

The Competitive pricing in marina business: Exploring relative price position and price fluctuation

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Abstract: *Competitive pricing is considered to be a very important part of revenue management, a management instrument that enables selling right products and services to the customers at the prices that will produce highest revenues. Marina business is supposed to be a business whose products or services are perishable (similar to hotels, airlines, campsites, hostels etc.) and tracking prices of competitors is very important part of managing its business. The purpose of this paper is to address the problem of relative price position and relative price fluctuation performance in marina business and seeks to complement existing research in the domain of strategic price positioning. The research results reveal that marinas who set their prices higher than their competition achieve lower level of berth occupancy and at the same time succeed higher RevPAB. Marinas with lower prices than their competitors achieve higher level of berth occupancy and lower RevPAB.*

Keywords: *marina performance, revenue management, revenue per available berth (RevPAB), competitive pricing, price position of berth, price fluctuation of berth, berth occupancy*

JEL Classification: *D4, G1*

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1 INTRODUCTION

Marinas are commercially the most important ports of nautical tourism, and together with charter and cruise industries, within the last 30 years, have continuously been showing high growing rates. It has been estimated that in Europe there are 4,500 marinas with 1,75 million berths (European Boating Industry, 2016) while Marina industry of

association states that in Australia there are 347 marinas, that have 32000 employees and create revenues of 1.4 billion AU\$ per year (Marina industries associations, 2018). Marinas can be classified according to (Luković 2012:405):

1. the level of equipment – standard, luxury, recreational
2. types of construction – American, Atlantic or Mediterranean type

3. position of maritime zone – open, semi-enclosed or enclosed
4. marina ownership – private, municipal or public
5. location – sea, lake, river or canal.

Since marinas are a part of almost every national economy, they influence the destination itself as well as general development of a country.

Successful marina business requires quick adaptation to changing market conditions and technological innovations. Developing and accepting new and creative ways of decision making is necessary in order to achieve greater business results and stay ahead of the competition (Korol and Fotiadis, 2016). Reacting to the changes in competitors' pricing is no longer acceptable solution and it should be replaced with leading and acting in order to challenge the elasticity of pricing. Managers should implement consistent pricing strategies in their businesses in order to improve the quality of their decisions and this will lead to higher RevPAB (Revenue Per Available Berth) relative to their competitive set.

Setting optimal price for ones' product or service is not an easy task, and in order to maximize their business results, managers need to introduce in their business revenue management. Revenue management is a management tool whose main objective is to increase sales revenues by manipulating prices of products or services (HOSPA, 2013). Revenue management is particularly useful in industries whose fixed costs are high in comparison to variable costs as hotels, airlines, car rentals, cinemas, stadiums, conventions, cruise liners etc. The hospitality industry recognised the benefits of adopting RM in order to maximize their business results and several research was conducted in order to explore the degree to which strategic price positioning and price fluctuations affect relative revenue per available room (Enz and Canina, 2005, Enz, Canina and Lomanno, 2009, Noone, Canina and Enz, 2013, Enz, Canina and van der Rest, 2015). Marina business characteristics have similarities with hotel business regarding perishability of their product (selling berth vs. room) and high fixed costs of a business. The methodology for research conducted on hotels was adjusted for marinas in order to explore the effects of price positioning in marina business. In this research we seek to extend the literature by examining how relative price position and relative price fluctuation has an impact on performance in marina business.

2 THEORETICAL FRAMEWORK

Despite a well-developed practical and scientific approach in the field of pricing, managers in many industries still rely on the rules of thumb, including cost-based pricing. Recent research shows that they also react to competitor's pricing performance (Enz, Canina, van der Rest, 2015). Setting prices should not be merely a tactical matter, even though there's no doubt that competitors are an important factor to consider in pricing. Absolutely, price setting should be a part of companies' overall strategy, and pricing should expose the position in providing customer value at a given cost, as well as enable actions and reactions of market players. Pricing is considered to be a strategic capability that is integral to a company's overall strategy, indicated by revenue management analysis and economic conditions (Enz, Canina,

van der Rest, p.6). Revenue managers need to know how to contribute to firm performance via pricing to drive higher revenue and optimise GOP. The pricing strategy could be one of price stability or one of changing price category relative to competitors (Noone, 2012). More importantly, it's crucial for strategic pricing in marina business to define whether raising or lowering prices relative to their competition contributes additionally to RevPAB growth.

