Satisfaction Regarding the Methods Used to Evaluate Hotel Performance

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Abstract

This study has four specific objectives: to analyse the association between hotel features and the methods used to evaluate hotel performance; to analyse the convergence between what the theory considers as appropriate performance evaluation methods, and the opinion of the hotels' financial managers; to identify the factors that explain why the same method is considered appropriate in some hotels and not in others; to analyse whether there is an association between the method used to evaluate hotel performance and customer satisfaction. Data collection was made using two sequential methods. Firstly, we conducted a survey directed at the financial managers of 3, 4 and 5-star hotels located in Portugal, where we obtained 189 completed surveys. Secondly, we collected information regarding the degree of customer satisfaction for the hotels responding to the initial survey using the information available on the online platform Tripadvisor.com. The results obtained allow us to indicate as main contributions the following: validation of the expectations confirmation paradigm as an adequate theoretical model to explain customer

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satisfaction in hotels, namely showing that the performance evaluation methods can be regarded as factors affecting the actual customer experience; to demonstrate that the satisfaction indicator room is what contributes the most to the level of overall customer satisfaction; to demonstrate the existing convergence between what the theory considers as appropriate performance evaluation methods, and the opinion of the hotels' financial managers, unlike what was previously reported in other industries.

1. Introduction

This study aims to contribute to the understanding about the methods used to evaluate hotel performance, and its relationship with customer satisfaction. As more specific objectives we can identify the following: to analyse the association between hotel features and the methods used to evaluate hotel performance; to analyse the convergence between what the theory considers as appropriate performance evaluation methods, and the opinion of the hotels' financial managers; to identify factors that explain why the same method is considered appropriate in some hotels and not in others; to analyse whether there is an association between the method used to evaluate hotel performance and customer satisfaction.

It is still a concern of researchers to study whether hotels use the performance evaluation methods considered by the theory as more appropriate and, if they don't, to find variables that explain their non-use (Machado, 2013; Nunes and Machado, 2014; Alonso-Almeida et al., 2016). The features of the hotels themselves are considered by several authors as contingency variables to the management accounting methods they use (Pavlatos and Paggios, 2008; Hsieh and Lin, 2010; Nunes and Machado, 2014; Alonso-Almeida et al., 2016).

Despite the advantages attributed by the theory to the use of the Balanced Scorecard in the hotel industry, the empirical studies carried out report low utilization rates for this method (Nunes and Machado, 2014; McPhail, Herington and Guilding, 2008), which justifies conducting new studies to analyse why the hotels continue to use performance evaluation methods considered by the theory as inappropriate. Machado (2016) suggests that there is no association between what the theory considers as adequate management accounting methods, and the opinion of corporate financial managers.

Studies already carried out suggest that the opinion of those managers on the adequacy of the methods is related to their individual characteristics (Cohen, Venieris and Kaimenaki, 2005; Machado, 2016), which may explain

why the same method is considered adequate in some hotels and not in others. These conclusions justify analysing the association between the characteristics of the managers and their opinion on the appropriateness of the method used to evaluate hotel performance.

The dominant model in the research about the satisfaction of hotel customers is the expectations confirmation paradigm (Matzler, Fuller and Faullant, 2007), according to which satisfaction is the result of the comparison the customers make between the expectations created, and the real experience provided by lodging at the hotel (Kattara, Weheba, El-Said, 2008). The use of appropriate management tools can be considered a factor affecting favourably the actual experience, thus promoting satisfaction (Kücükergin and Dedeoglu, 2014; Borges et al., 2015; Ariffin, Nameghi, Soon, 2015). These conclusions justify analysing the association between the performance evaluation methods used by the hotels, and customer satisfaction as a factor affecting the actual experience.

The universe of this study was defined as the set of 3, 4 and 5-star hotels located in Portugal. Data collection took place in two phases. In the first phase, we conducted a survey to the hotels' financial controllers, having obtained 189 completed surveys. In a second phase, we collected information regarding the degree of customer satisfaction for the hotels that replied to the initial survey, using the data available on the online platform Tripadvisor.com.

2. Research questions

Sainaghi, Phillips and Corti (2013) recommend the execution of studies on the performance evaluation methods used by the hotels, suggesting that the bankruptcy of several hotel chains is related to the use of inappropriate methods to evaluate performance. The simplest method to evaluate the performance of organizations consists in the exclusive use of financial indicators. However, the studies already conducted show that this method is not suited for the hotel industry (Nunes and Machado, 2014, Sainaghi, Phillips and Corti, 2013). Appropriate methods to evaluate hotel performance need to be market-oriented, and consider the vital role of hotel customers (Sainaghi, Phillips, Corti, 2013).

