



# Article Management Accounting Practices in the Hospitality Industry: The Portuguese Background

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Abstract: Background: Despite the increase in tourism revenues, management in the hospitality industry faces constant challenges for profit maximization. In this way, the aim of this study is to analyze management accounting (MA) research applied to the Portuguese hospitality industry, identifying all the practices mentioned by authors studying the same theme in the rest of the world. Methods: fifty-two studies were obtained and used between 2010 and 2021 for data assessment through bibliometric review, which involved both quantitative and qualitative methods of analysis. To achieve the objectives, studies were selected according to the MA practices identified by several authors for the global hospitality industry. Results: the results highlight the importance of increasing research on MA practices in the hospitality industry to empower management and smooth out the differences between their use. Currently, the emphasis is on hotel ratios and indicators, budgeting, and benchmarking. Conclusions: The adoption of MA practices is decisive for the success of hotel companies. This study evidenced the increasing use of some hotel MA practices over the years and made it possible to assess the development of these practices in Portugal, since to date no other author has produced a bibliometric review on this topic.

Keywords: management accounting practices; hospitality industry; Portugal; bibliometric review

# 1. Introduction

Recently, tourism has reached historic levels of development and is considered one of the world's biggest industries (Foris et al. 2019). However, due to its complexity, the hospitality industry faces an ongoing challenge, it is necessary to perform operational and financial analyses of hotels and present indicators to maximize business profit (Alves et al. 2019; Campos et al. 2020; Costa and Mota 2021; Paiva and Lourenço 2016).

Considering the above, the use of hospitality MA practices is considered a way to improve business performance and ensure sustainability. Therefore, this introduction seeks to understand what has already been studied about traditional and contemporary MA practices in the hospitality industry and the challenges they present. It involves a literature review on hospitality MA, and the definition of the purpose of the research, which includes establishing the research question and setting the research objectives.

Since the 19th century, the implementation of management accounting practices in the hospitality industry has undergone a rapid change, which has allowed a significant evolution in the success of hotel companies. Management accounting provides a perspective view of a company and improves performance management systems to assist in the implementation of management control strategies and reporting (Lima Santos et al. 2016). Management accounting can be influenced by various factors such as cultural, organizational, and location factors (Gomes et al. 2011; Tourita et al. 2019). In the 1980s, management accounting systems emerged to control, evaluate, and ensure the efficiency of resources within companies (Borges et al. 1998); these systems show how management can be more effective (Pedroso and Gomes 2020). However, the importance that each



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**Copyright:** © 2022 by the authors. Licensee MDPI, Basel, Switzerland. This article is an open access article distributed under the terms and conditions of the Creative Commons Attribution (CC BY) license (https:// creativecommons.org/licenses/by/ 4.0/). manager attaches to these systems is different from hotel to hotel (Govella et al. 2016; Nunes and Machado 2011).

Over the years, several authors have elaborated studies on management accounting practices that are used in hospitality (Faria et al. 2012; Lima Santos et al. 2012; Pavlatos and Paggios 2009); these practices are distinguished between traditional and contemporary. According to Lima Santos et al. (2010), the traditional MA practices are classified as: budgeting, budget variance analysis, product costing, product profitability, return on investment, break-even point, strategic planning, and tableau de bord. Even more, these practices are based on financial measures and on a short-term vision. According to the study by Campos et al. (2022), where more than 63 articles written in several countries of the world were analyzed, budgeting is the most used practice, appearing in more than 60% of cases. Regarding budgeting, several authors have analyzed the MA practices used in hotels in various countries, such as Brazil (Souza and Lunkes 2015), Spain (Urquidi-Martin and Feliu 2013), Greece (Pavlatos and Paggios 2007, 2009), United Kingdom (UK) (Jones 2008), and Turkey (Uyar and Bilgin 2011). The aforementioned authors state that this practice is the most used by all managers who were surveyed and/or interviewed in their studies. Concerning contemporary practices in MA, they are classified as activity-based budgeting, activity-based costing, the balanced scorecard, benchmarking, customer profitability analysis, economic value added, product lifecycle costing, target costing, and kaizen costing (Lima Santos et al. 2010). Note, they are based on financial and non-financial measures and a long-term view (Faria et al. 2018a). Several authors argue that contemporary practices have more advantages than traditional ones and indicate as examples: identifying opportunities; improving service and customer experience (Lunkes et al. 2020); promoting teamwork; recognizing responsibilities in cost management; and increasing skills in new management costing methods, among others (Aladwan et al. 2018). Revenue, also considered an MA practice, aims to increase a hotel's revenue, and allows for stricter cost control (Bastos 2022).

