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Mapping the ‘intellectual structure’ of research on human resources in the ‘tourism and hospitality’ management scientific domain: reviewing the field

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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

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Abstract:

Purpose - The purpose of this paper —based on the conviction that the human resource is by far the most strategic or distinctive resource available to firms competing in hospitality and tourism industries— is to objectively analyze the research on HR developed in the domain of tourism and hospitality management between 1997-2016.

Design/methodology/approach – ‘Bibliometric’ methods are utilized: ‘document citation and co-citation analyses’, as well as ‘multivariate and social network analyses (SNA).’

Findings - The paper provides an interesting inventory of the theoretical foundations of knowledge developed around HR in the field under study by different theoretical frameworks and scientific disciplines, such as marketing or psychology. However, its main contribution is to identify an important ‘gap’ in the literature in the specific area of management.

Research limitations/implications - The present study has several limitations resulting from the utilization of ‘bibliometric’ methods applied in the analyses performed. As for the implications, these are more than obvious.

Originality/value - The authors believe that research developed here provides —through a kind of ‘meta-analysis’— a valuable outlet from which future researchers could benefit, giving them easier access to the theoretical foundations on which HR research in the field in question is based. Our work also suggests some paths for future development or research in the field within the context of hospitality and tourism industries.

Keywords Human resources, Hospitality and tourism industries, Bibliometrics, Social network analysis (SNA), Citation analysis, Document co-citation analysis (DCA),

Paper type Research paper

Introduction

Human resources (HR) are by far the most strategic or distinctive type of resource available to firms competing in hospitality and tourism industries. Indeed, from the RBV of the firm, the achievement of competitive advantages largely depends on the availability of sufficient as well as distinctive resources and capabilities to face the possible threats from the business environment. Among the most valuable resources for firms competing in the hospitality industry are HR, on whose skills, training and experience the chances of firm success very often depend (Collins, 2007; Kusluvan et al., 2010). In turn, capabilities—including dynamic capabilities— are understood as collective competencies or skills developed internally from organizational routines. In this respect, it seems more than evident that human resources play a predominant role in the creation of such organizational routines and capabilities. Similarly, as stated by Kusluvan et al. (2010, p. 172) “models developed in
the service management literature, such as the gap model of service quality (Parasuraman et al., 1985), the service profit chain model (Heskett et al., 1994), and many others (see Ghozbian et al., 1994), acknowledge the role employees may play in service quality, customer satisfaction, and organizational performance.”

However, what do we really know about research developed in the last two decades in the field of HR with regard to the industries mentioned above? Does it have a multidisciplinary nature? Which contributions have received the highest number of citations during the period analyzed and can consequently be considered the most influential in the future consolidation and evolution of the field under study? Which cognitive or intellectual structure underpins such research? Is it possible to identify some sort of gap in the literature? Which are the future directions towards which the field might move?

Given the crucial importance of the human factor and its suitable management in the success of both corporate and business strategies of any firm in whatever industry, and even more so in hospitality and tourism industries, and starting from the assumption that the future advancement of a field “is, to a large degree, dependent upon existing scholarship and the work of contemporary contributors generating new knowledge” (Griffith et al., 2008, p. 1220), the aim of this research is to try to answer the preceding questions mapping the ‘knowledge base’ or ‘cognitive structure’ of research on HR developed in the scientific domain of ‘tourism’ and ‘hospitality’ management. More precisely, and seeking to achieve our aim, a total of 108 research papers on HR published in the three journals on tourism and hospitality management included in the Journal Citation Report® (JCR) within the management category –“Tourism Management”, “Cornell Hospitality Quarterly”; and “International Journal of Contemporary Hospitality Management”, with impact factors of 4.707, 2.657 and 3.166, respectively (2016 JCR Social Sciences Edition)– between 1997 and 2016 –until the database consultation date– were analyzed. The analysis uses various analytical instruments, such as ‘social network analysis (SNA)’, ‘document citation and co-citation analyses’, as well as some techniques of multivariate analysis, among which cluster analysis deserves special mention.

These two analysis methods –citation and co-citation analyses of authors, documents, keywords, etc.– have been applied not only in other management fields but also in very recent studies developed in the fields of hospitality and tourism, as well as in human resources (Cheng, 2016; Kiseoglu et al., 2016a, b; Markoulli et al., 2017; Okumus et al., 2017), but in a separate manner; hence the interest of this research. Also, based on the conviction that understanding past patterns in the literature can allow us to design future research directions, our paper provides both an interesting inventory of research on HR in the tourism and hospitality management domain and possible directions that such research could take in the future.