With the evolution in the business environment, specifically the increasing importance given to the customers, it has become essential to use also non-financial measures, able to measure the intangible assets that are crucial to the organization's success in the medium and long term (Kaplan and Norton 1996). Hotels must complement financial measures with non-financial measures, using a performance evaluation system made up of both, and called

mixed unstructured measures by Nunes and Machado (2014). The research carried out led to the development of new performance evaluation methods, based on financial and non-financial measures, but structured in specific theoretical systems (Machado and Simplício, 2016), known namely as Tableau de Bord (TB), and Balanced Scorecard (BSC). TB started by being used in France in the 1930s, and was developed by engineers to supply the information needed to run their businesses (Bessire and Baker, 2005). On a theoretical level, the TB can be considered as a horizontal process, since each department builds its own TB, despite being all interconnected (Cheffi, Rao, and Beldi, 2010). The TB has a column describing the proposed goal, another where the results obtained are recorded, and finally one where the deviation between the proposed goal and the result achieved is represented (Bourguignon, Malleret, Nørreklit, 2004).

The BSC was developed in the 1990s, in the USA, with the aim of solving some of the problems of the previously described methods, such as the companies' lack of orientation for the future (Kaplan and Norton, 1996). This method allows us to translate vision and strategy into objectives and indicators on four different areas called perspectives: financial, clients, internal processes, and learning and growth perspective (Kaplan and Norton, 1996). Considering the strategic objectives drawn for each perspective, it is necessary to establish cause and effect relationships between them, identifying these relationships with the use of a model called strategic map by Kaplan and Norton (2001). The financial perspective allows managers to see if the strategy chosen, and its implementation and execution, is contributing to the company's sustainable growth (Kaplan and Norton, 1996). The clients' perspective should identify the objectives and measures to be achieved with the customers in the different market segments where the company is inserted, with the aim of creating maximum value for the customers (Kaplan and Norton, 2001). In the perspective of internal processes, the managers identify which processes are critical – those that guarantee a quality product and service that satisfies the customers, and in turn assures that the financial expectations are fulfilled (Kaplan and Norton, 1996). The Learning and Growth Perspective is the pillar of any strategy as it deals with workers and information systems. In this perspective, managers define the skills and competencies that employees must have, the technology at their disposal, and the environment within the company, i.e., the organizational culture. The objectives of this perspective allow the manager to align the company's strategy with the human resources, and the necessary information technology (Kaplan and Norton, 2001).

The importance of intangible assets in the hotel industry makes the BSC the most appropriate method to evaluate hotel performance (Sainaghi, Phillips, Corti, 2013). The hotels operate in highly competitive environments,

requiring methods that evaluate their performance in terms of the strategic objectives previously defined, which makes the BSC the most appropriate method for this industry (Kala and Bagri, 2013). Current researchers continue to be interested in the study of hotels features as contingency factors to the management accounting tools used, namely through the following variables: integration in a hotel chain (Pavlatos and Paggios, 2008; Hsieh and Lin, 2010; Nunes and Machado, 2014), and hotel category (Alonso-Almeida et al., 2016). Studies already conducted have concluded that the hotels integrated in chains perform better than independent hotels (Hsieh and Lin, 2010), and use more sophisticated performance evaluation methods than the other hotels (Pavlatos and Paggios, 2008; Nunes and Machado, 2014). Alonso-Almeida et al. (2016) suggest that the hotel category, measured by the number of stars, is also a contingency variable to the management accounting tools used. These conclusions justify the formulation of a research question to analyse the association between hotel features and the methods used to evaluate hotel performance:

Research Question 1 - Is there an association between hotel features and the method used to evaluate hotel performance?

Despite the advantages attributed by the theory to the use of the BSC in the hotel industry, the empirical studies carried out report low utilization rates of this method. Nunes and Machado (2014) conclude, through a study carried out in 4 and 5-star hotels in Portugal, that most hotels (52%) evaluate their performance through a set of financial and non-financial measures not structured in a theoretical model. According to Nunes and Machado (2014), the TB utilization rate is 29%, while the BSC is the least used method to evaluate hotel performance (19%). This utilization rate of the BSC is identical to that found in Australia by McPhail, Herington and Guilding (2008) in the hotel industry (21%). This paradox, between theory and practice suggests the need for research into its causes, in an attempt to understand why companies continue to use performance evaluation methods considered by the theory as inappropriate. Machado (2016) concluded that there is no association between what the theory considers as adequate management accounting methods, and the opinion of the companies' financial managers. This conclusion makes relevant the study of the contingency factors that lead financial managers to classify as appropriate or inappropriate the methods used by the companies. Cohen, Venieris and Kaimenaki (2005) and Machado (2016) suggest that the opinion of the managers on the methods' adequacy is related to their individual characteristics, such as age, which may explain why the same method is considered appropriate in some hotels and not in others. Cohen, Venieris and Kaimenaki (2005) and Machado (2016) conclude that older managers tend to consider the method used as proportionately more

appropriate. These conclusions justify the formulation of two research questions: to analyse the convergence between what the theory considers to be appropriate methods for evaluating hotel performance, and the opinion of the hotels' financial managers; and to identify the factors that justify why the same method is considered appropriate in some hotels and not in others:

Research Question 2 - Is there an association between what the theory considers as appropriate performance evaluation methods, and the opinion of the hotels' financial managers?