Nevertheless, despite the above advantages, hotel managers prefer to use traditional practices (Lunkes et al. 2020). In addition, as defended by Campos et al. (2022), the hospitality industry has specific management accounting practices, such as ratios and indicators, that are present in the tableau de bord, balanced scorecard, and benchmarking (Campos et al. 2022); in the same study, applying the analysis at a global level, the authors concluded that the practice of hotel ratios and indicators was considered the second most studied worldwide. Another specific hospitality practice, the Uniform System of Accounts for the Hospitality Industry (USALI), is characterized by decision support through the various operational and financial statements that it presents, such as budgeting and budget variance analysis (HANYC 2014). Campos et al. (2022), argue that Europe is the continent that contributes the largest number of studies to the literature on MA practices in the hospitality industry. In view of the above, practical MA in hospitality industry at a global level have been characterized by numerous studies; however, in Portugal, the study of these practices is still at an early stage.

In Portugal, the development of practical accounting concepts began in the 17th century (Gonçalves 2010). However, research on hotel accounting started later because, according to Paiva et al. (2016), the literature was scarcely diversified and lacked focus on this topic. Another relevant fact is that, to date, no study has presented a bibliometric analysis of research applied to the Portuguese hospitality industry, which is a gap in the research on this topic. Moreover, considering that the hospitality industry has been gaining increasing relevance in the economy of several countries, as is the case of Portugal (Lima Santos et al. 2016; Lucas et al. 2022; Metreveli et al. 2020), and considering that the study by Campos et al. (2022) was applied at a global level, little is known about the type of MA in the hospitality industry applied to the specific Portuguese case.

It should also be noted that the study by Campos et al. (2022), the systematic literature review developed to characterize the state of the art in this topic, has not found studies focused on the global evolution of MA practices in the Portuguese hospitality industry.

To fill the gap of the lack of studies on MA practices applied to the Portuguese hospitality industry, by using the bibliometric analysis methodology, this study's main objective is to answer the following question: What are the MA practices applied to the Portuguese hospitality industry sector and how can they be characterized?

Faced with the research question, and when it is necessary to study the state of the art of a particular scientific field, it is necessary to apply the methodology appropriate to the object of study, in this case, bibliometric analysis has gained popularity and becomes a crucial approach for mapping the literature in different contexts and for tracking its evolution. Furthermore, bibliometric analysis has provided solid methods for overviewing academic domains and identifying outstanding studies and scholars (Agapito 2020; Cardoso et al. 2020; Palmer et al. 2005). Tourism and hospitality are an interdisciplinary field of study, which implies the application of precise methodologies that combine both quantitative and qualitative components. Bibliometric analysis is a combination of quantitative and qualitative analysis and is, therefore, the most commonly adopted method for mapping topics in a given area (Leong et al. 2021). Huang et al. (2011) and Koseoglu et al. (2016) highlight three types of bibliometrics methods: (1) relational techniques that explore relationships within research, such as the structure of research fields and the emergence of new research topics; (2) evaluative technics, based in frequencies counting and that access the impact of scholarly scientific production; and finally (3) the review studies. In the case of tourism and hospitality studies, there are a large number of bibliometric studies that adopt the most diverse bibliometric techniques alone, or by mixing them (Agapito 2020; Cardoso et al. 2022; Leong et al. 2021). However, although there are authors who present the literature review in a state of decline (Korstanje 2021), often justified by methodological errors, or bibliometric techniques incorrectly applied to the object of study, the bibliometric analysis that mixes relational techniques with the more qualitative aspect of the review analysis, continues to be the most effective to map the science (Agapito 2020). Moreover, as defended by Agapito (2020), Cardoso et al. (2020, 2021), and Koseoglu et al. (2016), mixing several bibliometric techniques allows for mitigating the subjectivity of the researcher and reducing research bias. Thus, this paper predominantly adopts review analysis mixed with relational and evaluative techniques. Furthermore, as argued by Agapito (2020), the use of search criteria contributes to mitigating the researchers' subjective bias in selecting publications for analysis. Finally, adopting a bibliometric mixed approach and in answer to the main question of this research, three sub-questions were developed:

- 1. What practices are identified in MA research applied to the Portuguese hospitality industry?
- 2. What is the global productivity in MA research applied to the Portuguese hospitality industry, and what are the most prominent topics?
- 3. What is the position of Portuguese research in MA applied to the hospitality industry compared to research worldwide?

The results contribute to the increase of scientific knowledge on MA practices in the Portuguese hospitality sector and to the identification of the prominent topics related to productivity on the theme. It also allows for understanding on whether MA practices in the Portuguese hospitality sector follow the global trend identified in the study by Campos et al. (2022).

