This is the accepted manuscript of the article:

Anguera-Torrell, O. and Nicolau, J.L. (2023). Who benefits more from trade shows: Independent, franchised or chain-owned/managed hotels?", ***Tourism Management***, 104770.
https://doi.org/10.1016/j.tourman.2023.104770

Who benefits more from trade shows: Independent, franchised or chain-owned/managed hotels?

Abstract:

Large-scale events are opportunities for hotels to generate revenue. The literature has attested positive effects of events on hotel performance. However, while large-demand events are associated with room rate increases, hotel operation types may play a critical role in this "event-hotel performance" relationship. Drawing on the resource-based view theory, the chain value model and the theory of strategic groups, we hypothesize that independent and franchised hotels outperform chain-owned/managed hotels when events are held. The empirical application on over 950,000 observations between 2014 and 2019 shows that while chain-owned/managed hotels generally outperform independent and franchised hotels, this situation reverses in the presence of events. This result extends the resource-based view theory and the value chain model by including the short/long-term and corporate/property paradigm in the hotel industry.

Keywords: trade shows; events; independent; franchised; chain; performance.

1. Introduction

Tell a hotelier that the next edition of the World Widget Exhibition will be held in town, and you will brighten her day. The hotelier will immediately think the event will cause a large enough demand surge to charge higher rates and obtain better profitability. Indeed, hosting large-scale events brings tourists to destinations (Getz, 2008) and, consequently, represents an opportunity for hotels to achieve better performance. A growing strand of research has analyzed the relationship between hotel performance and the celebration of events of different natures, including, among others, cultural festivals (Chikish et al., 2019; C. Collins et al., 2019; Herrmann & Herrmann, 2014; Litvin et al., 2013; Piga & Melis, 2021; Sainaghi & Mauri, 2018), sports competitions (Barreda et al., 2017; Borovcanin et al., 2020; Chalupa & Petricek, 2021; Chikish et al., 2019; C. Collins et al., 2019; Depken & Stephenson, 2018; Falk & Vieru, 2021; Lamla et al., 2014), political celebrations (C. Collins et al., 2019; C. Collins & Hall, 2022; Heller et al., 2018), or business conventions and trade shows (Bento et al., 2021; Peng et al., 2013). Most of these studies suggest that large-scale events can positively impact hotel performance.

Nevertheless, revenue managers of chain-managed hotels may have their hands tied in pressing too hard the button to raise rates for large-scale events dates. Think of an attendee at a large-scale event who feels she paid too high a price for her hotel stay during the event. The attendee may think this is unfair as the hotel took too much advantage of the situation. Unfair perceptions about pricing strategies can lead to negative responses by consumers (Mauri, 2007) —potentially being seen as price gouging— which may severely impact hotel chains. For instance, if the attendee stayed at an independent hotel during that event, she might decide not to return to that property the next time she stays in town. However, if she stayed at a chain hotel, she may decide not even to patronize hotels of that same chain everywhere in the future. Thus, the opportunity cost of increasing rates too much during events seems really high for hotel chains, as they are subject to adverse spillover effects to other chain properties. Along this line, it is no wonder that chain-owned/managed hotels give special importance to loyalty programs so that customers can use their services in any city they hotel chain has properties. However, not all chain properties may optimally internalize brand-value spillovers: franchisees may exclusively focus on their properties and ignore this reputational cost to other hotels in the chain.

Therefore, it is natural to hypothesize that both independent and franchised properties can benefit more, at least in the short run, from large-scale events than chain-owned and/or managed ones (henceforth, chain-owned/managed). This hypothesis can also be grounded in the theories of the resource-based view, the value chain model, and strategic groups. First, the resource-based view suggests that a brand constitutes a valuable, rare, inimitable and non-substitutable resource that assists companies in differentiating from their competitors (Barney, 1991). In that regard, higher-than-usual hotel rates during events might be seen as unfair by consumers and negatively affect hotel brands. As a consequence, hotel chains may decide to increase prices during events, but in moderation, to avoid damaging the brand.

Second, Porter's (1985) value chain model identifies marketing strategies as a primary activity of firms to gain a competitive advantage. In this sense, and building on the previous line of thought,

the pricing strategy for chain-owned/managed hotels most likely has to follow headquarters guidelines, limiting the freedom to which these properties can raise rates during events. Finally, the theory of strategic groups applied to the hotel industry (Claver-Cortés et al., 2017) also suggests that properties of different operation types may decide on diverging pricing strategies during the celebration of events.

Yet, previous literature has not considered the role of hotel operations when analyzing the relationship between large-scale events and hotel performance. The role of hotel operation is critical, not only for the relevant managerial implications that this analysis brings about, but also because of the theoretical advancements in the literature on the resource-based view, the value chain model, and the strategic groups. Accordingly, this paper proposes to start filling this gap by empirically analyzing whether hotel key performance indicators (KPIs) showcase different responses to the celebration of important trade shows depending on the operation of hotel properties. To this end, and using data from STR and TSSN, a panel database has been constructed. This database includes daily-level information between January 1, 2014 and December 31, 2019 for 435 hotels in five major US cities to celebrate trade shows. These cities are Atlanta, Chicago, Indianapolis, New York, and Orlando and are found among the seven top US cities with the most trade show attendees between 2014 and 2019 (TSNN, 2022).

Trade shows have been selected as an appropriate type of event to fill the abovementioned research gap for two reasons. On the one hand, trade shows are relevant in the event industry due to their significant economic impact. In 2019, exhibitions, shows and fairs accounted for more than $200 billion in global gross domestic product and generated 3.4 million jobs worldwide (The Global Association of the Exhibition Industry & Oxford Economics, 2022). On the other, it is likely that trade shows attendees' primary motivation for visiting a destination is to attend this event. In contrast, the motivation to visit a destination for those attending other types of events, such as music festivals or sports competitions, may emerge from the combination of attending these events and other tourism purposes, making it more challenging to identify the impact. For instance, Colombo and Marques (2020) measure the motivations for attending a cultural event and a business-oriented one. In their results, "visiting the area" only appears as one of the main motivations for the cultural event, but not for the business-oriented one.

The empirical analysis has been conducted by estimating three different equations using regression techniques. The first equation examines the relationship between hotel KPIs and hotel operation types when the celebration of trade shows is not considered; thus, potential differentiated effects by operation types per se are unearthed. The existence of different results would confirm the structure-conduct-performance theoretical framework of strategic groups. The second one is an interaction model used to study how KPIs change, on average, for independent and franchised hotels compared to chain-owned/managed properties when trade shows take place. Finally, the third equation further inspects the previous relationship considering trade shows' size. This third equation has been estimated using 2SLS to control for potential endogeneity between hotel KPIs and trade shows' size. Thus, the estimated results of the latter two equations allow

concluding whether hotel operation types play a critical role in the "event-performance" relationship.

This paper brings important managerial implications because two-level guidelines can be provided, at corporate (chain) and property (individual hotel) levels, regarding the optimal price points that can be set in order to find a balance that satisfies the long-term chain's performance and the short-term property's performance.

2.Events, KPIs and hotel operations

To describe the effect of hotel operation types, this section presents, first, the relationship between events and hotel KPIs, and then, the effect of hotel operations on KPIs in the theoretical framework provided by the resource-based view, the chain value model, and the theory of strategic groups.

2.1. Relationship between events and hotel KPIs

Tourism events can take different forms, including, among others, musical festivals, sports competitions, political meetings and trade shows (Getz, 2008), and can assist in deseasonalizing destinations (Ritchie & Beliveau, 1974). Tourism and hospitality researchers have been interested in analyzing the effects of events on host destinations in terms of economic gains (Andersson & Lundberg, 2013; Beckman & Traynor, 2019; Bracalente et al., 2011; Huang et al., 2014; Lafuente et al., 2017; Long & Perdue, 1990), tourist arrivals (Caprettini, 2021; Fourie & Santana-Gallego, 2011), perceived destination image (Liu & Gratton, 2010), social impacts (Andersson & Lundberg, 2013; Kim et al., 2015), and environmental impacts (Andersson & Lundberg, 2013; A. Collins et al., 2009; Jones, 2008). Along these lines, the framework of this study is based on the growing literature analyzing how hotel KPIs change when sports, cultural, political or business-oriented events are held.