Research Question 3 - Are the individual characteristics of the managers associated with the fact that they consider the methods as appropriate?

The study of customer satisfaction is also one of the current concerns of hotel managers and hotel industry researchers (Batista et al., 2014; Kim, Vogt and Knutson, 2015). Customer satisfaction in hotels is a key factor in terms of improving hotel performance in the future, as it promotes customer loyalty (Kim, Vogt and Knutson, 2015), and is positively related with increased sales and reduced price sensitivity (Matzler, Fuller and Faullant, 2007). Customer satisfaction can be the most profitable marketing tool of all, as it is free, and the phenomenon of word-of-mouth in the digital age allows satisfied customers to share their experience with an undeterminable number of potential customers (Cox et al., 2009; Sparks and Browning, 2010; Limberger et al., 2014). However, this phenomenon also works in the opposite direction – in the case of dissatisfied customers –, which makes the analysis of customer satisfaction one of the main goals of hotel managers (Batista et al., 2014). Previously carried out studies show that the management of customer satisfaction indexes, already built in sites such as Booking.com and Tripadvisor.com, is currently a common practice in the activity of hotel managers (Limberger et al., 2014; Borges et al., 2015). Although there is no consensus among the various authors regarding the determining factors of customer satisfaction, the dominant model in hotel research is the expectations confirmation paradigm (Matzler, Fuller and Faullant, 2007). According to this model, satisfaction is the result of the comparison hotel customers make between the expectations created and the actual experience provided by lodging at the hotel (Kattara, Weheba, El-Said, 2008). The use of appropriate management tools can be assumed as a factor that affects favourably the actual experience, helping expectations to be lower than the actual experience, and thus promoting satisfaction (Kattara, Weheba, El-Said, 2008; Kücükergin and Dedeoglu, 2014; Borges et al., 2015, Ariffin, Nameghi, Soon, 2015). These conclusions justify the formulation of a research question that analyses the association between the performance evaluation methods used by the hotels and customer satisfaction as a factor affecting the actual experience:

Research Question 4 - Is there an association between the method used to evaluate hotel performance and customer satisfaction?

3. Methodology

The universe of this study was defined as the set of 3, 4 and 5-star hotels located in Portugal, since previous studies have concluded that smaller hotels do not use management accounting methods (Nunes and Machado, 2014). Using the information available at the public agency Turismo de Portugal, at the start date of the study we identified 951 hotels in Portugal with the selected categories, thus making up the universe under analysis.

Data collection took place using two sequential methods. First, a survey was carried out directed at the hotels' financial managers to collect information on the hotel's features and the method used to evaluate its performance, as suggested by Vicente, Machado and Laureano (2016) and Vicente, Laureano and Machado (2017). The features requested for this study were the following: hotel category, and whether the hotel is integrated in a chain. The questionnaire was validated through a pilot test with a convenience sample of two scholars with expertise in the field. The final questionnaire was changed with the suggestions resulting from this pilot test, being sent to the universe only after that. As a result of the two contact phases with the universe, 189 completed surveys were received, which generates a response rate of 20%. This response rate is convergent with that obtained in other empirical studies previously conducted, such as Amorim and Machado (2015), Machado (2016), Laureano, Machado and Laureano (2016) and Machado and Alves (2017).

The second method of data collection was used to gather information on the satisfaction level of the customers of the hotels that responded to the initial survey. For this we used the online platform Tripadvisor.com. The ratings available on TripAdvisor.com shows levels of satisfaction that can vary between 1 and 5, according to the following classification: 1 (horrible), 2 (poor), 3 (reasonable), 4 (very good), 5 (excellent).

4. Results analysis and discussion

4.1 Hotel features and the method used to evaluate hotel performance

The data collected on the method used to evaluate hotel performance show that about a quarter of the hotels (n=44) do not evaluate their performance (23%). The most used method (36%) is a set of financial and

non-financial indicators, not structured in a theoretical model, such as the Tableau de Bord (TB) or the Balanced Scorecard (BSC), and designated in this study as unstructured measures. The BSC, considered by the theory as the most appropriate method for hotels (Sainaghi, Phillips and Corti, 2013, Kala and Bagri, 2013), is used only in 20% of cases, being its utilization rate identical to that of the TB (21 %).