# 2. Materials and Methods

Within the present study, a bibliometric analysis was applied, which is considered efficient for evaluating the degree of relevance of papers in a specific area (Cardoso et al. 2020, 2021, 2022; Lima Santos et al. 2020a, 2022). The following sub-sections address the methods used and the procedures in detail.

#### 2.1. Methods Used

Bibliometrics, seen as a quantitative methodology that relates qualitative aspects (Paul 1986), refers to a multidisciplinary practice used to identify behaviors in the literature

through the investigations of the most relevant authors on a specific theme in different contexts and times (Bufrem and Prates 2005). This methodology is recommended by several authors (Paul and Criado 2020; Zupic and Čater 2014) and allows for identifying gaps in the development of scientific knowledge (Paul 1986). This type of methodology has several advantages, such as the possibility of extending knowledge about the past; the possibility of extending data at a lower cost; and obtaining data without the constraint of the subjects (Cardoso et al. 2020; Gil 2008).

To contribute to filling the research gap and to answer the research question, this study adopted the following objectives:

- To identify the most used practices in MA research applied to the Portuguese hospitality industry.
- 2. To assess productivity and to determine the most prominent topics in MA research applied to the Portuguese hospitality industry.
- 3. To compare the evolution of Portuguese research on MA applied to the hospitality industry and its positioning in relation to the global level.

To achieve the objectives of this research, methodological procedures were adopted combining qualitative and quantitative analysis methods in different phases of the research, as previously conducted by other bibliometric research of the same type (Cardoso et al. 2020, 2021, 2022; Lima Santos et al. 2020b, 2022). The origin of the research indicators follows Cardoso et al.'s (2022) methodology and the technique used is represented in Figure 1.

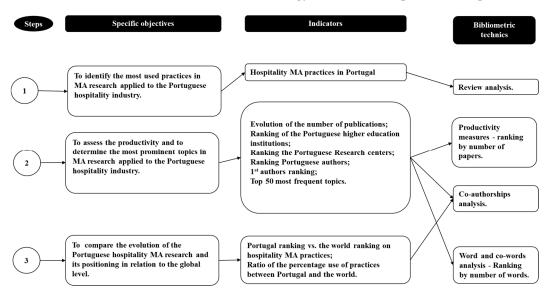


Figure 1. Summary of research objectives, indicators, and techniques used.

#### 2.2. Data Collection and Organization Procedures

Several authors (Bassotto et al. 2021; Hochrein and Glock 2012; Nunes and Machado 2012) used more than one international database in their studies, for example, Scopus and Web of Science (WoS), an approach which was followed in this research. Additionally, considering that Gietaneh et al. (2022) conducted a study in which they analyzed articles extracted from other international databases and from a university repository, this research also includes studies extracted from repositories of Portuguese universities and polytechnics, which allows for the inclusion of studies with high research relevance.

Based on these premises, data collection was conducted in March and April 2022. The search and selection process of the studies was carried out in the Web of Science (WoS), Scopus, and 22 Portuguese institutional repositories from higher education institutions. Among the repositories mentioned, only the following universities (Algarve, Aveiro, Coimbra, Fernando Pessoa, Lusófona, Minho, and ISCTE–University Institute of Lisbon) and polytechnics (Guarda, IPCA–Cávado and Ave, Leiria, and ESHTE–Estoril Higher Institute

for Tourism and Hotel Studies) obtained results. However, considering co-authorships in the context of research networks, the results obtained include authors from other higher education institutions. In several affiliations, it was also possible to identify the authors' research units. Figure 2 shows the strategy used by the authors to select the studies of the sample.

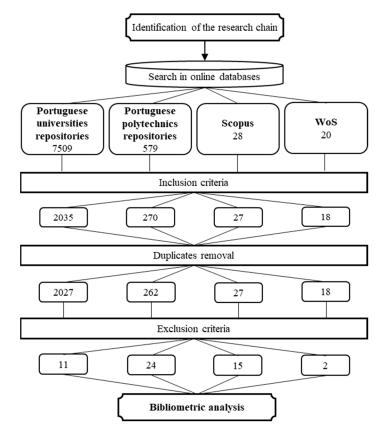


Figure 2. Database procedures collection.

The period included studies published between the years 2010–2021, one year more than the study conducted by Campos et al. (2022), allowing for the inclusion of more recent studies on the theme. The search for keyword sequences was based on the study by Campos et al. (2022): "management accounting" AND ("hospitality" OR "hotel") AND ("techniques" OR "practices" OR "USALI" OR "ratios" OR "indicators" OR "uniform accounting").