Our investigation is structured as follows. After this introduction, Section 2 adopts the format of a ‘literature review’ to argue the utility and stages of the analysis techniques mentioned above –‘co-citation analysis’ in particular– when it comes to evaluating scientific literature. The next section –Section 3– is about the systematic gathering of “data” and the “methodology” applied. The result of document citation and co-citation analyses (DCA), a reticular representation of the ‘pillars’ or ‘intellectual’ or knowledge’ base of the field under scrutiny or, as well as the outcomes of the multivariate and social network analyses (SNA), are shown in Section 4. The last section –Section 5– summarizes the principal conclusions, implications, and future lines of research as well as the limitations faced in research undertaken.

**Literature review**

In recent years, academic literature has experienced a great amount of research which has as their main goal to explore the “intellectual structure” of domains other than the discipline, called
scientometrics, dedicated “to the study of measuring and analyzing science, technology and innovation”. These “works” apply some of the analytical techniques and methods often used by this scientific discipline –“co-word analysis”, “citation and co-citation analyses of authors or documents”, “journal co-citation analysis”, SNA, etc.– in order to analyze and visualize the ‘cognitive structure’ or ‘knowledge base’; detect the presence of the ‘so-called’ ‘scientific schools’ or ‘invisible colleges’ and ‘academic networks’ (Crane, 1972); identify possible ‘fronts of research’ (de Solla Price, 1965); or carry out studies on authorship, production, patterns of collaboration and citation/co-citation, etc., regarding a scientific domain or discipline.

In general, it can be established that, as a ‘discipline’ advances and achieve to reach a certain level of development, the fascination to know the ‘state-of-the-art’ often grows among its scholars and investigators who thus, seek to comprehend –through analysis of research carried out by a great amount of authors on a given theme– which contributions have had a higher influence on its evolution or have managed to capture the greatest attention of the researchers.

In effect, as disciplines evolve the output of scientific work increases. “It is then common for scholars to periodically seek to make some sense of the knowledge produced and accumulated, to identify novel contributions, detect trends and research traditions, understand which topics are addressed, the theories and methods employed, delve into the intellectual structure of the discipline and its knowledge base, and prospect areas of future inquiry” (Portugal-Ferreira et al., 2014, p. 1902). The academic literature makes it possible to find a considerable amount of studies oriented to try to characterize and analyze the different ‘fronts of research’ detected within a field or scientific domain. Nevertheless, it is worth highlighting that most of the aforementioned contributions –whose nature is ‘qualitative’ in essence– frequently come as a product of the ‘reflections’ or ‘critical judgment’ of one or more researchers supported on the accumulated knowledge that they own about the domain or discipline itself”. A possibility therefore exists of falling into a “lack of scientific rigor” and a “high degree of subjectivity” in their interpretations.

Even though it is positioned within the above type of studies; or, expressed differently, focused on the identification of existing ‘research fronts’ within a scientific field or domain, the investigation undertaken here adopts however –unlike most of the contributions mentioned so far– a ‘quantitative’ perspective to reach its aims, thus introducing a measure of ‘objectivity’ in the process of evaluation of scientific literature, namely: the “analysis of co-citation”.

Introduced in 1973 by Henry Small, ‘co-citation analysis’ starts from the premise that between two documents which are co-cited there would be a certain ‘thematic affinity’, as well as a ‘cognitive connection’ in relation to the “domain” or “field” examined; and that the higher the frequency with which these documents are cited jointly, the greater the similarity or relationship existing between them will be (Cawkell, 1976; Garfield, 1978), it being possible to regard this documents as pertaining to the same ‘research front’. Obviously, the intensity of the aforesaid relationship or linkage is provided by the amount of source documents containing the same pair of cited documents among their references” (García-Lillo et al., 2016, p. 1035). If it is assumed, as Small (1973, p. 265) point out, that highly-cited contributions symbolize the key ideas, experiments or methodologies developed in a discipline, these patterns of co-citation could be utilized to map out in great detail, the relationship between these key ideas.