Authors Enz and Canina with several colleagues, in their research about hotel pricing concluded that consistent pricing strategy is essential and that pricing strategy should not rely on neoclassical theories of perfect competition (Enz, Canina, van der Rest, p.7). Their research investigates whether a clear strategic path to avoid tactical price fluctuations to steal market share in the short run by price positioning below competitors actually pays off (Enz, Canina, van der Rest, p.7). They found that hotels that consistently maintained an ADR somewhat higher than that of their competitive set also enjoyed a relatively higher RevPAR.

Studies also indicate that revenues are more strongly influenced by ADR than by occupancy.

Research results also suggest that hotels should not follow an overall strategy of price reduction, since it results in RevPAR losses. Offering average prices higher than those of competitor is the best way to get desired returns (Enz, Canina, and Noone, 2012).

Singh at al. explore the influence of changes in ADR on financial result measured by GOPAR and NOIPAR. They prove that changes in ADR have a significantly stronger correlation with changes in GOPAR and NOIPAR compared with changes in occupancy. These results indicate that ADR appears to be the key driver of RevPAR and bottom-line profitability since 1 percent change in ADR yields a 1.9 percent change in NOI, and an estimated 1.6 percent change in GOP (Singh, Dev and Mandelbaum, 2014). Although it is commonly known that tactical pricing decision must bring into line with strategic price positioning and contribute to the fulfilment of strategic goals, the literature provides little guidance in the domain of strategic price positioning. Noon, Canina and Enz have been identified two key dimensions of strategic pricing: relative price position and relative price fluctuation (Noone, Canina, & Enz, 2013:4). While relative price position represents a measure of the mean ADR attained by a given hotel relative to the competitive set and can be higher or lower, or on par with the competition, relative price fluctuation is a measure of relative variability in ADR over time and represents the degree of variation in price relative to the competition over time. (Noone, Canina, & Enz, 2013).

There is no doubt that competitor prices should be considered in managing revenue and maximizing profitability. For this purpose, competitive set reports can be used. They allow revenue manager to track their own performance against that of their comp set(s). It usually consists of main revenue management KPIs and compares the subject's indicators to the compset's aggregates. It is employed to assess the effectiveness of short-term decisions as well as effectiveness of long-term decisions and polices. These comparative reports are also used extensively by regional and corporate units to assess property-level performance, and by owners and investment companies to evaluate the performance of a contracted management company, the usefulness of a brand

affiliation and the performance of the industry (Webb, Schwartz, 2016).

In order to keep up-to-date with ever changing environment in which marinas operate, the following KPIs are recommended in compset reports for marinas, to assess their own performance and keep track to their competitors: (Jankovic & Vlastic, 2018)

- total occupancy rate (total number of occupied berths divided by total number of available berths),
- occupancy rate for wet berths (number of occupied wet berths by contract and in transit divided by total number of available wet berths)
- occupancy rate for dry berths (number of occupied dry berths by contract and in transit divided by total number of available dry berths).
- occupancy rate by contract (number of occupied wet and dry berths by contract divided by total number of available berths),
- occupancy rate by contract for wet berths (number of occupied wet berths by contract divided by total number of available wet berths)
- occupancy rate by contract for dry berths (number of occupied dry berths divided by total number of available dry berths),
- marina revenue per occupied berth - Average Berth Rate – ABR (revenue from renting dry and wet berths divided by total number of occupied berths),
- total marina revenue per occupied berth (revenues from renting berths, revenues from marina services, revenues from renting spaces, sub-concessions, permits and licenses and other marina revenues divided by total number of occupied berths)
- marina revenue per available berth – RevPAB (marina revenue from renting dry and wet berths by contracts and in transit divided by total number of available berths),
- total marina revenue per available berth – TRevPAB (revenues from renting berths, revenues from marina services, revenues from renting spaces, sub-concessions, permits and licenses and other marina revenues divided by total number of available berths),