Applying the search chain, a first search identified 8136 studies: 7509 from Portuguese university repositories; 579 from Portuguese polytechnic institutes repositories; 28 from Scopus; and 20 from WoS. Inclusion and exclusion criteria were defined to identify the articles to be considered since they covered the topics proposed for the present study. Inclusion criteria included studies that researched MA practices in the Portuguese hospitality industry, in the form of journal articles, conference proceedings papers, or book chapters. To avoid duplication, studies in more than one database were eliminated. Regarding the exclusion criteria, studies that did not refer to the MA practices mentioned in the introduction, environmental management studies, and studies that were not full-text articles, were excluded. Applying the inclusion criteria, the search identified a total of 2350 studies: 2035 from Portuguese university repositories; 270 from Portuguese polytechnic repositories; 27 from Scopus; and 18 from WoS. Sixteen duplicate studies were then eliminated. By reading the abstracts of the studies exclusion criteria were used and 2282 studies were eliminated, resulting in a final sample consisting of 52 studies (Appendix A), exported to MS-Excel sheet, and serving as the basis for the analysis and discussion presented in the next chapter.

#### 2.3. Data Analysis Techniques and Procedures

The most prominent practices in Portuguese hospitality MA research, analogous to the study of Almeida and Cardoso (2022), were assessed through a systematic review. The productivity and the most prominent topics within Portuguese hospitality MA research were assessed by counting the number of documents published and exposed through rankings following the same methodology as (Cardoso et al. 2020, 2021; Cardoso et al. 2022; Lima Santos et al. 2020b).

The most prominent topics within Portuguese hospitality MA research were assessed by word counts in abstracts, applying the same methodology as Cardoso et al. (2022) and applying Zipf's laws. As explained in more detail by Molinos et al. (2016), any text presents three categories of words: (1) high-frequency words, also called "stop words", which are operational words, such as articles, pronouns, conjunctions, prepositions, and some adjectives and adverbs; (2) average-frequency words, which carry more morphological and informative representations than those in the first zone, such as substantives adjectives and verbs; and (3) unit-frequency words, including terms that occur in very specific contexts and, therefore, have frequencies of one or close to one.

This methodology was adopted to collect relevant data to achieve interesting results on the topic under study, such as the studies developed by Iloranta (2022), Mkwizu (2021), and Campos et al. (2022). Table 1 shows the number of words before and after the application of Zipf's 1st Law–extraction of stop words.

Abstracts	Number of words before Zipf's 1st law-stop words extraction
52	9337
Abstracts	Number of words after Zipf's 1st law-stop words extraction
52	5572

Table 1. Number of words before and after application of Zipf's 1st law.

The procedure for applying Zipf's 1st law was done using the DB Gnosis software, whereby content analysis was applied; this analysis is established through the decomposition of texts into units, or categories, according to pre-established criteria, such as the elimination of pronouns, conjunctions, prepositions, adverbs, and adjectives. The initial sample size was 9337 words and after using the DB Gnosis, as in the 52 studies, the final sample size was 5572.

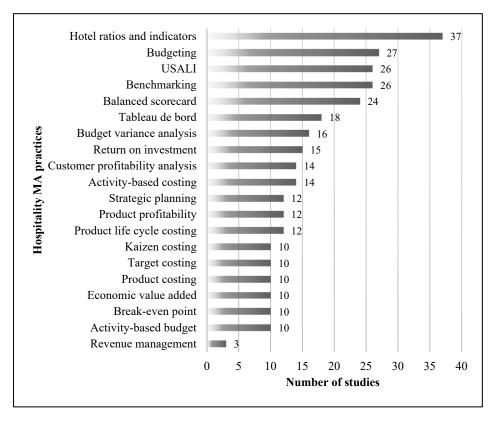
The comparison of the evolution of Portuguese hospitality MA research and its positioning in relation to the global level was assessed through rankings and ratios of the percentage use of practices between Portugal and the world using the study by Campos et al. (2022).

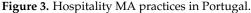
### 3. Results and Discussion

This chapter presents the results and their discussion. A detailed analysis is elaborated on the most used practices in MA research applied to the Portuguese hospitality industry, the productivity and the most prominent topics within the MA research applied to the Portuguese hospitality industry, and the ranking of practices in MA research applied to the Portuguese hospitality industry in comparison with the world. The results allowed answering the research question of the present study.