Figure 1 exhibits the “stages” that the analytical technique mentioned above consists of, but understanding the method from a “general” perspective or, in other words, not focusing the attention exclusively on document co-citation analysis (DCA).
Methodology

Data source and the sample of documents

The primary data base used to obtain the source documents for the realization of the present research was the ‘Social Sciences Citation Index’ (SSCI), powered by the Institute for Scientific Information (ISI), founded by Eugene Garfield in 1960.

Accordingly, to “characterize” and “visualize” the cognitive structure or knowledge base of research on HR in the realm of tourism and hospitality management, we analyze a total of 108 manuscripts published in the journals: “Tourism Management”, “Cornell Hospitality Quarterly”, and “International Journal of Contemporary Hospitality Management” between 1997 and 2016. Figure 2 shows the journals where the papers appear, by year of publication.

In particular, these documents contained in total 6,518 cited references, with an average of 60.35 citations by paper. The distribution of frequencies for the aforementioned ‘references’, according to the publication year, can be seen in Figure 3.

The database consultation date was October 3rd 2016. The ‘search equation’ used was the expression: ‘HUMAN RESOURC*’ in the field ‘TOPIC’ of Web of Science (WoS) for each of the journals examined.

Bibexcel® and the treatment of bibliographic records

The retrieved documents were analyzed through Bibexcel®, a software specifically developed to handle bibliographic records. Bibexcel® offers, among many other features or functionalities, the possibility to analyze “in combination”, within a same record, the information extracted from diverse fields –also, the field of references–, carrying out counts by frequency, analyzing co-occurrence between different units of analysis –“keywords”, “documents”, “authors”, “journals”– as well as the appliance of the technique of “bibliographic coupling.”

In our investigation, Bibexcel® was utilized to perform not only the counts by frequency of the citations included in the papers that integrate the sample –a total of 108 papers– but also to generate the ‘document co-citation matrix’. The ‘intellectual structure’ of the field under examination from the perspective offered by ‘social network analysis (SNA)’ was approached using the “matrices” obtained through Bibexcel® proceeding with their visualization by means of VOSviewer®. The software UCINET® 6 for Windows was also used to obtain different network “indicators”, all of them related to social network analysis (SNA). Finally, the different multivariate techniques of analysis carried out were evolved using the “package” IBM® SPSS® Statistics v.24.
It is worth highlighting at this point that analysis of scientific maps cannot be applied to the gross data retrieved from Web of Science (WoS) or Scopus (García-Lillo et al., 2017a); a “pre-processing” of the information is necessary, since the data usually contain inconsistencies and errors, mainly in regards to its “coding”. On some occasions, there are elements which symbolize the same object. This is, for example, the case of the name of an author or the title of a journal which might appear codified or written in a considerable “diversity of modes” (Cornell Hosp Q or Cornell Hospitality Quarterly; Huselid, M or Huselid, Mark A) or the diverse “editions” of a unique book. Hence, why data contained in the field of cited references underwent a “careful” normalization process in order to ensure their accuracy.

**Document selection and the calculation of the co-citation and proximity matrices**

With regard to the selection of the documents to be introduced in our analysis, the impossibility to work with all data and the need to establish a cut-off point to select the most influential works, led us to the decision to consider the documents cited at least 3 times, thus generating a “co-citation matrix”, \( C \), of dimensions 164x164, which would show the “number of times” –“raw co-citation counts”– in which the aforementioned documents, considered in pairs, were “co-cited” by the ‘source’ or ‘citing’ papers analyzed.

The next step, once the above matrix \( C \) has been calculated, consists in achieving a “proximity matrix” on which there is a possibility to apply multivariate techniques of analysis trying to diminish the “dimensionality” of data, Pearson’s r correlation coefficient being, in spite of the “criticisms” received, one of the “between pairs” similarity measures most often used among a wide range of possible strategies of “normalization.”