In order to measure the mentioned KPIs, a uniform methodology of measuring marina revenues and costs should be clearly defined. Although Uniform System of Accounts for Marinas and Boatyards (USAMB) was published by International Marina Institute in 1996 to improve financial reporting for marina business, nowadays, this standard does not enable the framework for performance measurement in marinas. More comprehensive measurement of revenues, costs and capacity, traced by profit and cost centres is required. To enable marina benchmarking, minimum business data for its measurement on monthly basis is provided below (Jankovic & Vlastic, 2018):

- revenues from renting dry and wet berths by contracts and in transit,
- revenues from marina services,
- revenues from renting spaces, sub-concessions, permits and licenses, and
- other marina revenues,
- the number of available wet berths and dry berths (on monthly basis)
- the number of occupied wet berths and dry berths by

contracts and in transit (boat per day)

Marina business can be considered as lodging business (berth is the lodging for the guests' boat/yacht) and the competitors are most commonly defined by size, location, proximity and published price, with location and price used as dimensions of similarity since it is strongly believed that location and price have significant impact on a business success (Kim & Canina, 2011). The marina business can create its competitive sets using several parameters: size, region, type of marina, marina categorization, marina occupancy rate and marina revenues.

Renting berths or berth revenues is considered to be the main profit centre of marina business, which is similar to a hotel business, where renting rooms (or lodging) is the main profit centre. Marina berth rates can be calculated for transit (daily, weekly) or by contract (seasonal or annual basis). They are normally calculated by length of the boat (per ft) and basically a boat slip is like a hotel room with the exception that marinas accommodate guest's boat and hotels accommodate guests in a time period. Marina business requires high investment in property plant and equipment and therefore have high fixed costs so high berth occupancy is necessary for financial success.

3 METHODOLOGY AND SAMPLE

Based on the idea that good revenue management exists when rates and occupancies show positive correlation this research examines the relationship between pricing strategy and marinas position in RevPAB and berth occupancy in relation to their competitive sets. The methodology for this research was taken over from the research conducted by Enz, Canina and Van der Rest (2015) for hotels. Variables that were used are average berth rate (ABR), berth occupancy and revenue per available berth (RevPAB) percentage differences. The percentage differences were calculated for each indicator by dividing each individual marina indicator to the average indicator of its competitive set. Relative price position for each marina in the sample was computed as the average of monthly ABR percentage difference from the competitive set over 36 months and relative price fluctuation for each marina in the sample was computed as the standard deviation of the monthly ABR percentage difference from the competitive set over the 36 months period. The methodology applied in this research excluded marinas who were unable to achieve a percentage difference in RevPAB with one standard deviation of zero from their competitors considering them non-competitive.

The sample consisted of 32 Croatian marinas whose data were collected through the project Croatian Benchmarking for the period of 36 months – for years 2015, 2016 and 2017. The number of observations made was 848. As the sample contained four seasonal marinas, it has to be kept in mind that they have operated only during the summer months (April till October) and therefore have no data during off-seasonal months. Also, there are marinas whose prices were not considered because their value of ABR, RevPAB and berth occupancy were too low or too high in comparison to other marinas due to errors made in providing data. The reason for that stands in their information system limitations that do not provide separation of revenues from cash received for the time period that the transaction occurred in. For example:

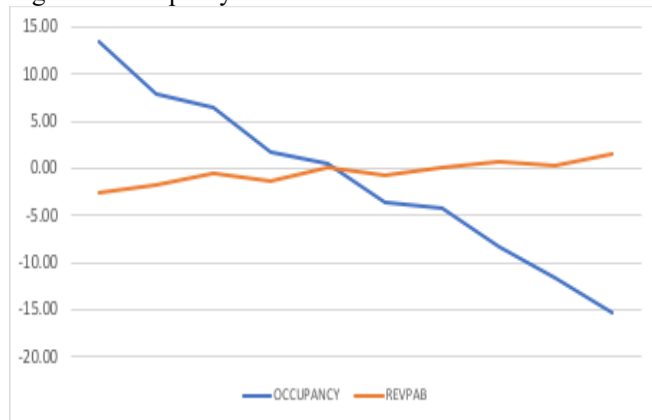
Annual contracts for berths are usually signed and the invoice for the entire year delivered in April. The invoice is then paid in the same or next month (April or May), and the system records this transaction in that month disregarding the fact that according to the accounting principle the (annual) revenue should be divided and recorded for each month separately. The above mentioned values were excluded from the final calculations in order to avoid misinterpretation in the conclusions for this research.

