RevPAR determinants of individual hotels
Evidences from Milan

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Abstract

Purpose – This paper aims to identify revenue per available room (RevPAR) determinants of individual firms located in a destination. Independent variables are to be sought along "what" and "where" dimensions.

Design/methodology/approach – The sample is composed of 72 individual firms, operating in the 3-5 star range and data have been collected from financial statements and questionnaires.

Findings – The empirical findings identify four main significant determinants linked to the "what" positioning – number of rooms, number of employees, number of years since the last refurbishment, market orientation – and confirm the relevance of location ("where"), and especially of centrality within the destination.

Research limitations/implications – At a theoretical level, the findings suggest the importance of linking the identification of determinants with the local context (destination) and positioning inside the city (location). At an empirical level, the study suggests some interesting implications both for existing hotels and for start-ups. For existing firms, empirical findings show the relevance of a strong advantage (disadvantage) in location (where) that might compensate for a disadvantage (advantage) in the strategic positioning (what). Concerning start-ups, the findings confirm the old rules of the hotel game, significantly summarized in the three success factors of a hotel unit: location, location, and location.

Originality/value – The present paper suggests the usefulness of taking into greater account the link between destination and local firms as an important determinant of performance, and explores the key success factors for individual (not affiliated) firms.

Keywords Hotels, Organizational performance, Hospitality management

Paper type Research paper

1. Introduction

Many research studies have sought to answer a crucial question for managers and researchers: which determinants influence a firm's performance? (Capon *et al.*, 1990; Lenz, 1981). The attempts to answer this question have been made mainly in two directions: outside the firm, focusing attention above all on sectors and markets and seeking to understand how their structure influences productivity, and inside the firm, looking for the determinants of performance in some strategic or functional choices (marketing, HRM, operational processes, etc.) (Hawawini *et al.*, 2003; Schmalensee, 1985).

This theme has had numerous applications in the tourism sector and, in particular, in the hospitality industry (Okumus, 2002), but two main gaps have been identified.

First, research studies on performance determinants tend to take on a national perspective (Chung and Kalnins, 2001; Gursoy and Swanger, 2007; Reichel and Haber,

2005), in order to construct broad samples making it possible to generalize findings, but ignoring the effects generated by destination strategy on firms' performance.

Studies conducted at destination level (Bieger, 1997; Enright and Newton, 2004; Go and Govers, 2000) describe the destination as a "competitive actor" or "business unit", able to influence some traits of local firm strategy, especially along the commercial dimensions (segments, seasonality and occupancy) (Jeffrey and Barden, 2000a, b).

Second, contributions on performance determinants focus prevalently on affiliated hotels, due to the relative facility in collecting data (Ham *et al.*, 2005; Ingram, 1996; Ingram and Baum, 1997a; Madan, 2007). However in some contexts, such as European countries, a wide portion of the supply is provided by individual firms.

The present paper is part of this debate (performance determinants) and suggests the usefulness of taking into greater account the link between destination and local firms as an important determinant of performance, and explores the key success factors for individual (not affiliated) firms.

2. Literature review

2.1 Performance in the field of strategic management

The ability of a business to last in time is closely linked to the results it pursues. Performance is the time test of any strategy (Hofer and Schendel, 1978) and performance improvement lies at the heart of strategic management (Chakravarthy, 1986). It is therefore not surprising that numerous studies have sought to clarify what is meant by performance, underlining the need to consider several dimensions jointly (Venkatraman and Ramanujam, 1986; Walker and Ruekert, 1987), to integrate financial and non-financial measures (Chakravarthy, 1986; Eccles, 1991), widen the survey perspectives, and involve the main business stakeholders (Kaplan and Norton, 1992, 1996).

Venkatraman and Ramanujam (1986) identify three dimensions of a firm's success: the financial, operational and organizational dimensions. The financial perspective includes accounting measures, able to appreciate margins and profitability. Financial ratios are the most used indices for this first category. The operational dimension measures the firm's ability to obtain trust from its clients and, in this sense, is an important determinant of financial success. In the absence of operational results it is impossible to account good financial performance. The organizational dimension evaluates the satisfaction of some stakeholders, with particular attention to shareholders and employees.