In the investigation developed here, and because of our particular interest in applying social network analysis (SNA) as the priority technique of analysis to obtain the aforementioned “proximity” or “similarity matrix” –which will be referred to as matrix \( S_1 \)– a decision was made to use the software VOSviewer® at first. This software is a freely available computer program specifically designed for constructing and representing large maps of scientific knowledge paying singular attention to their graphical visualization. The tool has been developed at the University of Leiden, the oldest university in the Netherlands, by the “Centrum voor Wetenschap en Technologie Studies (CWTS)” and can be used free of charge. The positioning of elements on the map is carried out through the VOS positioning technique, which constructs a “proximity or similarity matrix” as of a “co-occurrence matrix” by using a value known as “association strength” as the measure of normalization. The VOS technique builds a two-dimensional map where the analyzed units –authors, documents, words, journals, etc. – are placed just like that the distance between each pair of them accurately reveals its similarity level. On the “map” each “unit” is depicted through a tag and a circle. The more significant a unit is, the greater the tag and the area of its circle. The software also exhibits the “clusters” into which such “units” are integrated according to the “proximity” or “probabilistic affinity index” (PAI) calculated, each “cluster” being identified through the use of a different color in their reticular representation.

The results obtained in the previous analysis –concerning the identification of the various clusters– were validated by means of multivariate analysis using the statistical package IBM® SPSS® Statistics v.24. In particular, a hierarchical clustering analysis was performed on the data contained in a second similarity matrix, \( S_2 \). To construct this matrix, we decided not to utilize “Pearson’s r coefficient”, instead we used a “relative” value known as CoCit-Score (Gmür, 2003), as “measure” to achieve a “similarity matrix”, \( S_2 \), in such a way that the “similarity” between each couple of documents (\( P_i, P_j \)) would be obtained by their “absolute frequency of co-citation” normalized in relation to the “mean” and the “minimum” of citations reached by each one considered independently.
Each entry $S_{ij}$ is now contained in the “range” $[0, 1]$, where a “high” score of $S_{ij}$ is indicative of a “strong similarity” between pairs.

Note that the “entries” $C_{ii}$ located on the “main diagonal” of matrix $S_2$ would be made to correspond with the amount of citations obtained by “paper” $P_i$.

The analysis is completed with the use of the software UCINET® 6 for Windows by means of which –despite not being utilized to represent the matrix $S_2$—several network “indicators”, mainly referring to the degree of centrality, closeness and betweenness, between the various nodes, so that the network can be properly characterized, were calculated.

Results and discussion

The outcomes achieved once the different “stages” or “phases” comprised in analyses that have been developed are provided below.

Table 1 exhibits an “inventory” of the 164 most-cited documents by the 108 articles on HR published during the period under examination in the three leading journals examined—“Tourism Management”, “Cornell Hospitality Quarterly”, and “International Journal of Contemporary Hospitality Management”—resulting of our citation analysis.

| Table 1. Insert about here |

The “descriptive” analysis of the documents mentioned above provides the following “research” results:

1) The book—in its different “editions”—by Hair et al. (1998) and the paper by Baron and Kenny (1986) top the ranking of most-cited documents with 21 and 14 citations.

2) In this order, “the papers or books of Anderson and Gerbing (1988), Fornell and Larcker (1981), Nunnally (1978), Bagozzi and Yi (1988), Podsakoff et al. (2003), Kuslivan et al. (2010), Jöreskog and Sörbom (1996) and Heskett et al. (1994), Delery and Doty (1996), Parasuraman et al. (1988), Huselid (1995) and Hartline and Ferrell (1996)” —the last five research papers being tied on 7 citations each—complete the top ten.

3) Finally, with regard to the total number of most-cited documents, 132 “papers”, 2 “chapters in books”, and 30 “books” comprises “the list”.

Table 2 shows the “journals” where the aforesaid “papers” were published.

| Table 2. Insert about here |
In particular, we can observe that a considerable percentage of this “papers” has been published in the “journal” under examination: “International Journal of Contemporary Hospitality Management” (18.18%). The second place in order of importance corresponds to the articles published in “International Journal of Hospitality Management” (12.12%), the third position being occupied by those appearing in “Tourism Management” (8.33%). As for the rest of “papers”, two other journals –“Journal of Marketing” (7.58%) and “Cornell Hotel & Restaurant Administration Quarterly” (7.58%)– account for another 15% of the total, a percentage that goes up to “nearly” 30% if “papers” published in “Journal of Applied Psychology” (4.55%), “The Academy of Management Journal” (4.55%), and “Cornell Hospitality Quarterly” (3.78%) are considered. Among the rest of the publishing journals of the remaining 33.33% mentioned in Table 2 are journals such as “Journal of Marketing Research”, “The Academy of Management Review” or “Psychological Bulletin”.