## 3.1. Most Used Practices in MA Research

As shown in Figure 3, 20 hospitality MA practices were identified. A critical analysis of the eight hospitality MA practices with the highest representation in this study was elaborated, and a brief critical summary was produced on the remaining 12 practices with the lowest impact on hospitality companies in Portugal, three are highlighted, "Hotel ratios and indicators", "Budgeting", and USALI.



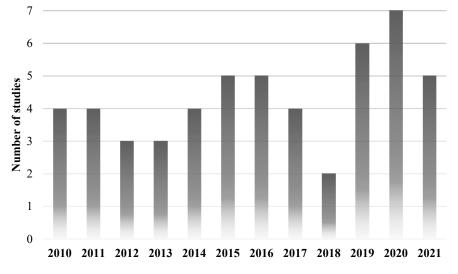


The three most used practices in Portugal are "hotel ratios and indicators", addressed in 37 studies (71%), "budgeting", referred to in 27 studies (52%), and "USALI" and "benchmarking", both referred to in 26 studies (50%). Comparatively, in the study by Campos et al. (2022), "budgeting" (64%), "hotel ratios and indicators", "benchmarking" (37%), and "activity-based costing" (32%), are the most used practices overall.

The greater use of hotel ratios and indicators is corroborated by (Faria et al. 2017; Lima Santos et al. 2021; Rolim et al. 2019), which establish that operating ratios allow increasing hotel profitability and are among the most used internationally. "Budgeting" ranked second and, in agreement with (Brito 2014; Faria et al. 2015), the results validate the studies of Lima Santos et al. (2012, 2014) and Faria et al. (2018a), stating that hotel companies widely use this practice, which also appears associated with the use of USALI according to Gomes et al. (2015), Nunes and Machado (2020). Regarding USALI and benchmarking, positioned in the third place, the results are in accordance with the literature reviewed, considering that Lima Santos et al. (2018), Nunes and Machado (2020), Machado and Nunes (2021), and Machado and Silva (2021) show that USALI is widely used in hospitality, allowing to measure performance and make comparisons between companies; additionally, benchmarking, constantly associated with USALI, is a common practice in Portugal, being widely used by hotel chains, as in the studies of (Casqueira et al. 2016; Correia et al. 2016; Lima Santos et al. 2019; Malheiros et al. 2017).

#### 3.2. Productivity and the Most Prominent Topics

According to Figure 4, from the 52 studies analyzed between 2010 and 2021, it appears that the most productive year was 2020, with seven publications. The most covered topic in 2020 was "hotel ratios and indicators", present in six studies by the following authors: Campos et al. (2020); Carrera et al. (2020); Metreveli et al. (2020); Lima Santos et al. (2020a); Pedroso and Gomes (2020); Machado and Nunes (2020); and Nunes and Machado (2020). 2018 was the year with the lowest number of publications, with only two, both focused on



activity-based costing and budgeting, by Faria et al. (2018a, 2018b). There was an upward cycle in the period 2014–2016 and from 2019 to 2020.

The sample consists of 15 papers indexed in Scopus between Q1 and Q4, two papers indexed in ESCI WoS, seven papers with other indexations, four book chapters, and 24 papers published in conference proceedings (Figure 5).

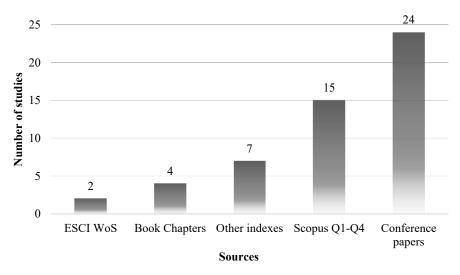


Figure 5. Sample composition.

Portuguese higher education institutions (HEIs) have a key role in the development and the sharing of knowledge in the case under study about MA practices in hospitality. In the period studied, 14 HEIs contributed to the development in this field, the most productive in descending order of the number of studies being: Polytechnic of Leiria; ISCTE–University Institute of Lisbon; ESHTE–Estoril Higher Institute for Tourism and Hotel Studies; Nova University of Lisbon; University of Algarve; and Lusófona (Figure 6).

Figure 4. Evolution of the number of publications.

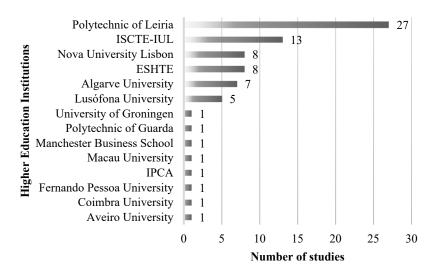


Figure 6. HEI ranking.