2.2 Performance in the field of hospitality management

The theme of performance has had numerous applications in the hotel sector (Okumus, 2002). Some characteristics of hotel businesses (Harris and Brander-Brown, 1998; Mia and Patiar, 2001; Winata and Mia, 2005), together with the strong growth recorded by the industry (WTO, 2008), increasing competition (Collier and Gregory, 1995; Harris and Brander Brown, 1998) and the existence of a high spatial concentration (destinations) (Baum and Mezias, 1992; Dredge, 1999), make this industry a fascinating field for research.

The studies carried out till now mainly utilize internal factors such as independent variables, relating to numerous business functions, processes and activities, although

with a strong focus on the themes of strategy (Ingram, 1996; Ingram and Baum, 1997a), marketing (Kim and Kim, 2005) and production (Sigala, 2004; Barros, 2004).

Performance is almost always measured by jointly or separately using the financial and operational dimension (Hu and Cai, 2004; Phillips, 1996); use of the organizational dimension is however rarer (Baum and Ingram, 1998; Øgaard *et al.*, 2008).

The indicators used to operationalize these dimensions are mainly financial ratios, occupancy, prices, RevPAR, sales growth, and customer satisfaction.

Inside this very wide corpus of studies, the present article focuses on searching for the RevPAR determinants, using independent variables mainly related to strategy. This choice is principally tied to the importance that "two key decisions: what products to sell and where to locate" (Baum and Haveman, 1997, p. 304) play in influencing hotel performance. Choice of location and product characteristics are particularly critical for hotels because the costs of relocating and changing product characteristics are high.

2.3 Determinants of "what"

What product to produce is a key decision that each hotel should take. To operationalize this concept, the literature mainly suggests the following variables: size, star rating, period of founding and refurbishment, services delivered and market orientation (or commercial mix). Founding refers to the hotel unit's first year of opening.

Many studies hypothesize a positive relationship between firm size, economies of scale and performance (Barros, 2004; Barros and Mascarenhas, 2005; Chen and Tseng, 2005; Claver-Cortés *et al.*, 2006, 2007a, b; Israeli, 2002; Pine and Phillips, 2005; Rodríguez and Cruz, 2007). Empirical findings demonstrate the ability of a firm's size to generate direct and positive ties with performance. However Anastassopoulos *et al.* (2009, p. 191) suggest that "size usually captures not only the existence of economies of scale but also diseconomies due to higher organization and management costs". Size is usually operationalized by using number of rooms, turnover or number of employees.

Star rating is used as a determinant in a large set of studies. Empirical findings suggest a direct and positive relationship with performance (Ingram and Roberts, 2000; Israeli, 2002; Pine and Phillips, 2005; Danziger *et al.*, 2006; Briggs *et al.*, 2007; Chand and Katou, 2007). Tsang and Yip demonstrate that only high star-ranking joint venture hotels contribute to heightened demand, creating agglomeration effects (Tsang and Yip, 2009). Star rating is usually operationalized by using official star classification.

Founding is a potential important variable in researching determinants of performance. When entrepreneurs found firms, they observe existing companies; Ingram and Baum introduce the idea of "vicarious learning" that is time and local specific (Ingram and Baum, 1997a). Entrepreneurs observe existing hotels and benchmark them to decide key characteristics of the new firms:

> In the 1920s hotels were slow to recognize the market opportunity presented by auto travelers, and failed to make necessary changes such as providing garage space and making it possible for guests to register without walk-in through a formal lobby in dirty road clothes (Ingram and Baum, 1997b, p. 80).

The relevance of vicarious learning is very important for individual firms that cannot take advantage of previous experiences developed by the chain in the same or in other destinations (Baum and Mezias, 1992). But paradigms and best practices evolve over time (Urtasun and Gutiérrez, 2006). For this reason newcomers may have some

additional advantages compared with incumbents. The latter may modify their supply by refurbishing it, reducing or nullifying disadvantages or taking advantage of new solutions.