As for the results of the “document co-citation analysis (DCA)” carry out, the application of “the VOS positioning technique” through VOSviewer® –bearing in mind that this analytical “technique” lets to build a “similarity matrix”, $S$, as of a “co-occurrence matrix”– allowed us to obtain the results specified below.

Figure 4 exhibits a visual representation of the “cognitive structure” of research on HR undertaken in the scientific domain of tourism and hospitality management.

Figure 4. Insert about here

In particular, and regardless of works linked to data analysis –such as those written by Hair et al. (1998), Baron and Kenny (1986) or Fornell and Larcker (1981), which hold central positions, or others such as those of Anderson and Gerbing (1988) or Podsakoff et al. (2003), situated more to the right on the graph– as well as of others considered essential in the research focused on HRM, including those of Huselid (1995), Delery and Doty (1996), Pfeffer (1994), Delaney and Huselid (1996) or Arthur (1994), another three clusters emerge during the analyses developed, namely: 1) the works of Riley et al. (2002), Lucas (2004), Esichaikul and Baum (1998), Baum et al. (1997) or Wong and Ko (2009), among others, appear in purple. These papers are also identified in the hierarchical clustering analysis applied on Matrix $S_2$, though divided into two groups. A first subgroup brings together the studies by Esichaikul and Baum (1998), Baum (1994) or Baum et al. (1997) and their book: “Policy Dimensions of Human Resource Management in the Tourism and Hospitality Industries.” All of these works deal with the political dimension and the involvement of governments in the development of HR in a sector like the tourism industry, which has so much relevance in terms of employment and contribution to the GDP in many countries. The second subgroup is divided into two groups: a first subgroup brings together the works of Szivas et al. (2003), Szivas and Riley (1999) and Riley et al. (2002) about Employment and Tourism; for its part, the second subgroup gathers the papers written by Choy (1995), Wong and Ko (2009), Riley et al. (1998), Lucas (2004) and Baum (2006) on labor relations, employees’ perception of WLB, organizational commitment, or tourism employment quality. In their research about employees’ perceptions in relation to work-life balance issues, Wong and Ko (2009, p. 202) propose, for example, “an effective management system and culture that enables employees to reconcile their personal and family matters more effectively”; 2) the nodes represented in light blue identify the works of Kay and Russette (2000), Boyatzis (1982), Sandwith (1993), Tas (1988) or Fjelstul and Tesone (2008), among others. As in the previous case, these papers are divided into two groups in the cluster analysis. Those by Okeiyi et al. (1994), Tas (1988), Kay and Russette (2000), Tas et al. (1996), and Sandwith (1993) form the first group. The second group brings together the papers written by Fjelstul and Tesone (2008), Asree et al. (2010) and Boyatzis (1982). Attention is paid to the managerial skills required for managers to be competent and to achieve a successful performance in all of these works; and 3) shown in yellow are the works of
Mary Jo Bitner (1990), Bettencourt and Brown (1997), Morgan and Hunt (1994) or Oliver (1997), to quote but a few. The focus in all these studies—from a marketing perspective—is placed on issues associated with the link between customer satisfaction and delivered service quality, and relationship marketing or the Commitment-Trust Theory of Relationship Marketing proposed by Morgan and Hunt (1994). The hierarchical clustering analysis also identifies such works as belonging to the same cluster.

Effectively, with regard to the above, we can highlight that the hierarchical clustering analysis identifies the existence of certain subgroups in relation to some of the groups identified through the implementation of the VOS positioning technique. We can also identify clusters in the group of works considered crucial in the HRM literature, such as those written by Huselid (1995) or Deleary and Doty (1996). An example is the cluster that includes the works of Solnet and Hood (2008), Chen and Choi (2008) and Lucas and Deery (2004) about the differences in work values across three generations of managers and supervisors in the hospitality industry or other generational issues around the social segment of the so-called ‘millenials’ as hospitality employees. Or the cluster including the studies of Barron (2008) or Hughes and Rog (2008) about talent management. The works of Mathieu and Zajac (1990), Allen and Meyer (1990), Meyer and Allen (1991), and Meyer et al. (1993), focused on organizational commitment can also be identified as a potential subgroup within this cluster.