Regarding sports events, Falk and Vieru (2021) use a difference in differences approach, with booking-level data for nine hotel chains, to estimate the short-run impact of sports events celebrated in Finnish Lapland on hotel prices. These sports events include skiing, ice fishing, marathon, mountain biking, and auto racing competitions. They show that large sports events positively impact prices for those hotels closely located to the sporting events. However, no effect is detected for small-scale sports events. Similarly, Depken and Stephenson (2018) used a fixed regression model with day-level information to show that car races celebrated in Charlotte are associated with significant increases in hotel KPIs.

Using a similar methodology, C. Collins et al. (2019) illustrate that high-end hotels in Texas benefit from the United States Formula One race. In turn, Chalupa and Petricek (2021) present descriptive statistics and perform some t-tests to conclude that Prague and Bratislava hotels

experienced an increase in their performance during the Ice Hockey World Championship. Likewise, Barreda et al. (2017) report some descriptive statistics suggesting that Brazilian hotels in different hosting cities benefited from the 2014 FIFA World Cup, and Borovcanin et al. (2020) perform several ANOVA tests using day-level data to illustrate that Vienna hotels' KPIs are positively associated with celebrating marathons. Conversely, Chikish et al. (2019) evaluate the impact of professional sports events celebrated at the Staples Center in Los Angeles using daily data in three geographic areas classified from closest to farthest from the arena, and their results do not support the idea that hotels benefit from NBA and NHL games.

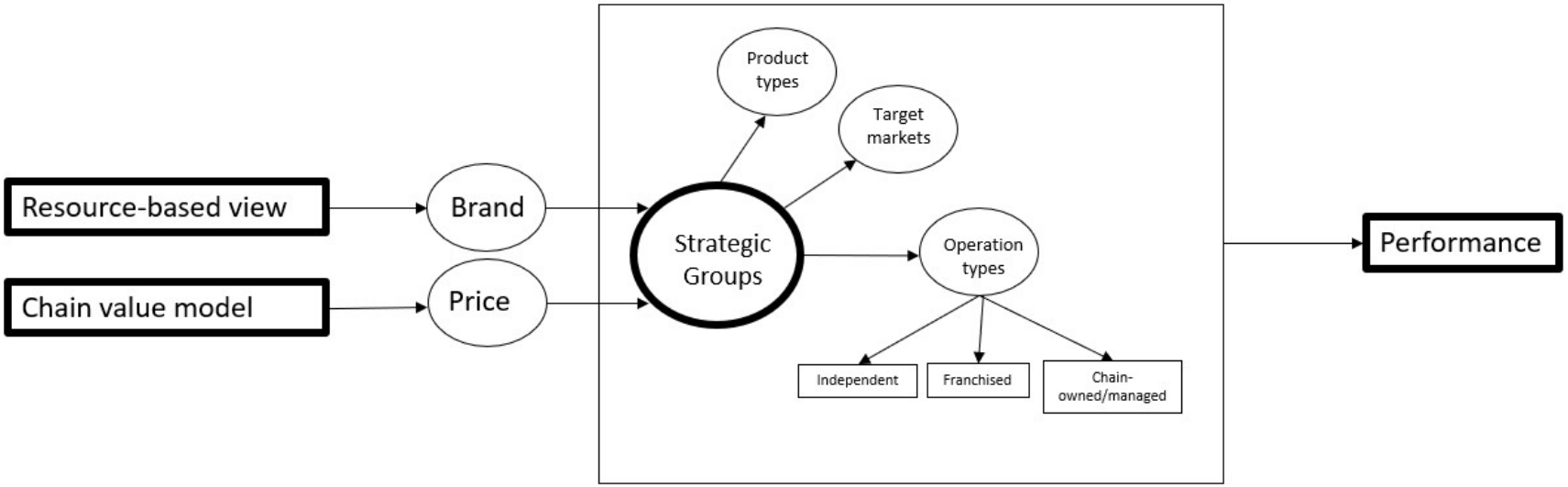
Concerning cultural events, Herrmann and Herrmann (2014) exploit day- and hotel-level data to show that hotel rates increase on the days the Oktoberfest is celebrated in Munich and that this impact is more prominent for higher-end, better-rated, and closer to the event properties. Similarly, using day- and property-level information, Piga and Melis (2021) show that hotel prices increase during the Nottingham Beer and Cider Festival, and Litvin et al. (2013) showcase a positive association between hotel KPIs and the celebration of festivals in Charleston. Depken and Stephenson (2018) and Chikish et al. (2019) also show a positive effect when music events are held. In addition, when a mega-event such as the 2015 Milan World Expo is considered, Sainaghi and Mauri (2018) prove that hotel KPIs also improve.

Regarding political events, C. Collins and Hall (2022) employ day-level data and a fixed effects regression to exhibit that hotel occupancy not only increased during the days of Obama's and Trump's presidential inaugurations in Washington DC but also some days prior to and posterior to the event. By the same token, using day-level data for four US cities, Heller et al. (2018) also show a positive impact on hotel occupancy and revenue due to the celebration of Democratic and Republican national conventions.

As for business-oriented events, Bento et al. (2021) contemplate the Web Summit held in Lisbon and present descriptive statistics on hotel KPIs suggesting a positive impact of this event. In addition, Peng et al. (2013) evaluate how the China Import and Export Fair in Guangzhou influences hotel rates. Estimating an equation at the property level by ordinary least squares, they find an average negative impact on hotel room rates and show that chained-brand properties perform worse than independent ones during the fair. This latter result is close to the objective of this paper. Nevertheless, they do not distinguish between chain-owned/managed properties and franchised ones. Moreover they only study a particular event and exploit data at the property level in one single city as opposed to the present study, which considers several trade fairs during a longer period of time in five different cities.

Therefore, most of the above-discussed research identifies a positive impact of events of different natures on hotels' KPIs, with large-scale events generating the greatest impacts. Nevertheless, the possible heterogeneous impacts depending on hotels' operation types mostly remain unexplored.

Figure 1. Theoretical framework



2.2. Effect of hotel operation on KPIs

To outline the effect of hotel operations on KPIs, this study resorts to the resource-based view, the chain value model, and the theory of strategic groups. Figure 1 outlines the theoretical framework, wherein the resource-based view and the chain value model offer, as discussed below, key strategic tools such as branding and pricing. These tools enable members of strategic groups defined in terms of, for instance, product types, target markets, or more relevant to this study, operation types, develop and implement different strategic actions, which, in turn, will lead to different levels of performance.

The resource-based view has proven to be a critical theoretical framework to explain why some companies are able to gain competitive advantages and keep them over time (Ibrahim et al., 2023; Seo et al., 2021). As far as a company possesses resources that are "valuable, rare, inimitable and non-substitutable" (Barney, 1991; Barney & Arikan, 2001), the resulting competitive advantages help the company differentiate from competitors and find a stable position in the market. In this framework, the tangible-intangible dichotomy emerges as a fundamental element, not only for the physical distinction of resources but also for the implications thereof. In the comparison of both types of resources, the criteria of "valuable, rare, inimitable and non-substitutable" are more readily met by intangible resources. Consequently, strategic as well as operational decisions must specially consider these intangible resources with the long-term competitive advantage that they bring about.