Services delivered cover the breadth of supply. The literature review shows relatively few studies using this variable (Claver-Cortés *et al.*, 2006, 2007a, b; Urtasun and Gutíerrez, 2006). This could appear surprising. However, many studies use size as proxy for services delivered. Baum and Haveman write:

> Size is closely tied to the scope and scale of a hotel's services. Large hotels can offer a wider range of services (dining, recreational, and personal) and can cater for a greater variety of clients (e.g. business travelers, corporate meetings, conferences, tourists, tour groups) simultaneously (Baum and Haveman, 1997, p. 314).

The scale and scope of services delivered could be measured by counting the number of total services offered or using dummy variables focusing on key services.

In a seminal work using daily occupancy data, Jeffrey and Barden use market orientation as an independent variable:

> It measures the proportion of leisure guests to business and conference guests (Jeffrey and Barden, 2000a, p. 185).

In their study, market orientation "produces a level of explained variance of 65 percent" (Jeffrey and Barden, 2000a, p. 185). Later studies, using similar samples (Jeffrey and Barden, 2000b; Jeffrey *et al.*, 2002) confirm the same results. Market orientation is used in many other research studies (Capiez and Kaya, 2004; Cizmar and Weber, 2000; Gray *et al.*, 2000; Gu and Ryan, 2008; Qu *et al.*, 2005; Sargeant and Mohamad, 1999; Sin *et al.*, 2005; Tajeddini, 2010; Tse *et al.*, 2005), but the concept of market orientation refers "as organizational-wide information gathering and dissemination, and a quick response to current and future customer needs and preferences" (Sin *et al.*, 2005, p. 563). For the purpose of this paper, market orientation is more related to the concept of commercial mix, following the interesting results of Jeffrey and Barden. The independent variable is operationalized using the commercial mix relevant for the specific destination examined.

2.4 Determinants of "where"

The importance of "where" (location) is well known in the hospitality sector. Baum and Mezias write:

> The location and pricing of a hotel have substantive long-term consequences for the success of the establishment ... Among the most frequently mentioned criteria in a traveler's decision to purchase accommodation are: i) location (destination or city as well as specific address within the area); ii) price; iii) services; iv) facilities; and v) image. Those familiar with the hotel industry often argue that the three most important factors for success, as with restaurants and real estate, are location, location, and location (Baum and Mezias, 1992, p. 585).

At local level, location is operationalized by using a spatial segmentation related to the main blocks or avenues of the destination. Some researchers use the "street-avenue grid" (Baum and Mezias, 1992, p. 589; Baum and Haveman, 1997, p. 319), location coordinates and subjective geographic areas (Urtasun and Gutíerrez, 2006, p. 389), while Ingram and Inman (1996, p. 646) use proximity to relevant attractions.

2.5 Research model
Following the insights drawn from the literature review, the present study aims to test some hypotheses related to the what-where perspective. Figure 1 summarizes the expected relationships and signs.

Size, both in term of rooms (*H1*) and employees (*H2*), is expected to be positive (+) related to hotels performance, due to economies of scale and specializations.

Star rating (*H3*) should have a positive relationship (+) with RevPAR for two reasons. Firstly, high star rating hotels obtain high prices; secondly, in a business city like Milan, high spending hotels are able to intercept a wide segment of the market.

Founding is expected to be negatively (−) related to results. This dimension has been operationalized by using two variables: the number of years since foundation (*H4*) and the number of years since the last refurbishment (*H5*). If the foundation took place many years ago, the building and the main services have been designed according to the needs for a customer that is significantly different from the current one. In contrast, a smaller number of years since the last refurbishment makes it possible to match the facilities with the needs of present clients.