The sample represents eight research centers: CiTUR (Center for Tourism Research, Development and Innovation) from Polytechnic of Leiria; ISTAR (Information Sciences, Technologies and Architecture Research Center) from ISCTE–University Institute of Lisbon; CIPES (Center for Research in Higher Education Policies) from the University of Aveiro and the University of Porto; NOVA SBE from the Nova University of Lisbon; UNIDE (Business Research Unit) from ISCTE–University Institute of Lisbon; ADETTI (Center for the Development of Computer Techniques) from ISCTE–University Institute of Lisbon; CeBER (Center for Business and Economics Research) from the University of Coimbra; and GOVCOPP (Research Unit on Governance, Competitiveness and Public Policies) from the University of Aveiro. Figure 7 illustrates that, in the studied period, CiTUR had the highest productivity in Portuguese research on MA applied to the hospitality industry (64%), followed by ISTAR and CIPES (both 8%), and INOVA and UNIDE (both with 5%).

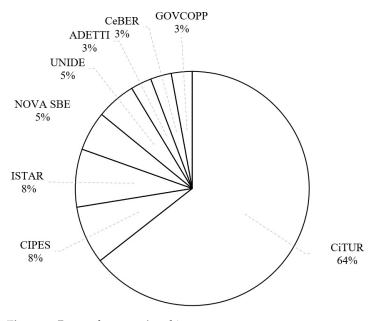
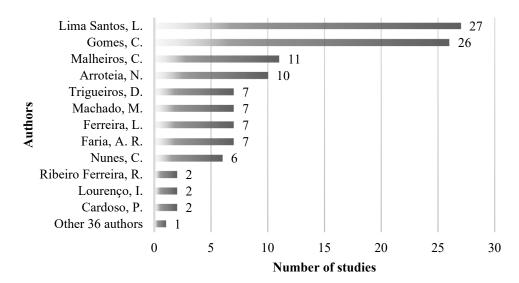
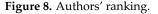


Figure 7. Research centers' ranking.

The 52 studies in the sample identify 48 researchers. Those with the highest productivity, as authors or co-authors, are identified in Figure 8.





Considering the researchers who appear as first author in their studies (Figure 9), Lima Santos, L. appears in 11 of the 52 articles in the sample. Faria, A. R. appears as first author in seven studies, Gomes, C. in four, and Nunes, C. and Machado, M. in three studies. Twenty-four authors appear as first author in only one study. In addition, according to Cardoso et al. (2021), the first authors are considered the most productive.

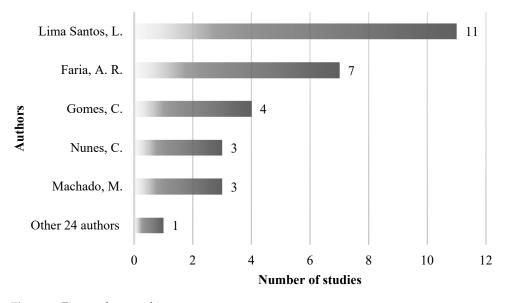


Figure 9. First authors ranking.

Regarding the most prominent topics, the word prominent relates to the frequency with which the topic appears in the papers, the higher the frequency, the more prominent the topic. So, the analysis of prominent topics in abstracts, the highest frequencies of use include topics such as "hotels" and "hotel", "management" and "accounting", "USALI", "financial" and "performance", and "indicators" and "ratios" (Table 2).

After identifying the 50 words most frequently used in the abstracts, a word cloud was made with the ten most-used topics. Word clouds represent a visual content analysis (Górska-Warsewicz and Kulykovets 2020). It should be noted that there are words with the same absolute frequency and, therefore, are in the top 10; there are 11 topics (Figure 10).

Rank.	V. Name:	AF	RF	Rank.	V. Name	AF	RF
1	hotels	119	0.021	22	sector	26	0.005
2	hotel	118	0.021	23	operating	23	0.004
3	management	108	0.019	24	lodging	20	0.004
4	accounting	77	0.014	24	MĂ	20	0.004
5	used	55	0.009	24	most	20	0.004
6	USALI	50	0.009	24	systems	20	0.004
7	financial	49	0.009	24	through	20	0.004
7	study	49	0.009	25	accounts	19	0.003
8	industry	46	0.008	25	independent	19	0.003
9	performance	45	0.008	25	influence	19	0.003
10	Portuguese	44	0.008	25	main	19	0.003
11	indicators	42	0.008	25	one	19	0.003
12	techniques	41	0.007	25	paper	19	0.003
13	information	39	0.007	25	small	19	0.003
14	Portugal	37	0.007	25	tourism	19	0.003
15	between	35	0.006	25	uniform	19	0.003
16	ratios	33	0.006	26	knowledge	18	0.003
17	hospitality	32	0.006	27	adoption	17	0.003
17	system	32	0.006	27	characteristics	17	0.003
18	analysis	31	0.006	27	importance	17	0.003
18	managers	31	0.006	27	obtained	17	0.003
19	research	30	0.005	27	structure	17	0.003
20	results	28	0.005	27	studies	17	0.003
21	data	27	0.005	27	there	17	0.003
22	companies	26	0.005	27	whether	17	0.003

Table 2. Top 50 most frequent topics.