In choosing competitive sets, it is essential to emphasize the fact that Croatia is substantially a small market for nautical tourism and that the differences in prices are connected to the heterogeneity of locations and brand reputation and quality of services which is not connected to the classification of marinas. There is a problem of the classification of marinas not only in Croatia but also at the international level because there is no uniform classification of marinas prescribed internationally. Marinas in Croatia carry different classifications containing letters (A, B, C), roman numbers (I, II, III. Etc.) or anchors (1 – 5) and therefore it was not used for the separation of the results as it was used in the research for hotels. Because of the small sample of marinas, there was no separation of the individual and chain ones or the size of marinas regarding number of berths.

In order to uniform the existing criteria for evaluation of marinas, for calculating the berth occupancy, only the occupancy of sea (wet) berths was considered for this research. It is because not all marinas in the sample contain sea and dry (land) berths, and there is a great difference when calculating berth occupancy for total berths or just sea berths – the dry berth occupancy is lower than the occupancy of sea berth and the total berth occupancy is lower in those marinas with dry berths. In some marinas the berth occupancy exceeds 100%, due to the fact that marinas some berths sell twice, once through the annual contract and second time, when during the high season the yacht/boat leaves the marina for cruising, sell the same berth as the transient one. The marinas have chosen their competitive sets on the basis of the closest ABR in the sample, regardless its location or size.

4 RESULTS AND DISCUSSION

Figure 1. Occupancy and RevPAB differences



Regarding the information on marina business for descriptive statistics, the sample showed relatively wide disparities for average in occupancy ranging from 8,10 to 149,27 with mean

78,09 of value. The range for ABR is 22,06 to 461,22 with mean value of 106,78. The sample also showed great disparities for average in RevPAB that range from 15,28 to 326,47 with mean value of 79,06.

Ten different pricing categories ranging from 0 to 30% were used for Marinas. Five of the pricing categories were set for the marinas with higher price position in comparison to their competitors and five categories for the marinas that achieved price position lower than their competitors (Figure 1).

Table 1: Percentage difference in average berth rated (ABR)

	15-30% lower	10-14% lower	6-9% lower	3-5% lower	0-2% lower	0-2% higher	3-5% higher	6-9% higher	10-14% higher	15-30% higher
OCCUPANCY	13,50	7,98	6,42	1,71	0,50	-3,64	-4,31	-8,31	-11,60	-15,40
RevPAB	-2,55	-1,83	-0,43	-1,42	0,02	-0,77	0,17	0,78	0,35	1,43

The research results conducted on marinas show that when marinas positioned their prices below the prices of their competitors, they have achieved better berth occupancy of marina and their RevPAB was slightly lower. With the marinas that positioned their prices substantially lower (15-30%) the occupancy was much higher (13,5) with RevPAB being only slightly lower (-2,55).

For those marinas that positioned their prices above then their competition, the research results show that their berth occupancy experienced lower values, with their RevPAB being slightly higher, so for much higher prices (15-30%), the occupancy was much lower (-15,40) and RevPAB only slightly higher (1,43).

In order to reveal the effect of price position, price fluctuation and occupancy performance of marina on its RevPAB, regression analysis is performed (Table 2):

Table 2: Regression analysis results

Dependent variable	RevPAB performance
Constant	-1.039 (0.234)
Price position	0.773***(0.019)
Occupancy performance	0.815***(0.019)
Price fluctuation	0.165***(0.008)
Observations	848
R2	0.334
R2 (adj)	0.332
F	141.005***

Note: *** significance at 0,001 level respectively. Standard error is given in parenthesis. Dependent variable: Revenue performance
Variables selection method: Enter

Table 2 shows the results of regression analysis used to test the effects of relative price position and fluctuation on RevPAB performance in marinas. RevPAB was entered as dependent variable, while relative price position and relative price fluctuation were entered as the independent variables.