Breadth of service has been operationalized by checking the presence of congress facilities (*H6*). Congress services allow hotels to attract new segments of clientele, reducing seasonality and increasing sales. Therefore, the impact on RevPAR is expected to be positive (+).

The last variable in the "what" perspective is market orientation. Milan is the second European destination for trade fair facilities. The relationship with performance is expected to be negatively related (−), because firms focusing excessively on trade fair exhibitors and buyers (*H7*) increase their seasonality and reduce their turnover.

Finally, the location (*H8*) has been measured by considering centrality. The relationship is expected to be positive (+).

3. Methodology
To analyze the link existing between the competitive positioning of the destination and the performance of hotel firms, a statistical analysis has been made, using financial
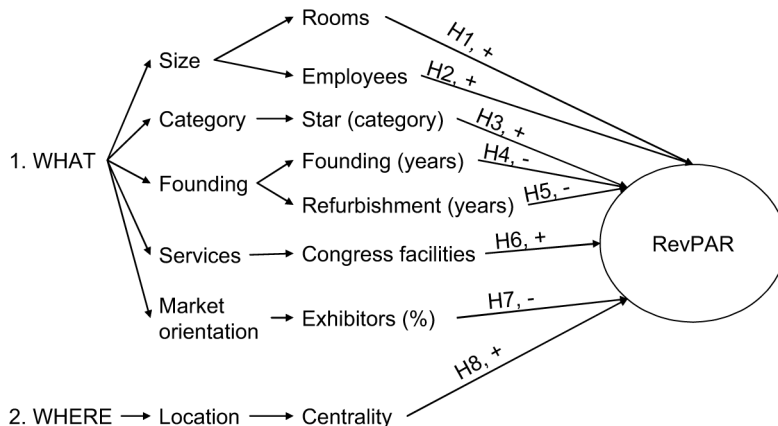

Figure 1.
Research model

data and conducting a questionnaire. The sample (described below) includes 72 hotels based in the city of Milan.

The decision to analyze a single destination is justified by considering the complexity of the information to be collected and the processing to be carried out to find out in detail the location, functioning and performance of an aggregate made up of several hundred firms and thousands of players. This methodological choice finds numerous confirmations in previous studies cantered on product analysis (Murphy *et al.*, 2000), competitiveness of destinations (Claver-Cortés *et al.*, 2007a; Enright and Newton, 2004; Ritchie and Crouch, 2000) and in the performance of firms based in a destination (Baum and Ingram, 1998; Baum and Mezias, 1992; Chiang *et al.*, 2004; Chung, 2000; Espino-Rodríguez and Padrón-Robaina, 2004; Ham *et al.*, 2005; Ingram and Baum, 1997a; Ingram and Inman, 1996; Urtasun and Gutierrez, 2006; Tse *et al.*, 2005).

3.1 Sample and procedure
The analysis focuses on the entire population of local firms obliged to publish financial statements. The unit of analysis is therefore a company with financial headquarters in Milan. But the author has excluded all cases of affiliated firms with hotels (units) in other cities. For this reason the sample does not feature national and international hotel chains. The 1 and 2-star structures were excluded, according to previous studies (Claver-Cortés *et al.*, 2006, 2007a, b; Emeksiz *et al.*, 2006); furthermore, according to Italian legislation, they are hardly ever obliged to publish financial statements. The "financial statements population" numbers 129 firms, but the financial results of eight firms were not available when data was recorded. All the firms were supplied with a structured questionnaire, and 72 completed questionnaires were returned, with a redemption of 59.5 per cent. For each firm in the sample there is one (hotel) unit. In fact, despite the presence of some local chains in Milan, a specific corporate name has always been found for each unit, with its own financial statements (profit and loss and balance sheet).