However, the analysis developed and the identified “intellectual structure” has certain drawbacks due to the absence of key works on essential analytical perspectives within the field of strategic management, such as the dynamic capabilities approach or works from the organization theory and related to organizational learning or organizational ambidexterity. This clearly reveals the scarcity of works devoted to the role that HR and their adequate strategic management—HR are sometimes an obstacle and, on other occasions, they act as true drivers in the development of new capabilities—or organizational learning itself as well as the investment in human capital as the ultimate support of knowledge in the firm can play in the development of dynamic capabilities that favor both change and adaptation of industry firms to the business environment or the development of ambidextrous organizations (Patel et al., 2013; Swart et al., 2016; Úbeda-García et al., 2016; among others). By way of example, organizational learning can be understood as a basic capability to develop other dynamic capabilities, such as proactive environmental management, which have proved to be so important in hospitality and tourism industries.

In short, it is our conviction that the analysis undertaken provides an interesting inventory of HR knowledge developed in the tourism and hospitality management domain. Nevertheless, and perhaps more importantly, it identifies a possible “gap” in the literature, curiously enough in the area of management compared to other disciplines. And that, although the ‘journals’ examined occupy “relevant” positions in the management category of the Journal Citation Report©.

The study carried out supplies a relatively deep understanding of the intellectual base of the field under study, enabling us to infer the nature of research developed therein, which in turn tells us, to some extent, where we stand at present. It additionally gives scholars and researchers the chance to identify possible research opportunities for the future derived from: 1) the observation of certain contradictions between the evidence found and the researcher’s own intuition; 2) the existence of barely related subfields—in terms of their theoretical bases or structures—between which an integration process could begin. Figure 4 shows, for example, that there is little relationship between the theoretical foundations of research into labor relations, employees’ perception of WLB or organizational commitment and research on HRM developed in the area of management; and 3) the already-mentioned absence of key works dedicated, among other things, to fundamental analytical perspectives in the field of strategic management, which in turn shows the existence of significant theoretical gaps. Concerning this last issue, it is possible to detect the existence of such gaps with...
regard to HRM research in the field of management, which encourage us to suggest some paths for future research within the context of hospitality and tourism industries.

**Link between HRM and organizational performance**

Firstly, future research developed in the field should try to come even closer to the topics most commonly investigated around HRM in the area of management; in short, seeking to understand the “mechanisms that lead HR policies and practices to influence unit-level performance” (Nyberg et al., 2014, p. 318). In this way, “scholars are interested in understanding how HRM initiatives affect the unit’s human capital, which, in turn, has an impact on performance” (Bowen and Ostroff, 2004; Huselid and Becker, 2011; among others). The bulk of research in HRM has focused on the liaison between “HRM practices” –HIWPS, high-commitment or performance-oriented work systems– and organizational performance. For instance, using a ‘meta-analytic approach’, Hong et al. (2014) point out that service-oriented HRM practices are more positively correlated with service climate than general HRM practices (Jackson et al., 2014, p. 29). In our opinion, such findings can revitalize attention in understanding ‘context-appropriate HRM systems’ relationship.

**HRM, organizational capabilities, and strategic management**

A number of intermediate variables play an important role in the causal relationship between HR and performance. Indeed, “employee responses are not the only mediating process through which HRM systems can help achieve competitive advantages” (Jackson et al., 2014, p. 24); HRM systems may also help develop “emergent capabilities” –including dynamic capabilities— which, “in turn, contribute to effectiveness and organizational performance”. As Jackson et al. (2014) point out, “several studies provide support for this view about the way in which HRM systems work” (p. 24). For instance, “network-building HRM systems can increase financial performance by promoting top management teams’ social capital” (Collins and Clark, 2003); HPWS can not only have an effect on financial performance by increasing employees’ flexibility to react when facing different strategies (Beltrán-Martí et al., 2013), but also develop social capital (Jiang and Liu, 2015) or organizational ambidexterity (Patel et al., 2013). This is yet another possible path to consolidate strategic HRM, an area scarcely developed within the context of tourism and hospitality.

The emphasis on human capital has enabled traditional HRM researchers to better connect with strategy researchers (Wright et al., 2014). Wright and McMahan (2011) noted that strategy researchers increasingly attend to human capital as a critical “strategic resource”, and yet they focus to a much lesser extent on the practices that acquire, motivate, develop, and retain that human capital. HRM researchers, however, stress the HRM practices-performance relationship rather than human capital itself. Consequently, bringing these two complementary perspectives and knowledge bases together can result in significantly greater progress than is likely to be obtained by these two fields progressing independently of one another (Nyberg et al., 2014).

