tour. Res.* 37 (1), 51–76.
- Yilmaz, Y., Bititci, U.S., 2006. Performance measurement in tourism: a value chain model. *Int. J. Contemp. Hosp. Manag.* 18 (4), 341–349.
- Yoo, M., Lee, S., Bai, B., 2011. Hospitality marketing research from 2000 to 2009: topics, methods, and trends. *Int. J. Contemp. Hosp. Manag.* 23 (4), 517–532.
- Zarezadeh, Z., Benckendorff, P., Gretzel, U., 2018. Lack of progress in tourist information search research: a critique of citation behaviour and knowledge development. *Current Issues in Tourism* 1–15.
- Zeithaml, V.A., 1988. Consumer perceptions of price, quality, and value: a means-end model and synthesis of evidence. *The J. Mark.* 52, 2–22.
- Zeithaml, V., Berry, L.L., Parasuraman, A., 1996. The behavioral consequences of service quality. *J. Mark.* 60 (2), 31–46.
- Zhang, J., 2015. Tourism research Co-authorship networks in China. *Journal of China Tourism Research* 11 (4), 424–439.
- Zhao, H., Zhang, F., Kwon, J., 2017. Corporate social responsibility research in international business journals: an author co-citation analysis. *International Business Review*.
- Zhu, Y., Sun, L.Y., Leung, A.S., 2014. Corporate social responsibility, firm reputation, and firm performance: the role of ethical leadership. *Asia Pacific J. Manag.* 31 (4), 925–947.
- Zupic, I., Cater, T., 2015. Bibliometric methods in management and organization. *Organizational Research Methods* 18 (3), 429–472.