These results are different from those reported by other reviewed studies – namely by Nunes and Machado (2014) –, which concluded that all hotels use methods to evaluate their performance. The utilization rate found for the TB is lower than the 29% reported by Nunes and Machado (2014). The utilization rate of the BSC is identical to that found by McPhail, Herington, Guilding (2008) in Australian hotels (21%), and by Nunes and Machado (2014) in Portuguese hotels (19%). The comparison of these results with the study by Nunes and Machado (2014), carried out in Portugal in only 4 and 5-star hotels, suggests that the divergence in the conclusions may result from the fact that the present study focuses on a universe that also includes 3-star hotels.

The features of the hotels analysed in this study are category and integration in a hotel chain. Regarding hotel category, the data collected show that 32% of hotels are classified as 3 stars, 48% as 4 stars, and only 20% as 5 stars. Table 1 shows the association between category and the method used to evaluate hotel performance, making it clear that the TB and the BSC are the least used methods in 3-star hotels and, at the same time, the most used methods in 5-star hotels.

TABLE 1. Hotel category and method used to evaluate hotel performance.

| Performance evaluation method	Number of stars			TOTAL
	3	4	5	
None	15	26	3	44 (23%)
Unstructured measures	27	31	9	67 (36%)
Tableau de Bord	9	16	15	40 (21 %)
Balanced Scorecard	9	18	11	38 (20%)
TOTAL	60 (32%)	91 (48%)	38 (20%)	189 (100%)

The objectives defined compel us to analyse the association between the behaviour of these two nominal variables, which determines that the association test applicable is the Chi-Square test of independence (Siegel and Castellan, 1988). This test is based on a table where the expected absolute frequencies intersect, based on the theory of probabilities, and the null hypothesis is variable independence (Mood, Graybill and Boes, 1974). By

calculation the Chi-Square test of independence, we obtained a value of 18.019 for a p-value of 0.006, which allows the rejection of the null hypothesis of variable independence, for a 1% error.

These results allow us to conclude that there is an association between the method used to evaluate hotel performance and hotel category. The intensity of this association can be measured by the Cramer's V coefficient, where we obtained a value of 0.218, which is considered a moderate association by Machado (2013).

Figure 1 presents a graphical analysis of this association, showing that most 5-star hotels use the more sophisticated methods (68%), such as the TB and the BSC, while only a minority of the 3-star hotels use these methods (30%).

FIGURE 1. Hotel category and method used to evaluate hotel performance.
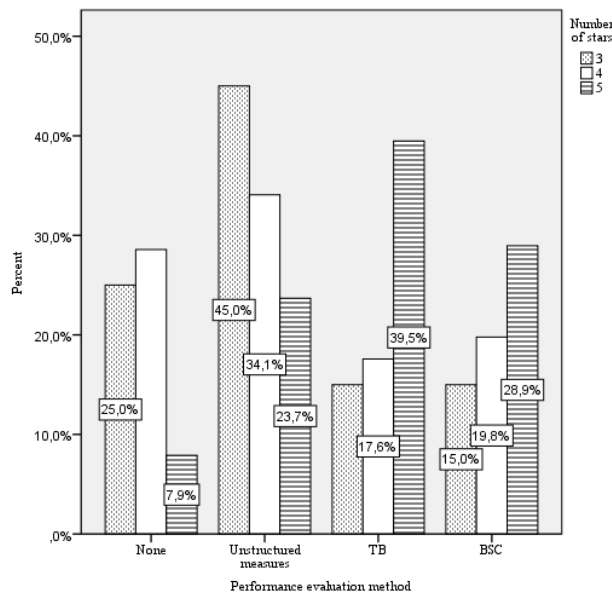
Regarding the integration of the hotel in a chain, the data collected show that most hotels (69%) are integrated in a hotel chain. Table 2 shows the association between this variable and the method used to evaluate hotel performance, making it evident that only a residual number of hotels not integrated in chains use the TB or the BSC.

TABLE 2. Method used and integration in a hotel chain.

Performance evaluation method	Integration in a hotel chain		TOTAL
	Yes	No	
None	28	16	44 (23%)
Unstructured measures	39	28	67 (36%)
Tableau de Bord	32	8	40 (21 %)
Balanced Scorecard	32	6	38 (20%)
TOTAL	131 (69%)	58 (31%)	189 (100%)

The Chi-Square test of independence presents a value of 10.663 for a p-value of 0.014, which leads to the conclusion that there is an association between the method used and the hotel integration in a chain, for a 5% error. Cramer's V coefficient, with a value of 0.238, suggests that this association is moderate.