**Dynamic human resources nature and multilevel analysis**

Precisely because of the dynamic nature of HR and because the composition of work systems will probably lead to different results depending on the context, authors have insisted above on the importance of better understanding the relationship—HR systems should be regarded as a relational construct— between the context and the suitability of these HR systems for hospitality and tourism industries. This forces scholars to take into account the linkage between “individual”, “organizational”, “institutional”, and “national” or “international” contexts that shape human resources. Although the field of HRM began with a focus on the organization level of analysis, its evolution has led researchers to increasingly recognize the requisite multilevel nature of all aspects. The
field has evolved to increasingly recognize that the phenomena we study “cross organizational, unit, and individual actors” (Wright and Ulrich, 2017).

Empirical research has more and more often brought multilevel analyses to bear. Studies such as those carried out by Nishii et al. (2008) or den Hartog et al. (2013) have simultaneously addressed organization and individual-level data. Nevertheless, it is our opinion that these multilevel analyses have not yet been sufficiently developed in terms of research into human resources undertaken within the fields of tourism and hospitality management.

HR and environmental sustainability

HRM scholars have only lately begun to reflect on how HR systems can contribute to the environmental performance of firms (Jackson and Seo, 2010; Renwick, et al., 2013; Paillé et al., 2014). Martínez del Río et al. (2012, p. 842) find, for example, that “HR systems indirectly influence financial performance mediated through their consequences and implications on proactive natural environmental strategies”. Therefore, given the vital importance that development of “sustainable tourism” has for tourism and hospitality, we see the link between HRM and sustainability as a potential interesting path to pursue in future research.

Finally, Table 3 shows the value of the different network indicators calculated for some of its nodes – particularly, the 15 nodes with higher indices in each case – for which the software UCINET® 6 for Windows was used. These nodal indices or indicators – centrality degree, closeness and betweenness – allow us to complete, from the approach offered by “social network analysis (SNA)”, the analyses performed.

Table 3. Insert about here

Conclusions, implications, limitations, and future lines of research

The research work developed here, can be mainly framed among those which aim to “identify”, “analyze” and “visualize” the “knowledge base” or “cognitive structure” of a scientific domain, discipline or sub-discipline by using ‘bibliometric’ methods. The main contribution made by this type of research to the academic literature derives from the use of an “objective methodology” – “co-citation analysis” – to reveal the existence of possible “research fronts” in an area of knowledge or discipline (Eom, 2008). The method also provides scholars with an “adequate” instrument for the identification of new directions in the investigation and the prevailing paradigms therein, as well as to frame their contributions within a specific domain or discipline. What is more, the aforementioned “methodology” could be extremely “useful” for “novel researchers”, since its use makes it easier for them to identify the most important contributions related to an area, domain or discipline and the way in which such contributions may be structured.

In our specific case, the object of study was research developed with regard to HR in the scientific domain of “tourism and hospitality management”. This allowed us to identify a number of strands which have characterized research in recent years. Unlike other systematization proposals (e.g., the paper written by Kusluvan et al. (2010) under the title of “The Human Dimension: A Review of Human Resources Management Issues in the Tourism and Hospitality Industry”) and as explained above, our study additionally uses an empirical method. However, and most importantly – as highlighted in the results and discussion section – it identifies a significant gap in the literature in the area of management.
Indeed, the absence of analytical perspectives related, for example, to the important role that HR—one of the built-in components in the RBV of the firm—is the human aspect: “the firm-specific and causally ambiguous human capital, and socially complex behaviors and interactions associated with him constitute important forms of valuable, rare, inimitable, and irreplaceable resources” (Coff and Kryscynski, 2011, p. 1431)—can eventually play in the development of dynamic capabilities (Ployhart and Moliterno, 2011) that favor both change and the adaptation of industry firms to the business environment, reveals not only the need but also the opportunity to undertake a greater research effort in this area. In this respect, we agree, for example, with authors such as Hong et al. (2014) when they state that, “although strategic capabilities are considered an important intermediate outcome of HRM, no substantive effort has been devoted to delineating how HRM can contribute to the creation of strategic capabilities”. Even more so in hospitality and tourism industries, where these research works are particularly scarce.