The sample has a good stratification if read according to the previously identified details (Table I). The financial statement made it possible to gather financial information for the last five years (2002-2006). For Italian legislation, accounting income in the public financial statement is not subdivided per business unit or department. In the calculation of RevPAR the income relating to F&B and to any

Variables	n	Range	Minimum	Maximum	Mean	SD	Variance
Rooms	72	161	27	188	71.96	36.641	1,342.55
Employees	72	94	6	100	19.42	14.132	199.71
Category	72	2	3	5	3.53	0.556	0.31
Founding years	72	57	0	57	22.5972	15.059	226.78
Refurbishment	72	26	0	26	3.72	5.195	26.99
Congress	72	1	0	1	0.29	0.458	0.21
Exhibitors	72	74.78%	3.00%	77.78%	35.96%	0.176	0.03
Centrality	72	1	0	1	0.26	0.444	0.20
Valid n (listwise)	72						

Table I.
Descriptive statistics

collateral services such as SPA or congress centers are therefore included. Performance is measured using RevPAR, due to this indicator's ability to synthesize both price and occupancy.

The questionnaire data made it possible to obtain information concerning: occupancy, seasonality (measured on a monthly basis), dimension, number of staff, founding and last refurbishment, services offered, locations. The questionnaires were carried out by an interviewer between the end of January and the beginning of February 2007 and contain information on the results for 2006. After an in-depth analysis of performance, it was decided to use the RevPAR as a dependent variable (Ham *et al.*, 2005; Kim and Kim, 2005; Namasivayam *et al.*, 2007).

3.2 Statistical analysis

Table II presents the correlation matrix of the eight independent variables. Data show correlations between some determinants, mainly generated by size (number of rooms and number of employees); in both cases there are three significant relationships.

Focusing on rooms: this variable is positively tied to the number of employees, star rating level and the presence of congress facilities. In other words, large hotels in Milan have more personnel, are positioned in the 4-5 star range and have developed congress services. These results appear reasonable.

The number of employees is positively related with star rating, the presence of congress facilities, and centrality. Concerning category, 4-5 star hotels tend to be larger than three-star firms and thus have more personnel in absolute terms. Furthermore, high quality hotels usually have more employees per room. Concerning congress facilities, hotels with a higher absolute value of personnel present a strong fixed cost structure. For this reason they could be more likely to develop additional services (congress facilities) able to attract new segments and to increase sales. Finally, the relationship with centrality is determined by the presence of some large structures in downtown Milan.

In order to analyze the problems of multicollinearity, two tests have been made. The first is the variance inflation factor (VIF); the maximum value found in the sample is 2.4, thus lower than the maximum value of 3 suggested by Hair *et al.* (2005). The second is the condition index; the highest value of 26.7 is lower than the value of 30 suggested by Belsley *et al.* (2004). The two indices suggest the absence of multicollinearity.

In statistics, a sequence of random variables is heteroscedastic, or heteroskedastic, if the random variables have different variances. The term means "differing variance" and comes from the Greek "hetero" (different) and "skedasis" (dispersion). In contrast, a sequence of random variables is called homoscedastic if it has constant variance.

The heteroskedasticity was controlled by using the White test, verifying the null hypothesis of the homoscedastic sequence. The obtained value is not statistically significant, and so it is possible to affirm the validity of the model (White, 1980).

4. Results

A regression analysis has been made (Table III), using the RevPAR as a dependent variable. The obtained model is statistically significant ($p = 0.000$) and able to explain

		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Rooms (1)	Pearson correlation	1.000							
	Sig. (two-tailed)								
Employees (2)	Pearson correlation	0.618**	1.000						
	Sig. (two-tailed)	0.000							
Category (3)	Pearson correlation	0.303**	0.552**	1.000					
	Sig. (two-tailed)	0.010	0.000						
Founding (years) (4)	Pearson correlation	0.313**	0.184	0.086	1.000				
	Sig. (two-tailed)	0.007	0.121	0.471					
Refurbishment (5)	Pearson correlation	0.039	0.181	0.266*	0.020	1.000			
	Sig. (two-tailed)	0.742	0.128	0.024	0.869				
Congress (6)	Pearson correlation	0.506**	0.384**	0.272*	0.066	0.122	1.000		
	Sig. (two-tailed)	0.000	0.001	0.021	0.580	0.351			
Exhibitors (7)	Pearson correlation	−0.124	−0.126	0.088	−0.020	0.082	0.139	1.000	
	Sig. (two-tailed)	0.299	0.290	0.464	0.867	0.495	0.243		
Centrality (8)	Pearson correlation	0.079	0.324**	0.170	0.121	0.051	0.032	0.003	1.000
	Sig. (two-tailed)	0.507	0.006	0.154	0.309	0.673	0.791	0.979	