Chief among these intangible resources is the brand. A hotel brand can be affected by strategic decisions (e.g., repositioning) and operational decisions (e.g., dynamic pricing). In the context of this study, it is important to recall that prices can have an influence on the demand for an event but also on the image and reputation of a hotel chain. As the literature shows that price premiums driven by profits are regarded as more unfair than price increases derived from cost-justified reasons (Tarrahi et al., 2016), this perceived lack of fairness can be transferred to the brand with potential negative consequences, not only for the demand but especially for the brand's reputation. Therefore, the expectation is that, in the case of an event, chain-owned/managed hotels (also known as branded hotels, precisely because corporate brands are a key element in the distinction of hotel operations) will not increase prices as much as independent and franchised hotels. Any damage to the reputation of the brand may lead customers to refrain from booking these hotel brands elsewhere on future occasions; however, independent hotels (not associated with a parent brand) and franchised hotels (even if linked to a brand, they care less about the brand than chain-owned/managed hotels) may set a high premium in an attempt to make the most of the upcoming event.

This argument is further reinforced by Porter's (1985) value chain model, which places the emphasis on the activities that firms can do with their resources rather than the resources per se. In fact, this author claims that "resources are not valuable in and of themselves"; rather, it is the value created by the activities conducted through these resources that matters in the development of competitive advantages. When this activity-driven value creation is designed, implemented and coordinated at the corporate level (hotel chain), the leeway of each business unit (property) is

limited. Porter's (1985) model proposes two types of activities, primary (essential actions for the development of the firm) and support activities (basic infrastructure). Marketing and sales are considered primary activities wherein pricing plays a critical role in the corporate strategy. Thus, with the marketing strategy—and the branding strategy for that matter—being dictated at the hotel chain level and with the individual property having to follow the guidelines provided by the hotel chain, the chain-owned/managed hotels have the range with which they can increase prices constrained.

Beyond the potential constraints that chain-owned/managed hotels may have in terms of their capacity to raise rates, the theory of strategic groups offers insightful perspectives regarding the different courses of action undertaken by different firm types; firm types defined in terms of hotel operations. Stemming from the structure–conduct–performance theoretical framework developed in the field of Industrial Economics, Hunt (1972) defines, in his seminal work, a strategic group as a set of firms in an industry that show similarities when it comes to key strategic dimensions, which in turn have an effect on performance. In the hotel industry, Claver-Cortés et al. (2007) use hotel operations as a univariant strategic dimension to identify strategic groups and find that different conducts lead to distinct performance.

These differentiated conducts by type of hotel operations entail a strategic use of prices that the members of each group pursue. Drawing on this theory of strategic groups, it is hypothesized that, when facing the prospects of an upcoming event, hotels that belong to different strategic groups defined by hotel operations (chain-owned/managed, independent and franchised hotels) will act distinctively in terms of price reactions. On account of the resource-based view and the value chain model outlined previously—and the constraints that chain-owned/managed hotels may be confronted with—the expected price reaction of independent and franchised hotel should lead to higher price premiums.

3. Methodology

3.1 Data

Two sources of information have been combined to analyze the relationship between hotel Key Performance Indicators (KPIs) and hotel operations (independent, franchised, or chain owned/managed) when trade shows are held. On the one hand, day- and property-level anonymized data have been obtained from STR, a firm providing reliable data for the global hospitality industry. This dataset includes daily ADR, Occupancy, and RevPAR information per hotel, which are standard performance metrics for the hotel industry (Lim and Ok, 2021) . Moreover, it also contains basic property level information such as category (luxury, upper upscale, upscale, upper midscale, midscale, or economy) and size (classified depending on the number of rooms). On the other hand, relevant data about major trade shows held in the US have been gathered from TSNN. In particular, TSNN yearly publishes the Top 250 US Trade Show

List, including location, dates, number of attendees, and meeting space per each main trade show held in the US.

Of all the cities listed in those TSSN annual rankings, only seven cities have been able to attract more than 950k attendees between 2014 and 2019, which is the period for which hotel data was available for this study. In order from more to few attendees, these cities are Las Vegas, Chicago, Orlando, Atlanta, New York, Anaheim and Indianapolis. The next most attended city congregated about 600,000 attendees. For all these seven cities but Las Vegas and Anaheim, the authors have been able to get day- and hotel-level data for 435 properties. These five cities gathered approximately 9.5 million attendees between 2014 and 2019, emphasizing their relevance to the trade show sector.

As a result, a panel database has been built after merging the STR and TSSN datasets. The final database includes daily ADR, Occupancy, and RevPAR and time-invariant property characteristics information for 435 sampled hotels between January 1, 2014, and December 31, 2019, making up a total of 952,493 observations. These hotel properties are located in the urban areas of the following hotel markets defined by STR: Atlanta, Chicago, Indianapolis, New York, and Orlando. STR also has information for properties located in non-urban areas of these markets, such as those in interstates or suburban parts. Nevertheless, only urban hotels have been selected as they are the ones more likely to be affected by trade shows. In addition, the final database also identifies the days on which a trade show was held and its number of attendees and meeting space. Table 1 reports a detailed description and the source of all the used variables in this study.

3.2 Empirical strategy

The following three equations are proposed to be estimated per each KPI (ADR, Occupancy, and RevPAR):

$$ln(KPI_{icd}) = \lambda_1\, independent_i + \lambda_2 franchised_i + \sum_{j=1}^{4} \psi_j\, rooms\_size\_j_i + \rho_{cd} + \varepsilon_{icd}, \quad (1)$$

$$ln(KPI_{icd}) = \beta_1\, trade\_show_{cd} * independent_i + \beta_2\, trade\_show_{cd} * franchised_i + \sum_{j=1}^{4} \omega_j trade\_show_{cd} * rooms\_size\_j_i + \gamma_i + \rho_{cd} + \varepsilon_{icd}, \quad (2)$$

$$ln(KPI_{icd}) = \phi_1\, attendees_{cd} * independent_i + \phi_2\, attendees_{cd} * franchised_i + \sum_{j=1}^{4} v_j\, attendees_{cd} * rooms\_size\_j_i + \gamma_i + \rho_{cd} + \varepsilon_{icd}, \quad (3)$$

where i, c and d stand for a property i in a city c on date d; $ln(KPI_{icd})$ is the natural logarithm of one of the three considered KPIs (ADR, Occupancy or RevPAR); $independent_i$ is a dummy equal

to one if i is an independent property; $franchised_i$ is a dummy equal to one if i is a franchised property; $rooms\_size\_j_i$ is a dummy equal to one if i has hotel size j as defined in Table 1; $trade\_show_{cd}$ is a dummy equal to one if at least one trade show was held in city c on date d; ρ_{cd} are city-date fixed effects; γ_i are property fixed effects; and ε_{icd} is the error term.

118 **Table 1. Description and source of the used variables**

Variable	Description and source
ADR_{icd}	Numerical variable equal to the average daily rate of a property i in city c on date d. Source: STR
$Occupancy_{icd}$	Numerical variable equal to the occupancy of a property i in city c on date d. Source: STR
$RevPAR_{icd}$	Numerical variable equal to the revenue per available room of a property i in city c on date d. Source: STR
$independent_i$	Dummy variable equal to one if i is an independent property and zero otherwise. Source: STR
$franchised_i$	Dummy variable equal to one if i is a franchised property and zero otherwise. Source: STR
$chain\_owned\_managed_i$	Dummy variable equal to one if i is a chain-owned/managed property and zero otherwise. Source: STR
$rooms\_size\_1_i$	Dummy variable equal to one if i has less than 75 rooms and zero otherwise. Source: STR
$rooms\_size\_2_i$	Dummy variable equal to one if i has between 75 and 149 rooms and zero otherwise. Source: STR
$rooms\_size\_3_i$	Dummy variable equal to one if i has between 150 and 299 rooms and zero otherwise. Source: STR
$rooms\_size\_4_i$	Dummy variable equal to one if i has between 300 and 500 rooms and zero otherwise. Source: STR
$rooms\_size\_5_i$	Dummy variable equal to one if i has more than 500 rooms and zero otherwise. Source: STR
$trade\_show_{cd}$	Dummy variable equal to one if at least a trade show was held in city c on date d and zero otherwise. Source: TSSN
$attendess_{cd}$	Numerical variable equal to the total number of attendees in any trade show held in city c on date d. Source: TSSN
nsf_{cd}	Numerical variable equal to the total meeting net square feet used by any trade show held in city c on date d. Source: TSSN

119

Estimating Equation 1 by ordinary least squares allows analyzing the relationship between hotel KPIs and hotel operation types when the celebration of trade shows is not considered. This equation also controls for property size and city-date fixed characteristics to reduce omitted variable bias. Conversely, hotel class categories have not been incorporated into Equation 1 as they would create reverse causality. STR groups hotels in luxury, upper upscale, upscale, upper midscale, midscale, or economy categories based on their actual average room rates. That is, those properties whose price is the highest are classified as luxury; the second most expensive as upper upscale; and so forth. Thus, the considered KPIs, or at least the ADR, impact those class categories.