The model is statistically significant ($F = 141.005$; $p < 0.001$) with 33,7% of variation in RevPAB accounted for the model ($R^2 = 0.332$). The effect of price position, price fluctuation and berth occupancy performance shows that there is a significant relationship between dependent and independent variable. Berth occupancy performance has higher influence ($\beta=0.815$) on RevPAB performance than price position ($\beta=0.773$), but still price position was highly significant in explaining RevPAB performance. The price fluctuation has also been significant in explaining RevPAB performance ($\beta=0.165$) but less than the price position and occupancy performance.

Our research results show that marinas who set their prices below their competitors achieve higher berth occupancy but still achieve lower RevPAB, and marinas that set their prices above their competitors manage to achieve lower level of occupancy but at the same time those marinas achieve higher RevPAB. These results emphasize the importance of setting strategic price positions based on presenting different marina products and marina services. Marina managers should consider more strategic and consistent price positioning, particularly if their marinas offer unique, recognized, high quality services and valued products (Fotiadis and Vassiliadis, 2017). Although price fluctuation shows lower significance on influencing RevPAB, it should be noted that price variability is connected to customer risk and perceptions of brand and that lowering prices can be seen as lowering quality of services in marinas and should be avoided. Because of the small sample, the individual marinas were not separated from the chain affiliated ones.

Therefore, we suggest to upgrade this project on surrounding countries (eg. Mediterranean) or at international level. In this case different approach should be introduced – starting from prices that should be collected in equal (not different) currencies, different types of marinas regarding areas, locations, sea/river, inland/coastal, wet/dry etc). We suggest that the criteria for defining marina categorisation should be set at national as well as international level and we suggest that gold anchor categorisation could be used. We also suggest to repeat the research for longer period of time (5 or 10 years), because three years is considered to be small amount of time. We also suggest that in order to get better basis for the comparison nationally and internationally length and width of the boat or yacht should be taken into consideration. For length of the boat meter/day value should be introduced, and for the boat width equivalent numbers should be used. Until now, only the managerial accounting information were collected and financial indicators calculated. In order to further develop and improve project benchmarking marinas there is a need for additional information on costs /expenses and sustainability to be introduced and costs and sustainability indicators calculated. To position itself in the long term, marina needs to gain clear understanding of its current market position and the direction it wants to take in the future. As competitors pricing creates a part of short-term and long-term strategies marina managers should consider those prices in order to facilitate responsive positioning and to avoid conflicts. Regarding price positioning in short and long term marina managers are suggested to be very careful when setting the prices above their competitors in marinas in order to prevent lowering their marinas occupancy by having unsatisfied customers. If they plan to set higher prices than their competitors, than in order

to keep the customers satisfaction, the prices should be risen gradually and they should offer higher quality of their services or include additional bonus services. When setting higher prices than their competitors for annual contract berths, the additional services should be included in the price and higher quality of services should be offered in order to keep the customers satisfied. Managers should have in mind that this berth will be sold and revenues gained for the entire year which will increase their occupancy, but will also enable selling the same berth in the summer months when the boat/yacht owner decides to take the boat out of marina for a few days. Although setting prices for transient berths seem slightly easier, it is definitely not so. For the seasonal months it is not difficult to sell the berth because regardless the price their marina will reach maximum in occupancy. However, in that period managers should maximize their business results but they should be careful with pricing policy because if they set the prices too high, they risk losing their revenues in long term.

In Europe there are 4500 marinas with 1,75 million berths (www.europeanboatingindustry.eu). They are very attractive for boat owners/ yachtmen, and considering this fact they should not have problems with raising the prices of their berths, but they still need to do it very carefully thinking about long-term effects of this increase. Therefore, future research on shifting prices should be conducted in order to follow the actual effects of this change on occupancy and revenue per available berth. It is also suggested that total revenue per available berth (TrevPAB) needs to be considered because it will bring clearer picture on managers' ability to be successful. TrevPAB apart from the price of berth includes other marina revenues e.g. from parking, maintenance of the boat, transfers, lodging if available, revenues from renting, sub-concessions, permits and approvals and other marina revenues excluding financial and extraordinary revenues and shows actual results of managing marina business. As this is the first research regarding the price positioning and price fluctuation of marina business it should be noted that the research in this area should be further developed. We also suggest for further research that marinas should be divided by chain affiliated or by size or even by region, and that for long-term price positioning the period of observation should be extended to at least 5 to 10 years.