Notes: *Correlation is significant at the 0.05 level (two-tailed); **Correlation is significant at the 0.01 level (two-tailed)

Table II.
Correlation matrix

	Unstandardized coefficients		Standardized coefficients		
	B	Std. error	Beta	t	sig.
(Constant)	86.855	34.481		2.519	0.014
Rooms	−0.605	0.186	−0.363	−3.259	0.002
Employees	3.314	0.513	0.768	6.458	0.000
Category	−0.629	10.368	−0.006	−0.061	0.952
Founding years	−0.487	0.328	−0.120	−1.486	0.142
Refurbishment	2.099	0.931	0.179	2.254	0.028
Congress	4.648	12.294	0.035	0.378	0.707
Exhibitors	−68.460	27.903	−0.197	−2.453	0.017
Centrality	26.756	11.256	0.195	2.377	0.020

Notes: [a]Dependent variable: RevPAR; Adjusted R square 0.592

Table III.
Regression model

59.2 percent of the RevPAR variance. The columns B and beta (standardized coefficients) show the signs of the relationships between RevPAR and independent variables. The last column (Sig.) measures whether the results are significant (italic values, $p < 0.05$) or not. Figure 2 summarizes significant results.

Among the "what" variables, the model shows that:

- the number of rooms is negatively related to results ($−0.363$);

- the number of employees is positively related to RevPAR (0.768);

- refurbishment is positively related to the dependent variable; and

- a focus on exhibitor segment reduces the level of RevPAR ($−0.197$).

Concerning the "where" variable, centrality is positively related to results (0.195).

Interesting empirical findings suggest a diverse sign (as outlined in Figure 1) in the relationship between independent variables and RevPAR in hypothesis 1 (rooms) and 5 (refurbishment).
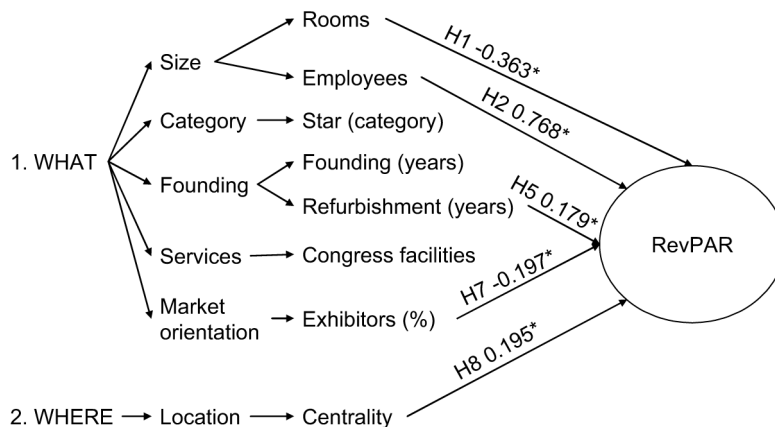
Figure 2.
Significant results

4. Discussion

The results show five significant determinants of performance. Concerning size, the number of rooms is negatively related to RevPAR, suggesting diseconomies of scales. Since size negatively affects Revpar, the larger a hotel, the lower its RevPAR value. It is important to remember that the sample is composed only of individual hotels.

In contrast, the number of employees is positively related with performance, showing that:

- employees are not a proxy of rooms; and
- employees tend to generate value in terms of occupancy or in terms of price and then positive impact on RevPAR.