Therefore, the implications of the results reached in our research are clear. At least, from a theoretical “point of view” or “perspective”: more and better investigation is necessary. Mainly, regarding patterns for future research suggested in this manuscript on the role that HR, as “strategic” or “distinctive” assets, can play in the competitiveness of firms competing in hospitality and tourism industries.

Logically, our study inevitably suffers from certain limitations, some of which, as in many other similar research works, are a consequence of the “research design” while others result from the ‘bibliometric’ methods implemented in analyses developed. This last type of constraint is due to the fact that these analytical techniques do not depend on the context where they take place. Moreover, and regardless of the ‘grounds’ why authors cite, the theoretical foundations as of the ‘sociology’ and ‘philosophy’ of science are identical: when researchers cite one another’s papers—acknowledging previous work that they judge to be of particular usefulness and significance—they create a sprawling but navigable network of cognitive connections, creating and repeating old links or trying to find new linkages between some previous contributions” (García-Lillo et al, 2017b, p. 1805). An additional constraint is that a publication requires some time to accumulate influence within an area of research (p. 1805). It is likewise not easy—with respect to the analyses performed—to refute the presence of a certain degree of subjectivity around the choice about the amount of documents considered in the analysis. As for the rest of limitations—those related to “research design”—, the most important one derives from the consideration of only three scientific journals to undertake the empirical study. Obviously, certain “changes” might have happened if the “range” of “journals” had been expanded. Nonetheless, our choice is in keeping with the goal pursued, i.e. analyzing the three journals about tourism and hospitality management included within the category of “management” of the Journal Citation Report©. The papers published in other reviews or journals such as “International Journal of Hospitality Management”, “Tourism and Hospitality Research”, “Annals of Tourism Research”, “Journal of Hospitality and Tourism Research” or “Journal of Hospitality and Tourism Management” might be considered in the development of future research works, so that the outcomes achieved could be compared.
References


Barney, J.B. (1997), *Gaining and Sustaining Competitive Advantage*. Addison-Wesley, Reading, MA.


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Figure 1. Co-citation analysis: stages in the development of this method

- Definition of the domain under analysis
  - Institutional, geographic, thematic, etc.
- Selection of units subject to study
  - Documents, journals, authors, etc.
- Choice of data sources
  - Biographic databases, review papers, consultation with specialists.
- Search and extractions of records
  - Recovery of domain records and units subject to analysis.
- Calculation of co-citation references
  - Creation of an absolute frequency matrix.
- Calculation of similarity or distance measures
  - Conversion of an absolute frequency matrix into a relative frequency one. Measures: Jaccard Index, Salton cosine, Pearson coefficient, etc.
- Analysis and graphical representation
  - Statistical techniques: PCA, CA, MDS, connectionists: PFPNET's, SOM, etc.
  - Social Network Analysis (SNA).
- Interpretation and validation
  - Result interpretation and validation.
Figure 2. Journal and year of publication of the 108 papers analysed.
Figure 3. Frequency distribution of the 6,518 references analysed by years
Figure 4. Intellectual Structure of research on HR in the *tourism* and *hospitality management* scientific domain: visualization performed using VOSviewer© – map created using VOS mapping and clustering techniques.
Table 1. List of the documents most often cited by the research papers on HR in the tourism and hospitality management scientific domain

<table>
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<tr>
<th>Ranking</th>
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<th>Number of citations</th>
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Table 1. List of the documents most often cited by the research papers on HR in the tourism and hospitality management scientific domain (continued)

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Table 1. List of the documents most often cited by the research papers on HR in the tourism and hospitality management scientific domain (continued)

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Table 2. List of journals where the 132 research papers listed on Table 1 have been published

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<td>30.30%</td>
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<td>Tourism Management</td>
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<td>8.33%</td>
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<tr>
<td>Journal of Marketing</td>
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<tr>
<td>Cornell Hotel &amp; Restaurant Administration Quarterly</td>
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<td>53.78%</td>
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<tr>
<td>Journal of Applied Psychology</td>
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<tr>
<td>Academy of Management Journal</td>
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<td>Cornell Hospitality Quarterly</td>
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<td>3.78%</td>
<td>66.66%</td>
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<td>Others</td>
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<td><strong>TOTAL</strong></td>
<td><strong>132</strong></td>
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Table 3. Indicators—centrality degree, closeness and betweenness—calculated for some of the nodes of the network

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