Notes: Rank = Ranking; V. Name = Variable Name; AF = Absolute Frequency; RF = Relative Frequency.



Figure 10. Abstracts' word cloud.

Visually, it is possible to verify that the most frequent Portuguese practice in MA research is USALI applied to Portuguese Hotels, while accounting performance also stands out.

# 3.3. Comparing Portuguese Hospitality MA Research with the Global Level

This sub-section aims to compare and establish the relationships between hospitality MA research in Portugal and worldwide, according to a previous study prepared by Campos et al. (2022). The most used practices (hotel ratios, indicators, and budgeting) are similar, however, there are some exceptions. The causes for these differences may be related to the fact that hospitality MA research in Portugal is at an early stage when compared to global developments.

Making the comparison with the study previously prepared by (Campos et al. 2022), Table 3 compares the most studied practices in the world and Portugal. As previously mentioned, hotel ratios and indicators are ranked first, and budgeting is ranked second in the Portuguese sample. Worldwide, these two instruments change places since budgeting is the most used practice internationally and hotel ratios and indicators are ranked second.

Hospitality MA Practices	Portuguese Ranking	World Ranking According to Campos et al. (2022)
Hotel ratios and indicators	1st	2nd
Budgeting	2nd	1st
USALI	3rd	6th
Benchmarking	3rd	2nd
Balanced scorecard	4th	5th
Tableau de bord	5th	13th
Budget variance analysis	6th	9th
Return on investment	7th	4th
Customer profitability analysis	8th	4th
Activity-based costing	8th	3rd
Strategic planning	9th	8th
Product profitability	9th	12th
Product life cycle costing	9th	9th
Kaizen costing	10th	15th
Target costing	10th	14th
Product costing	10th	7th
Economic value added	10th	13th
Break-even point	10th	10th
Activity-based budget	10th	13th
Revenue management	11th	11th

Table 3. Portuguese ranking vs. world ranking on hospitality MA practices.

The only practices that appear in the same place in the world ranking and in Portugal are product life cycle costing, in ninth place, break-even point, in 10th place, and revenue management, in 11th place. Some positions are close between the studies, such as benchmarking, which ranks third in Portugal and second in the world, balanced scorecard, which ranks fourth in Portugal and fifth in the world, and strategic planning, which ranks ninth in Portugal and eighth in the world.

The graph presented in Figure 11 visually confirms the information contained in the previous table, showing the order of relevance between Portugal and the world according to Campos et al. (2022).

Figure 12 shows the relation established between the eight most used practices in Portugal and worldwide. It is observed that tableau de bord is referred to six times more in Portugal than in the world. As hospitality ratios and indicators the most studied practices by the authors in Portugal, they are used almost two times (1.95) more than worldwide. As for budgeting, the most used practice in the world, according to the data presented on the same issue, the difference is only 0.18 times between Portugal and the world. In practical terms, above the line of 1 means higher expression in Portugal, and below the same line means higher expression worldwide.

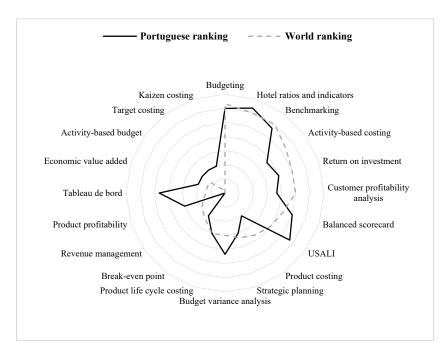
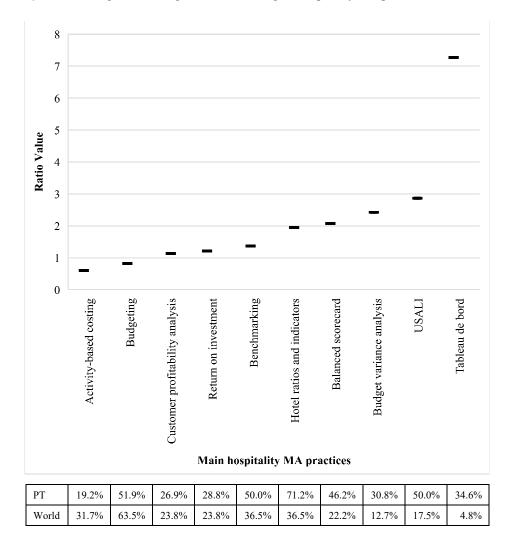


Figure 11. Portuguese ranking vs. world ranking on hospitality MA practices.