The coefficients of interest of Equation 1 are the different λs. In particular, λ_1 exhibits the associated average percent change in the considered KPI for independent hotels compared to chain-owned/managed properties (the omitted operation category) after controlling for hotel size and market-date fixed effects. Analogously, λ_2 shows the average percent change for franchised hotels compared to chain-owned/managed properties.

Equation 2 is an interaction model whose estimation by ordinary least squares permits examining how KPIs change for independent and franchised hotels compared to chain-owned/managed properties when trade shows are held. Note that although all constitutive terms must be included in an interaction model (Brambor et al., 2006), the variables $trade\_show_{cd}$, $independent_i$, $franchised_i$ and the rooms size dummies are not incorporated outside the interactions terms because $trade\_show_{cd}$ would be multicollinear with city-date fixed effects, and the other variables would be multicollinear with property fixed effects. The main coefficients of interest are β_1 and β_2. Specifically, β_1 can be interpreted as the average percent change in the considered KPI that independent properties obtain compared to chain-owned/managed properties when trade shows are held. In turn, β_2 displays the analogous relationship for franchised properties.

Moreover, as trade shows of different sizes may also have a different impact on the relationship between KPIs and operation types, this relationship is further inspected by considering trade shows' size. A natural approach to this end is the one proposed in Equation 3, in which the trade shows' dummy of Equation 2 has been replaced by the total number of attendees in any trade show held in a city on a particular date. Nevertheless, using the number of attendees in the considered interactions in Equation 3 would produce biased estimates in an ordinary least-squared regression for at least the following two reasons. The variable $attendees_{cd}$ is potentially an endogenous regressor because there might be reverse causality between hotel KPIs and the number of attendees. For example, room rates positively depend on the number of attendees, but at the same time, those prices may negatively affect the number of attendees. An analogous argument can be made for the other KPIs.

Consequently, since $attendees_{cd}$ is endogenous, the interactions between $attendees_{cd}$ and $independent_i$, $franchised_i$ or $rooms\_size\_j_i$ are also endogenous. Additionally, there is likely

a measurement error in trade shows' attendees, which would also bias the estimates. To address these issues, a 2SLS instrumental variable estimation is appropriate (Wooldridge, 2001) to estimate Equation 3. This approach requires finding instruments satisfying the exogeneity and relevance conditions.

The meeting space used by trade shows would be a reasonably valid instrument for attendees if the latter would individually appear in Equation 3. On the one hand, trade shows' space is not determined by hotel KPIs, and meeting space is unlikely to affect hotel KPIs except through the number of attendees to these trade shows. Thus, meeting space is plausibly exogenous to hotel KPIs (exogeneity condition). On the other hand, meeting space is expected to correlate highly with the number of attendees. Trade shows that use more space are likely to have more exhibitors and, potentially, more attendees (relevance condition). Accordingly, the total meeting net square feet (NSF) used by any trade show held on date t in city c has been recorded in the variable nsf_{cd} and the interactions between nsf_{cd} and $independent_i$, $franchised_i$ and $rooms\_size\_j_i$ are the very natural instruments to use in the interaction model of Equation 3. The main coefficients of interest are $the\ \phi$s, which allow inspecting the relationship between the considered KPIs and the hotel operation types depending on trade shows' size.

4. Results

4.2 Descriptive statistics

Table 2 shows detailed characteristics of the sampled hotels. Franchised hotels (47%) is the most represented operation type in the sample, while chain-owned/managed and independent hotels each account for approximately 26% of the properties. In terms of hotel class, the most represented categories are luxury, upper upscale, upscale and upper midscale. Regarding hotel size, those having between 75 and 299 rooms are the most common.

Table 2. Characteristics of the sampled properties

Variable	Categories	Frequency	Percent
Operation	Chain owned/managed	115	26.44%
	Franchised	204	46.90%
	Independent	116	26.67%
Class	Luxury	77	17.70%
	Upper upscale	131	30.11%
	Upscale	106	24.37%
	Upper midscale	82	18.85%
	Midscale	26	5.98%
	Economy	13	2.99%
Size	<75 rooms	38	8.74%
	75-149 rooms	120	27.59%
	150-299 rooms	150	34.48%
	300-500 rooms	70	16.09%
	>500 rooms	57	13.10%

Table 3, in turn, exhibits the descriptive statistics for all the other variables used in the empirical analysis. The first three rows display those descriptive statistics across properties, cities and dates for the hotel KPIs. First, the average ADR is around $238, with minimum and maximum ADR values of $12 and $6,180. Second, the mean and standard deviation for Occupancy equal 82% and 20%. Occupancy sometimes takes values above 100%, which is possible for some properties selling rooms for day use and then offering these same rooms again for overnight guests. Third, RevPAR's mean and standard deviation are around $199 and $143. Therefore, all three KPIs highlight considerable variability in the sample. The other rows report the descriptive statistics for the trade shows-related variables. In particular, it can be seen that at least a trade show was held for 16% of all city-date pairs. The most significant event in terms of attendees brought together more than 140k people, while the biggest in terms of space used more than 1.4 million NSF.

Table 3. Descriptive statistics

	Observations	Mean/Percentage	SD	Min.	Max.
ADR	952,493	237.449	162.854	11.68	6180.36
Occupancy	952,493	81.447	20.439	0.10	131.90
RevPAR	952,493	198.661	143.227	0.27	6070.78
Trade show	952,493	15.9%		0	1
Attendees	952,314	3,414.881	11,136.327	0	143,604
NSF	952,493	47,637.638	152,502.890	0	1,426,749

4.2 Estimates

Table 4 presents the estimates of Equations 1-3. In particular, the first three columns display the respective estimates of Equation 1 for the three considered KPIs. These estimates show that, on average, and without considering trade shows, the ADRs of independent and franchised properties are respectively 25% and 41% lower than that of owned/managed hotels. Alternatively, the Occupancy levels are slightly higher for independent and franchised properties than for chain-owned/managed hotels. Therefore, independent and franchised properties underperform in ADR and outperform in Occupancy, resulting in a worse RevPAR than that of chain-owned/managed hotels. Hence, these results—also found in the literature (Yang and Mao, 2017)—suggest that revenue management strategies of independent and franchised hotels are, on average, and when not considering trade shows, more ineffective than those of chain-owned/managed properties as they seem to be discounting too much their rates.

Columns 4-6 report the estimates of Equation 2. That is, these columns show the relationship between KPIs and trade shows depending on hotels' operation type. When trade shows are held, independent and franchised properties' ADRs are, on average, 1.7 and 1.9% higher than that of chain-owned/managed properties. For Occupancy, independent hotels achieve a slightly higher index than chain-owned/managed hotels, whereas franchised hotels do worse on this KPI. In any case, the RevPAR of both independent and franchised properties increase with respect to that of chain-owned/managed properties when trade shows take place.

Finally, columns 7-9 present the results of estimating Equation 3 by 2SLS. The Kleibergen-Paap rk LM statistic is statistically significant, highlighting that the used instruments are relevant. The coefficients of interest in columns 7 and 9 are positive and statistically significant. Conversely, in column 8, only the coefficient on the interaction between the number of attendees and independent is positive and statistically significant, whereas the coefficient on the interaction between the number of attendees and franchise is negative and statistically significant. While all the estimated coefficients are statistically significant and informative in columns 7-9, it remains to be shown how big the number of attendees needs to be to conclude if differences exist between independent and franchised properties' KPIs and those of chain-owned/managed hotels.