Figure 2 presents a graphical analysis of this association, making it clear that chain-integrated hotels use proportionally more the more sophisticated methods (48%), such as the BSC and the TB, while non-chain hotels use proportionally more the simplest method, consisting of a set of unstructured measures (48%).

FIGURE 2. Method used and integration in a hotel chain.
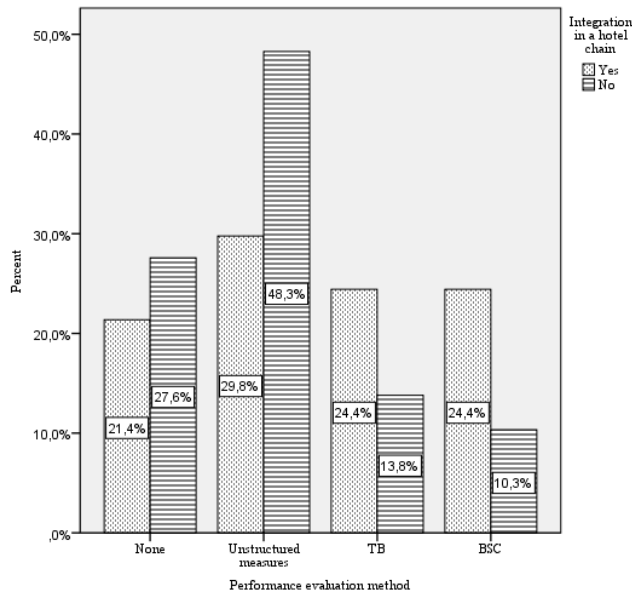
The results obtained in this section are convergent with those presented by Nunes and Machado (2014), since they confirm the existence of an association between hotel features and the methods used to evaluate performance, in the following sense: hotels of a higher category and integrated in a chain use more sophisticated methods.

4.2 Adequacy of the method used to evaluate hotel performance

To answer the second research question, the financial managers were asked if they considered the method used to evaluate the hotel's performance as the most appropriate. Most of the 145 hotel managers that evaluate performance consider the method used as the most appropriate (90%). Only 10% of them consider that the method used is inappropriate.
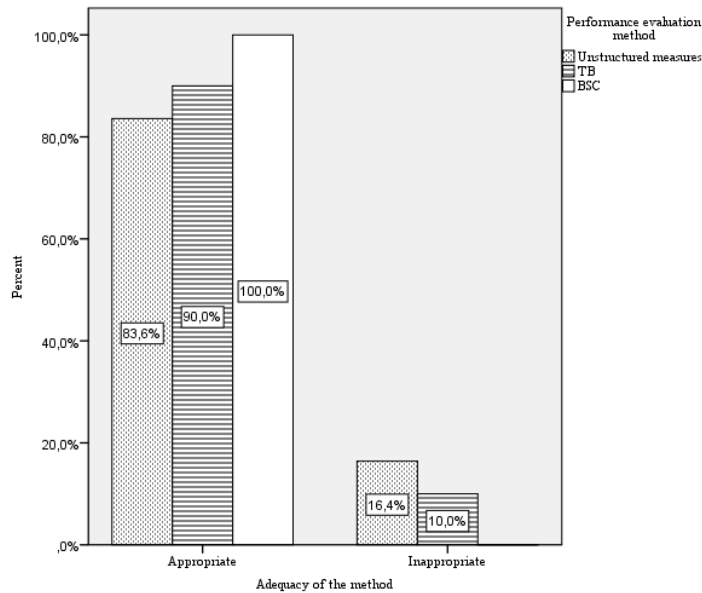
It is now relevant to analyse whether the financial managers considering the method used to evaluate hotel performance as appropriate or inappropriate is associated with the type of method used. The result of intersecting these two variables is presented in Table 3, whose observation allows us to conclude that all hotel managers using the BSC consider it as an appropriate method, as the previously reviewed theory suggests.

TABLE 3. Adequacy of the method used.

Adequacy of the method	Performance evaluation method			TOTAL
	Unstructured measures	Tableau de Bord	Balanced Scorecard	
Appropriate	56	36	38	130 (90%)
Inappropriate	11	4	0	15 (10%)
TOTAL	67	40	38	145 (100%)

Figure 3 presents a graphical analysis of this association, making it clear that all hotel managers using the BSC consider it as the appropriate method, whereas 16% of the hotel managers using only a set of unstructured measures considers them to be an inappropriate method. The Chi-Square test of independence presents a value of 7.054 for a p-value of 0.028, which allows us to conclude that the managers considering the method as appropriate or inappropriate is associated with the type of method used, for a 5% error. Cramer's V coefficient, with a value of 0.221, suggests that this association is moderate.