**Figure 12.** Ratio between the percentage of use of the main hospitality MA practices: Portugal vs. the world.

# 4. Conclusions

The present study aimed to examine the evolution of MA research applied to the Portuguese hospitality industry, in the period 2010–2021, following the methodology of a similar study (Campos et al. 2022), which allowed for comparisons between Portugal and the world at large.

### 4.1. The Most Used Practices in MA Research Applied to the Portuguese Hospitality Industry

Four practices stand out in MA research applied to the Portuguese hospitality industry, "hotel ratios and indicators", "budgeting", "USALI", and "benchmarking" results that are in line with several studies in which these practices are referenced as the most relevant (Mia and Patiar 2002; Pavlatos and Paggios 2009; Chen et al. 2011; Faria et al. 2012).

### 4.2. The Productivity in MA Research Applied to the Portuguese Hospitality Industry

The bibliometric evaluative results showed that productivity and impact on MA research applied to the Portuguese hospitality industry are not particularly high. This is evidenced by the general number of articles published on Scopus within the last two decades (15). It was also found that most of the publications are made at conferences in the area (24). Considering the crisis that the pandemic has generated in the hospitality sector, this area of research may prove to be encouraging for researchers in the field. Regarding the institutions that stand out, two of them produced 77% of all research on this topic, the Polytechnic of Leiria and ISCTE–University Institute of Lisbon, while the productivity of the ESHTE–Estoril Higher Institute for Tourism and Hotel Studies, Nova University of Lisbon, and Algarve University, is also relevant. As for the results regarding authors, it should be noted that the authors with the highest productivity indices are those who indicate affiliation with the higher education institutions and research centers that are more productive and impactful on the subject under study.

# 4.3. The Most Prominent Topics in MA Research Applied to the Portuguese Hospitality Industry

Besides showing that "accounting" is assumed to be the right arm of "management", the structure of words and co-words in the abstracts of MA research applied to the Portuguese hotel industry shows that, in relation to the analysis of prominent topics, the highest frequencies confirm that the practices mentioned in the studies are related to each other, as is the case of "USALI", which goes beyond "financial" metrics and assumes itself as a cornerstone in the measurement of "performance" and, of course, the "ratios" and "indicators", which are a fundamental element in the management accounting of any hotel company.

# 4.4. Comparison of the Evolution of the Portuguese Hospitality MA Research and ITS Positioning in Relation to the Global Level

Comparing the most studied practices around the world with the most studied practices in Portugal, in the first three ranks come "hotel ratios and indicators", "budgeting", and "benchmarking". The fact that "revenue management" appears in last place in Portugal suggests a new line of research. When linking the relative importance of the practices in Portugal and the world, we conclude that despite occupying positions in the top three, "hospitality ratios and indicators" are mentioned almost twice as much in Portugal than in the world. With the greatest disparity, the "tableau de bord" is referred to six times more in Portugal than in the world. The "USALI" and the "balanced scorecard" are mentioned almost two times more in Portugal, compared to the world. Conversely, "activity-based costing" and "budgeting" are practices more referred to in the world than in Portugal.

#### 4.5. Contributions, Implications, and Future Research

The present study is the first to conduct a comprehensive bibliometric analysis on the academic production in MA research applied to the Portuguese hospitality industry. Moreover, it is the first to compare the research strength between different accounting practices in Portuguese hotel management. Therefore, it provides a more detailed understanding of the state-of-the-art in this area, as well as of the trending and emerging topics and those with the highest potential for publication. For accounting researchers, the study reveals research gaps and emerging research areas, making it possible to identify future lines of research. This should be quite useful for researchers and research centers aiming to conduct research projects on "revenue management", "Kaizen costing", and "target costing". In addition, the previous study by Campos et al. (2022) allowed us to measure and compare, over a decade, the levels of research strength between the country studied here and the world.

The study also contributes to future bibliometric studies. It shows that the method proposed by Cardoso et al. (2021) to map a country's research performance in a specific research area—in this case, Switzerland, and Tourism and Hospitality—can also be employed to map the scientific production of another country and in a different research area, in this case, Portugal and hospitality MA practices.

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