Accordingly, and following Brambor and Clark (2006), Figure 2 graphically displays the predicted percentage change in each hotel KPI that independent hotels achieve relative to chain-owned/managed properties, using the estimates of columns 7-9. These predictions have been obtained in the range between zero and 150,000 attendees. The solid line indicates the predicted percent changes, whereas the dashed lines indicate the 95% confidence interval that allows seeing whether the predictions are statistically significant or not. In turn, Figure 3 shows the analogous predictions for franchised properties relative to chain-owned/managed ones.

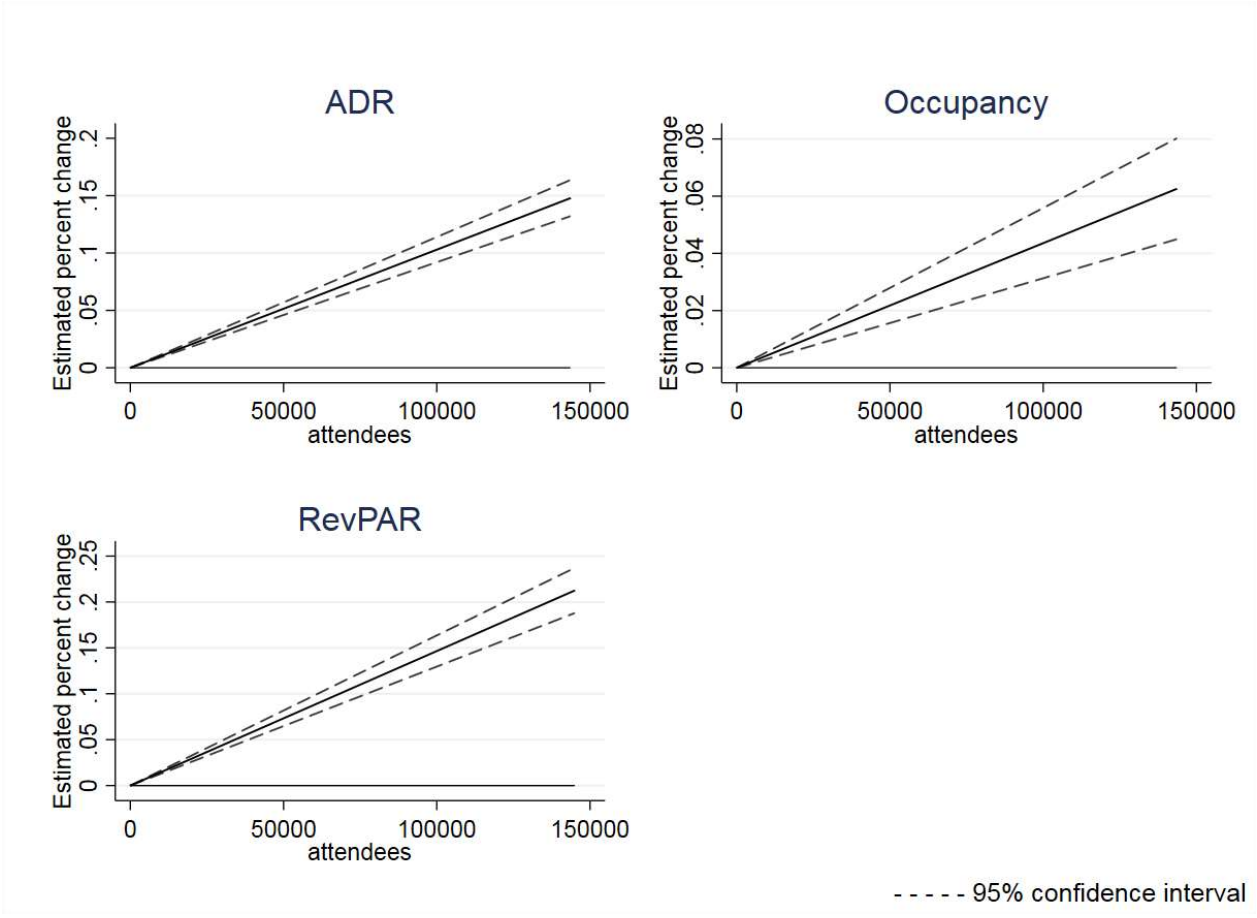
Therefore, Figures 2 and 3 graphically show the estimated causal relationship between attendees and each hotel KPI for independent and franchised hotels compared to chain-owned/managed properties. Figure 2 illustrates that independent properties, on average, do better than chain-owned/managed properties on each KPI, and they do better the higher the number of trade shows attendees is. For instance, on average, independent hotels' ADR, occupancy, and RevPAR are respectively 10%, 4%, and 14% higher than those of chain-owned/managed properties for events of 100,000 attendees. In turn, franchised properties perform better than chain-owned/managed properties on ADR and RevPAR, but not on Occupancy. For instance, on average, franchised hotels' ADR and RevPAR are respectively 9% and 8% higher than those of chain-owned/managed properties for events of 100,000 attendees.

Table 4. *Estimates*

	Estimates of Equation 1:			Estimates of Equation 2:			Estimates of Equation 3:		
	(1) ln(ADR)	(2) ln(Occ)	(3) ln(RevPAR)	(4) ln(ADR)	(5) ln(Occ)	(6) ln(RevPAR)	(7) ln(ADR)	(8) ln(Occ)	(9) ln(RevPAR)
Independent	-0.254***	0.031***	-0.222***						
	(0.001)	(0.001)	(0.001)						
Franchised	-0.408***	0.045***	-0.363***						
	(0.001)	(0.001)	(0.001)						
Trade show*Independent				0.017***	0.004**	0.021***			
				(0.001)	(0.002)	(0.002)			
Trade show*Franchised				0.019***	-0.015***	0.005***			
				(0.001)	(0.001)	(0.002)			
Attendees*Independent							1.03e-06***	4.36e-07***	1.47e-06***
							(5.60e-08)	(6.27-08)	(8.67e-08)
Attendees*Franchised							8.73e-07***	-1.27e-07***	7.47e-07***
							(4.05e-08)	(4.80e-08)	(6.44e-08)
Rooms size dummies included	Yes	Yes	Yes	No	No	No	No	No	No
Interactions between trade show and room-size dummies included	No	No	No	Yes	Yes	Yes	No	No	No
Interactions between attendees and room-size dummies included	No	No	No	No	No	No	Yes	Yes	Yes
City-date fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Property fixed effects	No	No	No	Yes	Yes	Yes	Yes	Yes	Yes
Kleibergen-Paap rk LM statistic	-	-	-	-	-	-	307.362***	307.362***	307.362***
Observations	952,493	952,493	952,493	952,493	952,493	952,493	952,314	952,314	952,314
R^2	0.498	0.499	0.613	0.914	0.616	0.855			
F	39048.382	2132.145	28029.849	418.450	118.438	347.440	222.269	98.338	215.570

Robust standard errors in parentheses: * $p < .1$, ** $p < .05$, *** $p < .01$

406 **Figure 2.** Estimated percent change on KPIs depending on the number of attendees for
407 independent properties compared to chain-owned/managed ones