FIGURE 3. *Adequacy of the method used.*

Empirical studies already carried out in manufacturing companies suggest that there is no association between what the theory considers as adequate management accounting methods, and the opinion of the financial managers (Machado, 2016). The results now obtained allow us to conclude that the previous results cannot be generalized to the hotel industry, because the fact that the managers consider the method used to evaluate hotel performance as appropriate or inappropriate is effectively associated with the type of method used.

4.3 Characteristics of the financial managers

To answer the third research question, three characteristics of the financial managers were analysed: gender, age and academic background. Regarding gender, the data collected show that most managers are men (67%). However, no association was found between gender and the opinion of the managers regarding the adequacy of the method used to evaluate hotel performance.

Regarding age, the data collected show that most respondents from the 189 hotels surveyed are under 40 years of age (54%), about 26% are between 41 and 50, and only 20% of the respondents are older than 50. The association between age and the opinion of the managers regarding the
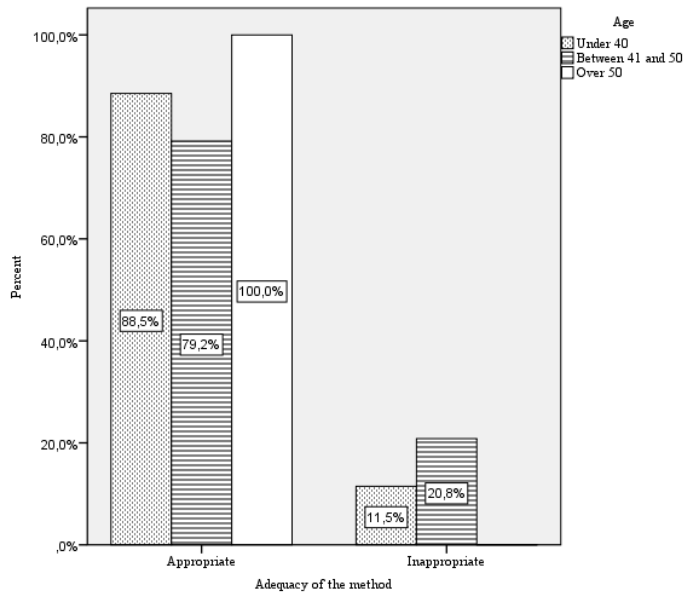
adequacy of the performance evaluation method used in the 145 hotels that evaluate performance is presented in Table 4. Its analysis allows us to conclude that none of the managers over 50 years old considers the method used to evaluate hotel performance as inappropriate.

TABLE 4. *Adequacy of the method used and age of the manager.*

Adequacy of the method	Age			TOTAL
	Under 40	Between 41 and 50	Over 50	
Appropriate	77	19	34	130
Inappropriate	10	5	0	15
TOTAL	87	24	34	145

Figure 4 depicts graphically this information, making it clear that all those aged over 50 consider the method as appropriate, while 21% of those in the age group between 41 and 50 consider the method as inappropriate. The Chi-Square test of independence presents a value of 6.894 for a p-value of 0.027, which leads to the conclusion that there is an association between the financial managers' age and their opinion regarding the adequacy of the method used to evaluate hotel performance, for a 5% error. Cramer's V coefficient, with a value of 0.218, suggests that this association is moderate.

FIGURE 4. *Adequacy of the method used and age of the manager.*

Regarding academic background, the data collected show that most managers of the 189 hotels surveyed have an academic degree (82%). Regarding the field of education, the majority (61%) of them have a degree in management, accounting or economics, while only 29% of the managers are graduated in hospitality or tourism. Only a residual number of managers has a degree in other areas (10%). The association between the field of education and the opinion of the managers regarding the adequacy of the method used to evaluate performance in the 145 hotels that do so is presented in Table 5. Its analysis allows us to conclude that the managers graduated in management, accounting or economists are more critical than the other managers, regarding the adequacy of the method used to evaluate hotel performance.

TABLE 5. Adequacy of the method used and academic background.

Adequacy of the method	Academic Background			TOTAL
	Accounting, Management, Economics	Hospitality, Tourism	Other areas	
Appropriate	69	38	13	130
Inappropriate	14	1	0	15
TOTAL	83	39	13	145