Refurbishment was expected to be negatively related to results, showing that recent refurbishment increases RevPAR. Empirical findings disconfirm the sign. The positive relationship may be explained in two ways. The first suggests a time lag effect: a new refurbishment requires time to be perceived and to generate positive effects on RevPAR. A second explanation is based on the positive relationship between refurbishment and star rating (0.266, Table II). Renovation work in the hotel tends to increase the number of stars, generating up-grading in the category. The re-positioning of the hotel takes time to be perceived by the new targets.

Market orientation shows a negative relationship with RevPAR, as expected. The city of Milan is strongly positioned in the trade fair segment, attracting roughly 80 events per year and originating approximately 150 days covered by events (Fiera Milano, 2008). However a significant number of trade fairs have a marginal impact on price and occupancy, and therefore on RevPAR. Therefore, hotels with a strong focus on trade fairs increase their seasonalities, reducing their operational results in non trade-fair periods. For this reason the relationship is negatively related to RevPAR.

Finally, centrality is able to increase the value of RevPAR, as supposed. It is interesting to note that hotels located downtown are not correlated with dimension (number of rooms), star rating, founding, refurbishment, breadth of facilities or market orientation. The only significant correlation (Table II) is the number of employees (0.324). The location advantage is so important that it is able to generate a positive rent independently of specific strategic positioning. This result is fairly similar to the study made by Baum and Haveman in Manhattan. The authors note that "the largest hotels have always been located where the demand for hotel services is densest, in midtown Manhattan – very few hotels with more than 1,000 rooms were ever established outside this area" (Baum and Haveman, 1997, p. 318).

Concerning the remaining hypotheses (*H3*, *H4* and *H6*), the results are not significant, and so it is impossible to draw conclusions about the relationship with RevPAR. Surprisingly, the value obtained by star rating, usually described as very important determinants of hotel results, is not significant in the study.

5. Conclusions

The present study makes it possible to draw some conclusions at theoretical and empirical level. At theoretical level, the findings suggest the importance of linking the identification of determinants with the local context (destination) and positioning inside the city (location). As showed in the literature review, previous works tend to focus exclusively on national samples, without exploring independent

"destination-based" variables. The case of Milan indicates the relevance of some local variables, such as the commercial mix and location. Market orientation is often designed and managed more at destination rather than at firm level. Starting from the destination helps researchers to have a widening knowledge of some structural traits that tend to characterize the sample, such as seasonalities and occupancy. An important implication for theory would be to repeat a study like this in different destinations, testing new variables and comparing results. Furthermore, independent variables could be different or very different regarding individual and affiliated hotels.

At empirical level, the study suggests some interesting implications both for existing hotel and for start-ups. For existing firms, empirical findings show the relevance of strong advantage (disadvantage) of location (where) that might compensate disadvantage (advantage) in the strategic positioning (what). Inside the determinants, the results suggest the importance of a broad commercial policy, able to differentiate the served targets, in order to optimize occupancy and, if possible, prices.

Finally, concerning start-ups, the findings confirm the old rules of the hotel game, significantly summarized in the three success factors of a hotel unit: location, location and location. Results suggest that in individual small business hotels the relationship between number of rooms and RevPAR is not positive, suggesting the presence of diseconomies of scale.

6. Limitations

The article presents three main limitations:

(1) It is based on the data of one destination.

(2) Uses information related to one year.

(3) Operationalizes the location variable using only one dummy (centrality versus non centrality).

Concerning the first point, the decision to analyze one destination is principally tied to the relevant work necessary to know the local context, develop the primary (interviews) and secondary (financial statements) data, and understand the main strategic and managerial practices used by local firms and leading companies.

The empirical findings are based on one year (2006). This decision is mainly tied to the difficulties in recording data related to sales volume (rooms sold per single hotel unit). The fragmented structure of the supply has necessitated an intensive field research and dealing with the problems of confidential data. Finally, the division of Milan into street blocks is based on public segmentation. In this article, a distinction has been developed between hotels located downtown or not. A wider sample would surely make it possible to analyze the location effects in greater detail.

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