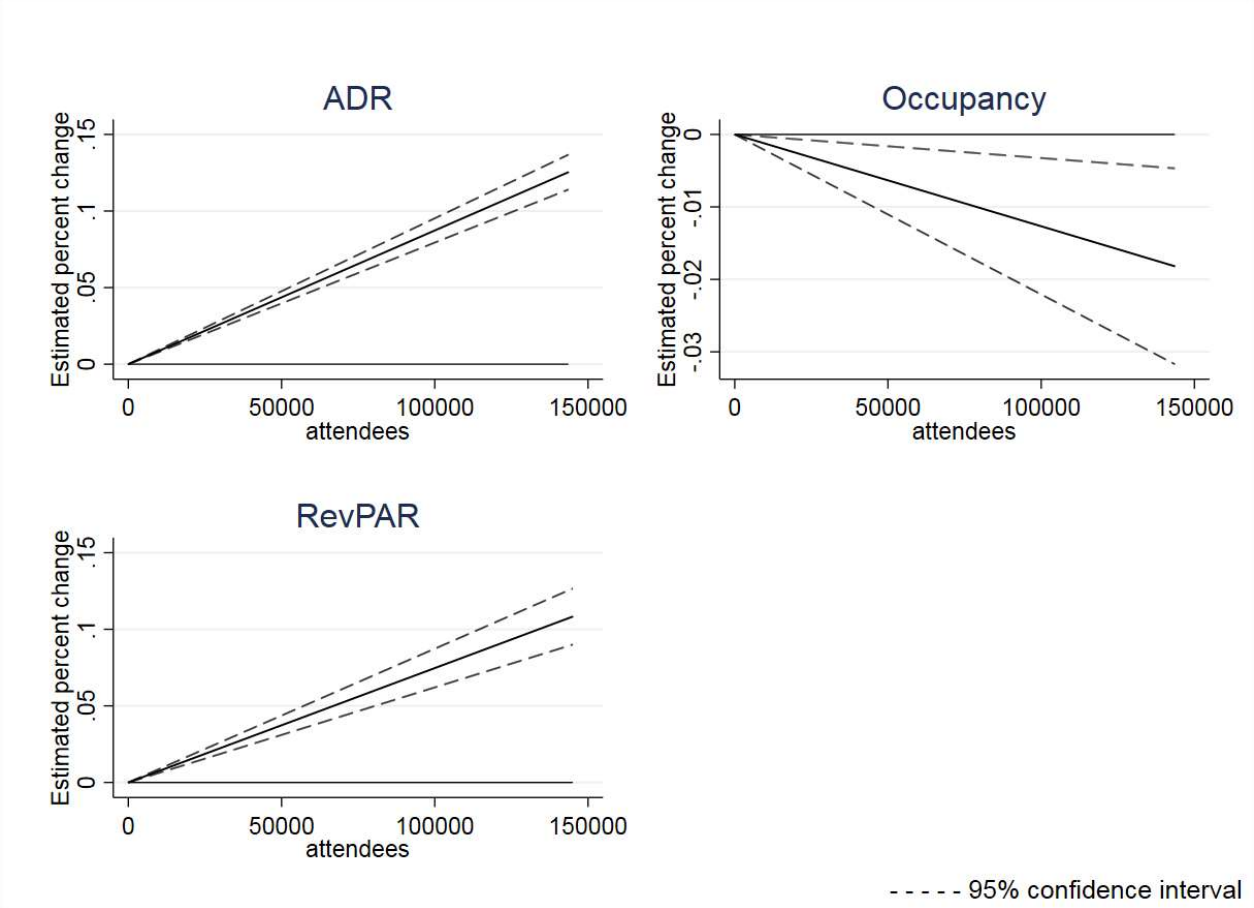


408

409
410

411

Figure 3. Estimated percent change on KPIs depending on the number of attendees for franchised properties compared to chain-owned/managed ones



5. Discussion

The introduction of hotel operation types into the study of the relationship between events and hotel KPIs brings about some crucial results. First, when events are not considered, independent and franchised hotels charge lower rates and show higher occupancy rates than chain-owned/managed hotels, resulting in a lower RevPAR for independent and franchised hotels. It seems that, on one hand, with their powerful revenue management systems, chain-owned/managed hotels can optimize revenue better than independent and franchised hotels and, on the other hand, these chain-owned/managed hotels leverage the value of their brand to charge higher rates even if full occupancy is not necessarily attained. This result would be in line with the theory of strategic groups and the results obtained by Claver-Cortés et al. (2007) that different conducts bring about distinct performances.

Second, in the presence of events, independent hotels set higher rates and achieve higher occupancy rates than chain-owned/managed properties. Interestingly, while franchised hotels also set higher rates than chain-owned/managed properties, the occupancy rates of the former are lower than those of the latter. Still, when the joint effects are considered, independent as well as franchised hotels present levels of RevPAR that are higher than those of chain-owned/managed properties. By looking at the marginal increments of ADR and Occupancy, the results show that the positive variation in RevPAR is mainly due to price increases on the part of independent and franchised hotels.

It seems that the existence of a brand leads chain-owned/managed hotels to be cautious because unfairness-related issues may tarnish their image and, in turn, their brand. In practical terms, a potential negative effect on reputation could result in a reduction in the demand of the hotel's brand, not only in the city where the event has taken place but anywhere else where customers would travel to and need to stay. Therefore, independent and franchised hotels may find it more feasible than chain-owned/managed hotels to charge a premium as their properties may be less affected by potential perceptions of price unfairness or even of potential cases of price gouging. This result is in accordance with the resource-based view and the value chain model because, with the brand being an intangible resource managed at the corporate level—for chain-owned/managed properties—and with prices being a primary activity as per Porter's (1985) terminology, chain-owned/managed hotels have their leeway of action diminished.

Third, analogous results are obtained when the number of attendees is examined. Specifically, independent hotels make the most of high numbers of attendees by setting greater rates and achieving higher occupancy rates than chain-owned/managed properties. Franchised hotels also set higher rates than chain-owned/managed properties as the number of attendees increases but their occupancy rates are lower than those of the latter. As before, when the joint effects of ADR and Occupancy rate are considered, independent and franchised hotels reach levels of RevPAR than are higher than those of chain-owned/managed properties as the number of attendees rises. It seems that the constrained room for maneuver of chain-owned/managed hotels does not allow them to optimize the potential revenue derived from an event.

Note, however, that this statement must be qualified: chain-owned/managed hotels may not optimize the event-driven revenues in the short term, but they are aptly looking to the long-term future. They are considering the potential damages to their brand reputation that could be evoked by perceptions of price unfairness or, even worse, by potential cases of price gouging. This is even more evident as, in general, when no events are considered, chain-owned/managed hotels seem to outperform independent and franchised hotels (see the parameter estimates associated with RevPAR in Equation 1 in Table 4); however, in the presence of events, chain-owned/managed hotels moderate their price increases (in comparison to independent and franchised hotels) and do not implement drastic increments so that potential future demand for the brand is not deterred (see the parameter estimates associated with ADR in Equations 2-3 in Table 4, and the estimated percent change in ADR in Figures 1-2).

Accordingly, these results are also connected to the growing literature finding a positive impact of events on hotel KPI (Barreda et al., 2017; Bento et al., 2021; Borovcanin et al., 2020; Chalupa & Petricek, 2021; C. Collins & Hall, 2022; Heller et al., 2018; Herrmann & Herrmann, 2014; Sainaghi & Mauri, 2018). Yet, the current study spans this literature for at least the following two reasons. On the one hand, this is the first paper analyzing the relationship between events and hotel performance which exploits data at the property-city-day level. This more granular data allows including property- and city-date levels fixed effects in Equations 2-3, potentially resulting in more accurate estimates of the impacts of events on hotel KPIs. On the other hand, the above-discussed results point to heterogeneous impacts of events on hotel KPIs depending on hotel operation types, representing a contribution to this literature.

6. Conclusions

Large-scale events are expected to attract tourists to destinations that represent opportunities for hotels to bring in revenue. The literature has mainly found a positive effect of different events, such as cultural festivals, sports competitions, political meetings, business conventions and trade shows, on hotel performance. However, while events with a large demand could be associated with increases in room rates so that hotels can optimize their performance, hotel operation types may play a critical role in this "event – hotel performance" relationship. Drawing on the resource-based view, the chain value model and the theory of strategic groups, the inclusion of hotel operation types significantly adds to the literature: while chain-owned/managed hotels generally outperform independent and franchised hotels, when it comes to events, this situation reverses because chain-owned/managed hotels do not have as much leeway to raise rates as independent and franchised hotels do.