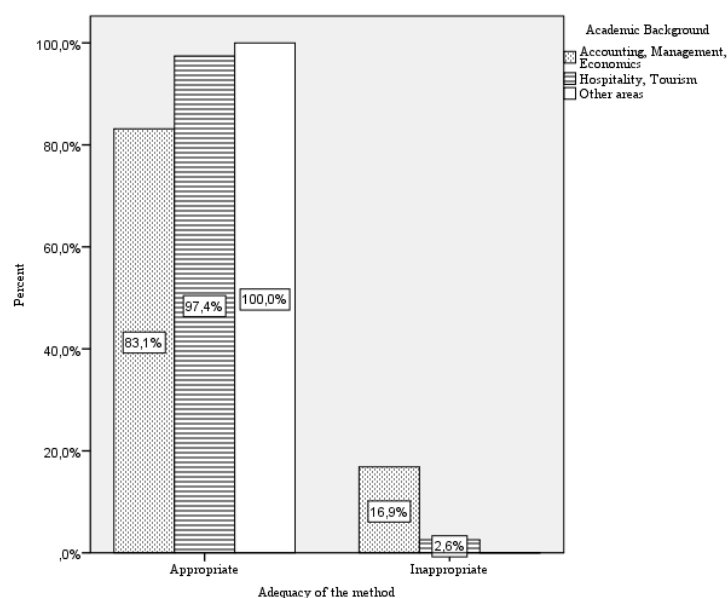*FIGURE 5. Adequacy of the method used and academic background.*

Figure 5 translates graphically this information, making it clear that 17% of the managers with a degree in management, accounting or economics consider the method as inappropriate, while only 3% of those with an academic background is hospitality or tourism, and none of the graduates from other areas, hold the same view. The Chi-Square test of independence presents a value of 7.294 for a p-value of 0.027, which leads to the conclusion that the educational area of the financial managers is associated with their opinion on the adequacy of the method used to evaluate hotel performance, for a 5% error. Cramer's V coefficient, with a value of 0.232, suggests that this association is moderate.

The results obtained are convergent with those of other studies already performed in the manufacturing sector (Cohen, Venieris and Kaimenaki, 2005; Machado, 2016), since they allow us to conclude that the opinion of the managers regarding the adequacy of the methods used is also related to the individual characteristics of the managers themselves, such as age and the academic qualifications, in the following sense: younger managers and those graduated in management, accounting or economics are more critical than senior managers and those graduated in other fields, such as hospitality and tourism, regarding the method used to evaluate hotel performance.

4.4 Satisfaction of hotel customers

Regarding the variable customer satisfaction, we collected the data available on Tripadvisor.com, regarding the customers' general satisfaction. These data were broken down into six items: sleep quality, location, room, service, cost/benefit ratio, and cleanliness. However, it was not possible to find information regarding one of the hotels that responded to the initial survey (n=188).

Regarding the customers' general satisfaction, the results obtained allow us to conclude that no hotel presents the classification of horrible or poor. Most present a rating of very good (72%), about 18% of the hotels present a rating of excellent, and 10% of the hotels are classified as reasonable. The association between the six satisfaction indicators previously mentioned, and the customers' overall satisfaction was analysed through the Chi-Square test of independence. The results obtained are presented in Table 6 and allow us to conclude that all the partial satisfaction indicators are associated with the customers' overall satisfaction, for a 1% error. However, the analysis of the results of Cramer's V coefficient shows that the indicator of room satisfaction is the one that has a stronger association, with location being the indicator with a weaker association.
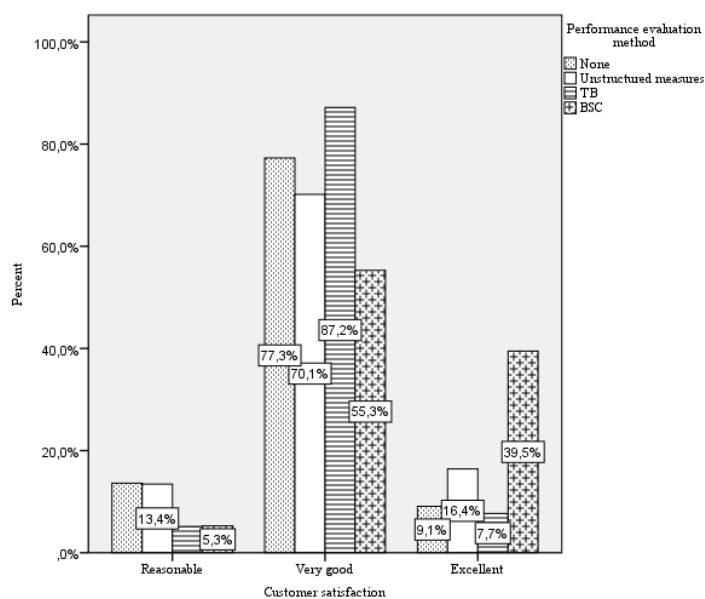
TABLE 6. *Satisfaction of hotel customers.*