With data from STR and TSSN, the empirical application uses a panel database (from January 1, 2014 to December 31, 2019) that includes daily-level information on 435 hotels located in five major US cities (Atlanta, Chicago, Indianapolis, New York, and Orlando), which are among the top US cities with the most trade show attendees between 2014 and 2019. The analysis includes the estimation of three different equations using regression techniques. The first regression analysis looks into the relationship between hotel KPIs and hotel operation types when the celebration of trade shows is not considered. Having in mind the caveat derived from using a multi-city sample from one single country, the results show that independent and franchised hotels charge lower rates and show higher occupancy rates than chain-owned/managed hotels, resulting in a higher RevPAR for the latter.

Having powerful revenue management systems and leveraging the value of their brand to charge higher rates allow chain-owned/managed hotels to optimize their performance better than independent and franchised hotels. The second regression analysis includes the presence of events and finds that independent and franchised hotels outperform chain-owned/managed hotels when these events take place because the former have increased flexibility to set rates higher than the latter. This reversal in the results of the first regression analysis adds further insights into the

current literature: while the use of brands allows chain-owned/managed hotels to attain better performance metrics (i.e., RevPAR) in general, avoidance of potential perceptions of price unfairness that could tarnish their brand image leads them to moderate price increases in the case of events. The third regression analysis further examines the effect of events on hotel KPIs by considering the event size. By using 2SLS to control for potential endogeneity between hotel KPIs and event size, the study finds that independent and franchised hotels make the most of large events (events with high numbers of attendees) by setting greater rates, thereby outperforming chain-owned/managed properties.

Regarding theoretical implications, the application of the theory of strategic groups to hotel operation types confirms the structure–conduct–performance theoretical framework, thus, different operation types (chain-owned/managed, independent and franchised hotels) lead to distinct conducts (in terms of revenue management and dynamic pricing) which bring about differentiated performance levels (RevPAR). Note that the dominant approach to the formation of strategic groups in the literature is based on inductive methodologies that, while possessing the benefit of maximizing internal validity, comes at the cost of generalizability. The approach followed in this study is deductive as it is based on extant theoretical underpinnings, and rather than focusing on a specific regional context, it uses several representative large cities where the phenomenon analyzed occurs, thereby warranting generalizability.

An additional theoretical implication comes from the extension of the resource-based view and the value chain model by including the short/long-term and corporate/property paradigm in the hotel industry. The resource-based view posits that companies with resources that are "valuable, rare, inimitable and non-substitutable" are able to gain competitive advantages and keep them over time. In the case of experiential goods, such as tourism services, the tangible-intangible dichotomy of the resource-based view turns out to have critical implications because intangible resources can be "valuable, rare, inimitable and non-substitutable" in a more unique way than tangible resources. Thus, any strategic and operational decisions should take into account the positive and negative effects of such decisions (e.g., pricing decisions) on the long-term competitive advantage derived from these intangible resources (e.g., brand reputation). Also, the value chain model claims that it is the value created through the activities conducted via the firm's resources that matters in the creation of competitive advantages, and that marketing and sales—and pricing decisions for that matter—are classified as "primary activities" that are fundamental to the corporate strategy.

Therefore, while the brand (intangible resource) can be affected by pricing actions (activities), the distinction between corporate and property levels (chain vs individual hotel) brings about potential sub-optimal performance at the property level in the short term because individual hotels have limited leeway to modify prices (in comparison to independent and franchised hotels). Hence, even if counterintuitive at first, sub-optimality in the short-term performance of chain-owned/managed hotels is a situation that can be derived from the application of the resource-based view and the value chain model. This sub-optimality helps chains protect their brand from potential perceptions of price unfairness (or even price gouging) which could be

detrimental to the brand reputation in the long run. Recall that, price premiums driven by profits are regarded as more unfair than price increases derived from cost-justified reasons; thus, in the context of this study wherein events are analyzed and opportunities for excessive price increases are created (and potentially expected), the alluded perceived lack of fairness, which could be transferred to the brand with potential negative consequences for the brand's reputation, could be high.

Managerial implications can be outlined at property and corporate levels. At the property level, individual hotels tend to look at sectorial reports (such as the STAR reports produced by STR) to know their performance compared to the rivals included in their competitive sets. Given that each hotel's competitive set is comprised of hotels with different operation types, a chain-owned/managed hotel may be surprised to see that independent and franchised hotels are beating their performance metrics regarding a recent event that has taken place in the area where these properties are located.

Rather than despairing, they must know that it is not out of the ordinary to find this situation after an event, and that this low short-term performance should pay off in the long term. At the corporate level, when hotel chains are confronted with the dilemma of leaving money on the table versus ethical issues, they must recognize that these are the extremes of a spectrum that should allow them to find an optimal price point (or sup-optimal for that matter) that would satisfy the corporation as well as the property. They should find a balance so that they follow a strategy that does not lead properties to consistently leave too much money on the table, but at the same time, they are not accused of price gouging.

As for future research avenues, even though this study has used the theory of strategic groups, the purpose was not to identify strategic groups in each market (i.e., in each city that has been analyzed). Nevertheless, with information about the competitive sets of each hotel, the analysis could certainly show relevant results as it would allow the researcher to see the price actions and reactions at the local level. This way, the general results obtained in this empirical application could be extended by looking, in a granular way, at the rivalry between and within strategic groups in each market. Finally, one limitation that could turn into a relevant further research avenue is the generalizability of the results. While this study uses data from different cities, all of them are located in the United States of America. Consequently, conducting this same analysis in other countries and continents could test the relationships found in the study.

References

Andersson, T. D., & Lundberg, E. (2013). Commensurability and sustainability: Triple impact assessments of a tourism event. *Tourism Management*, *37*, 99–109. https://doi.org/10.1016/j.tourman.2012.12.015

Barney, J. (1991). Firm resources and sustained competitive advantage. *Journal of Management*, *17*(1), 99–120. https://doi.org/10.1177/014920639101700108

Barney, J., & Arikan, A. (2001). The Resource-based View. In M. A. Hitt, R. E. Freeman, & J. S. Harrison (Eds.), *The Blackwell Handbook of Strategic Management* (pp. 124–188). Blackwell Publishing.

Barreda, A. A., Zubieta, S., Chen, H., & Cassilha, M. (2017). Evaluating the impact of mega-sporting events on hotel pricing strategies: The case of the 2014 FIFA World Cup. *Tourism Review*, *72*(2), 184–208. https://doi.org/10.1108/TR-02-2017-0018

Beckman, E., & Traynor, M. (2019). Utilizing trade market analysis to identify the economic impact of a multiday special event in Miami Beach, Florida. *Tourism Economics*, *25*(2), 253–273. https://doi.org/10.1177/1354816618800194

Bento, C., Almeida, P., Luis, J., & Caballero, J. (2021). The impact of the Web Summit on hotel performance, the case of Lisbon. *Journal of Revenue and Pricing Management*, *2018*, 1–14. https://doi.org/10.1057/s41272-021-00357-4

Borovcanin, D., Cuk, I., Lesjak, M., & Juvan, E. (2020). The importance of sport event on hotel performance for restarting tourism after COVID-19. *Societies*, *10*(90). https://doi.org/https://doi.org/10.3390/soc10040090

Bracalente, B., Chirieleison, C., Cossignani, M., Ferrucci, L., Gigliotti, M., & Giovanna Ranalli, M. (2011). The economic impact of cultural events: The Umbria Jazz music festival. *Tourism Economics*, *17*(6), 1235–1255. https://doi.org/10.5367/te.2011.0096

Brambor, T., Clark, W. R., & Golder, M. (2006). Understanding interaction models: Improving empirical analyses. *Political Analysis*, *14*(1), 63–82.