Partial satisfaction indicators	Customers' general satisfaction		
	Chi-Square Test	p-value	Cramer's V
Sleep quality	72.907	≤ 0.001	0.440
Location	21.074	≤ 0.001	0.237
Room	140.789	≤ 0.001	0.612
Service	87.998	≤ 0.001	0.484
Cost/benefit	65.064	≤ 0.001	0.416
Cleanliness	70.965	≤ 0.001	0.434

TABLE 7. *Customer satisfaction and method used.*

Customer satisfaction	Performance evaluation method				TOTAL
	None	Unstructured measures	Tableau de Bord	Balanced Scorecard	
Reasonable	6	9	2	2	19 (10%)
Very good	34	47	34	21	136 (72%)
Excellent	4	11	3	15	33 (18%)
TOTAL	44	67	39	38	188

FIGURE 6. *Customer satisfaction and method used.*

The association between customer satisfaction and the method used to evaluate hotel performance is presented in Table 7, with the following results: the lowest satisfaction level (reasonable) is attributed to only two hotels that use the TB and the BSC, but is attributed to several hotels using the simplest method of unstructured measures.

The Chi-Square test of independence shows a value of 20.433 for a p-value of 0.002, which indicates that there is an association between the degree of customer satisfaction, and the method used to evaluate hotel performance, for a 1% error. Cramer's V coefficient, with a value of 0.233, suggests that the association is moderate. Figure 6 allows us to analyse this association graphically, showing that the maximum level of satisfaction is more common in hotels using the BSC (40%), while the lowest level of satisfaction (reasonable) is more common in hotels that use only unstructured measures (13%).

The results obtained in this section allow us to conclude that the level of customer satisfaction is proportionally higher in hotels that use more sophisticated methods to evaluate their performance, being the satisfaction indicator room the one that contributes more to the level of overall customer satisfaction.

5. Conclusions

This study presents four specific objectives: to analyse the association between hotel features, and the methods used to evaluate their performance; to analyse the convergence between what the theory considers as appropriate performance evaluation methods, and the opinion of the hotels' financial managers; to identify factors explaining why the same method is considered appropriate in some hotels and not in others; to analyse whether there is an association between the method used to evaluate hotel performance and customer satisfaction.

Regarding the association between hotel features and the methods used to evaluate hotel performance, the data collected confirm the findings already reported in other studies: hotels of a higher category and integrated in a chain use more sophisticated methods.

Regarding the second objective, the data collected allow us to conclude that the fact managers consider the method used to evaluate hotel performance as appropriate or inappropriate is effectively associated with the type of method used. This association occurs towards a convergence between what the theory considers as an adequate performance evaluation method, and the opinion of the hotels' financial managers. These conclusions diverge from

those of other studies conducted in the manufacturing sector, thus proving that they cannot be generalized to the hotel industry.

Regarding the third objective, the data collected show that the opinion of the managers regarding the adequacy of the methods used is related to the individual characteristics of those managers themselves, such as age and their academic background, which may explain why the same method is considered appropriate in some hotels and not in others.

Regarding the last objective, the data collected allow us to conclude that there is an association between the methods used to evaluate hotel performance and the level of customer satisfaction, in the following sense: the level of customer satisfaction is proportionally higher in the hotels that use more sophisticated methods; and the satisfaction indicator room is the one that contributes most to the level of overall customer satisfaction. These results allow us to conclude that the use of more sophisticated performance evaluation methods can be a factor affecting favourably the customers' actual experience, thus promoting their satisfaction. These results allow us to suggest to the hotel managers the allocation of material and human resources to operations that promote an increase in room quality, as the most determinant factor for their customers' overall satisfaction.

The main limitation of this study is the fact that the method of data collection used did not allow the clarification of doubts regarding the questions asked to the hotels' financial managers. We consider, however, that this study presents three contributions. The first contribution is the validation of the expectations confirmation paradigm as an adequate theoretical model to explain the satisfaction of hotel customers, namely showing that the performance evaluation methods can be considered as factors affecting the clients' actual experience. The second contribution is the conclusion that the satisfaction indicator room is the one that contributes the most to the level of overall customer satisfaction, which allows us to suggest to hotel managers the allocation of resources to operations that increase room quality. The last contribution is the identification of a convergence between what the theory considers to be appropriate performance evaluation methods, and the opinion of the hotels' financial managers, unlike what was previously reported in other business sectors.

We suggest that new studies be carried out exploring the role of each contingency variable now validated, namely using a qualitative research paradigm based on case studies that explore the role each hotel feature plays in the methods used to evaluate hotel performance. Further studies are also suggested to identify the causes for the differing opinions of the hotels' financial managers, when compared to other industries, regarding the adequacy of the performance evaluation methods used. As a factor to be

analysed, we suggest the possibility of the hotels' financial managers having a more up-to-date academic training on the performance evaluation methods.

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