Caprettini, B. (2021). Team visibility and city travel: Evidence from the UEFA champions' league random draw. *Journal of Sports Economics*, *22*(1), 85–114. https://doi.org/10.1177/1527002520955208

Chalupa, S., & Petricek, M. (2021). Do hotels benefit from hosting IIHF World Championships? Case of Prague and Bratislava hotel market. *Tourism: An International Interdisciplinary Journal*, *69*(3), 418–428. https://doi.org/https://doi.org/10.37741/t.69.3.7

Chikish, Y., Humphreys, B. R., Liu, C., & Nowak, A. (2019). Sports-led tourism, spatial displacement, and hotel demand. *Economic Inquiry*, *57*(4), 1859–1878. https://doi.org/10.1111/ecin.12820

Claver-Cortés, E., Molina-Azorín, J. F., & Pereira-Moliner, J. (2007). The impact of strategic behaviours on hotel performance. *International Journal of Contemporary Hospitality Management*, *19*(1), 6–20. https://doi.org/10.1108/09596110710724125

Collins, A., Jones, C., & Munday, M. (2009). Assessing the environmental impacts of mega sporting events: Two options? *Tourism Management*, *30*(6), 828–837. https://doi.org/10.1016/j.tourman.2008.12.006

Collins, C., Depken, C. A., & Stephenson, E. F. (2019). The Impact of sporting and cultural events in a heterogeneous hotel market : Evidence from Austin , TX. *Working Paper*. http://dx.doi.org/10.2139/ssrn.3393739

Collins, C., & Hall, J. C. (2022). Presidential inauguration tourism and hotel occupancy: Evidence from the Obama and Trump inaugurals. *Tourism Economics*, *28*(1), 83–88. https://doi.org/10.1177/1354816620956821

Colombo, A., & Marques, L. (2020). Motivation and experience in symbiotic events: An illustrative example grounded in culture and business events. *Journal of Policy Research in Tourism, Leisure and Events*, *12*(2), 222–238. https://doi.org/10.1080/19407963.2019.1657437

Depken, C. A., & Stephenson, E. F. (2018). Hotel demand before, during, and after sports events: Evidence from Charlotte, North Carolina. *Economic Inquiry*, *56*(3), 1764–1776. https://doi.org/10.1111/ecin.12572

Falk, M. T., & Vieru, M. (2021). Short-term hotel room price effects of sporting events. *Tourism Economics*, *27*(3), 569–588. https://doi.org/10.1177/1354816620901953

Fourie, J., & Santana-Gallego, M. (2011). The impact of mega-sport events on tourist arrivals. *Tourism Management*, *32*(6), 1364–1370. https://doi.org/10.1016/j.tourman.2011.01.011

Getz, D. (2008). Event tourism: Definition, evolution, and research. *Tourism Management*, *29*(3), 403–428. https://doi.org/10.1016/j.tourman.2007.07.017

Heller, L. R., Matheson, V. A., & Stephenson, E. F. (2018). Unconventional wisdom: Estimating the economic impact of the Democratic and Republican national political conventions. *Papers in Regional Science*, *97*(4), 1267–1278. https://doi.org/10.1111/pirs.12311

Herrmann, R., & Herrmann, O. (2014). Hotel roomrates under the influence of a large event: The Oktoberfest in Munich 2012. *International Journal of Hospitality Management*, *39*, 21–28. https://doi.org/10.1016/j.ijhm.2014.01.006

Huang, H., Mao, L. L., Kim, S. K., & Zhang, J. J. (2014). Assessing the economic impact of three major sport events in China: The perspective of attendees. *Tourism Economics*, *20*(6), 1277–1296. https://doi.org/10.5367/te.2013.0340

Hunt, M. S. (1972). *Competition in the major home appliance industry, 1960-1970*. Harvard

University.

Ibrahim, M.N., Kimbu, A.N. and Ribeiro, m:A. (2023). Recontextualising the determinants of external CSR in the services industry: A cross-cultural study, Tourism Management, 95, 104690.

Jones, C. (2008). Assessing the impact of a major sporting event: The role of environmental accounting. *Tourism Economics*, *14*(2), 343–360. https://doi.org/10.5367/000000008784460382

Kim, W., Jun, H. M., Walker, M., & Drane, D. (2015). Evaluating the perceived social impacts of hosting large-scale sport tourism events: Scale development and validation. *Tourism Management*, *48*, 21–32. https://doi.org/10.1016/j.tourman.2014.10.015

Lafuente, V., Devesa, M., & Sanz, J. Á. (2017). Economic impact of a religious and tourist event: A Holy Week celebration. *Tourism Economics*, *23*(6), 1255–1274. https://doi.org/10.1177/1354816616675996

Lamla, M. J., Straub, M., & Girsberger, E. M. (2014). On the economic impact of international sport events: Microevidence from survey data at the EURO 2008. *Applied Economics*, *46*(15), 1693–1703. https://doi.org/10.1080/00036846.2014.881972

Lim, S. E., & Ok, C. M. (2021). A meta-analytic review of antecedents of hospitality and tourism firms' performance: A cross-cultural comparison. Tourism Management, 86, 104325.

Litvin, S., Pan, B., & Smith, W. (2013). Festivals , special events , and the "rising tide." *International Journal of Culture, Tourism and Hospitality Research*, *7*(2), 163–168. https://doi.org/10.1108/IJCTHR-04-2013-0022

Liu, D., & Gratton, C. (2010). The impact of mega sporting events on live spectators' images of a host city: A case study of the Shanghai F1 Grand Prix. *Tourism Economics*, *16*(3), 629–645. https://doi.org/10.5367/000000010792278347

Long, P. T., & Perdue, R. R. (1990). The economicimpact of rural festivals and special events: Assessing the spatial distribution of expenditures. *Journal of Travel Research*, *28*(4), 10–14. https://doi.org/10.1177/004728759002800403

Mauri, A. G. (2007). Yield management and perceptions of fairness in the hotel business. *International Review of Economics*, *54*(2), 284–293. https://doi.org/10.1007/s12232-007-0015-4

Peng, Q., Cheng, L.-X., & Qin, H.-H. (2013). The impacts of large-scale exhibitions on hotel room rates: A case study of Canton Fair. *Tourism Economics*, *19*(2), 245–256. https://doi.org/10.5367/te.2013.0200

Piga, C., & Melis, G. (2021). Identifying and measuring the impact of cultural events on hotels' performance. *International Journal of Contemporary Hospitality Management*, *33*(4), 1194–

1209. https://doi.org/10.1108/IJCHM-07-2020-0749

Porter, M. E. (1985). *Competitive advantage. Creating and sustaining superior performance*. The Free Press.

Ritchie, J. R. B., & Beliveau, D. (1974). Hallmark events: An evaluation of a strategic response to seasonality in the travel market. *Journal of Travel Research*, *13*(2), 14–20. https://doi.org/10.1177/004728757401300202

Sainaghi, R., & Mauri, A. (2018). The Milan World Expo 2015: Hospitality operating performance and seasonality effects. *International Journal of Hospitality Management*, *72*, 32–46. https://doi.org/10.1016/j.ijhm.2017.12.009

Seo, K., Woo, L., Mun, S. G., & Soh, J. (2021). The asset-light business model and firm performance in complex and dynamic environments: The dynamic capabilities view. *Tourism Management*, *85*(March), 104311. https://doi.org/10.1016/j.tourman.2021.104311

Tarrahi, F., Eisend, M., & Dost, F. (2016). A meta-analysis of price change fairness perceptions. *International Journal of Research in Marketing*, *33*(1), 199–203. https://doi.org/10.1016/j.ijresmar.2015.10.004

The Global Association of the Exhibition Industry, & Oxford Economics. (2022). *Global Economic Impact of Exhibitions*. https://www.ufi.org/archive-research/global-economic-impact-of-exhibitions-2022/

TSNN. (2022). *TSNN Trade Show Network*. TSNN TRADE SHOW DATA. https://www.tsnn.com/tsnn-trade-show-data-pg

Wooldridge, J. M. (2001). *Econometric Analysis of Cross Section and Panel Data*. The MIT Press.

Yang, Y., & Mao, Z. E. (2017). Do independent hotels benefit from the presence of branded ones?. *Journal of Business Research*, *76*, 108-117.