REFERENCES

- Canina, L., & Enz, C. A. (2008). Pricing for Revenue Enhancement in Asian and Pacific Region Hotels: A Study of Relative Pricing Strategies [Electronic article]. *Cornell Hospitality Report*, 8(3): 6-16.
- Enz, C. A. (2013). Strategic price positioning for revenue management: The effects of relative price position and fluctuation on performance [Electronic version]. Retrieved [25.05.2018.] from Cornell University, School of Hotel Administration site: <http://scholarship.sha.cornell.edu/articles/611>
- Enz, C. A., & Canina, L. (2005). An examination of revenue management in relation to hotels' pricing strategies. *Cornell Hospitality Report*, 5(6): 6-13.
- Enz, C. A., Canina, L., & Lomanno, M. (2009). Competitive Pricing Decisions in Uncertain Times. [Electronic version]. *Cornell Hospitality Quarterly*, 50(3), 325-341. Retrieved [May 30, 2018], from Cornell University, School of

- Hospitality Administration site:
<http://scholarship.sha.cornell.edu/articles/201/>
- Enz, C. A., Canina, L., & Lomanno, M. (2010). Strategic pricing in European hotels: 2006–2009 [Electronic article]. *Cornell Hospitality Report*, 10(5): 6-22.
- Enz, C. A., Canina, L., & Noone, B. (2012). Strategic revenue management and the role of competitive price shifting. *Cornell Hospitality Report*, 12(6), 6-11.
- Enz, C. A., Canina, L., & van der Rest J.P. (2015). Competitive hotel pricing in Europe: An exploration of Strategic Positioning. *Cornell Hospitality Report*, 15 (2), 6-16.
- European Boating Industry, (2016), EU Affairs Tourism, Nautical tourism in Europe, retrieved May, 20 2018 from <http://www.europeanboatingindustry.eu/euaffairs/tourism>
- Fotiadis, A. K., & Vassiliadis, C. (2017). Being customer-centric through CRM metrics in the B2B market: the case of maritime shipping. *Journal of Business & Industrial Marketing*. doi:10.1108/JBIM-11-2014-0226
- Ivanov, S. (2014). *Hotel revenue management: From theory to practice*. Varna: Zangador.
- Janković S. & Vlašić, D. (2018). Developing a benchmarking methodology for marina business, *Tourism in marine environment*, vol 13, no. 2, DOI:10.3727/154427318X15276699095970
- Kimes, S. E. (2016). The evolution of hotel revenue management. *Journal of Revenue and Pricing Management*, 15(3-4): 247-251.
- Kimes, S. E., & Wirtz, J. (2003). Has revenue management become acceptable? Findings from an international study on the perceived fairness of rate fences. *Journal of Service Research*, 6(2): 125-135.
- Korol, T., & Fotiadis, A. (2016). Applying Fuzzy Logic of Expert Knowledge for Accurate Predictive Algorithms of Customer Traffic Flows in Theme Parks. *International Journal of Information Technology & Decision Making*, 15(06), 1451-1468. doi:10.1142/S0219622016500425
- Luković, T., (2012). *Nautical Tourism and Its Function in the Economic Development of Europe, Visions for Global Tourism Industry - Creating and Sustaining Competitive Strategies*, Dr. Murat Kasimoglu (Ed.), ISBN: 978-953-51-0520-6, InTech, Available from: <http://www.intechopen.com/books/visions-for-global-tourismindustry-creating-and-sustaining-competitive-strategies/nautical-tourism-in-the-function-of-the-economicdevelopment-of-europe>
- Landman, P. (2011). *Leadership in Revenue Management*. Retrieved January 15, 2018, from <https://www.xotels.com/images/Revenue-Management-Manual-Xotels.pdf>
- Marina industries association (2018), *Developing the marina industries through education, accreditation and research*, retrieved May, 28 2018 from <https://www.marinas.net.au/>
- Noone, B.M., Canina, L., & Enz, C.A., (2013). Strategic Price Positioning for Revenue Management: The Effects of Relative Price Position and Fluctuation on Performance, *Journal of Revenue and Pricing Management*, 12(3): 207-220. Doi:/10.2057/rpm.2012.48
- Revenue management HOSPA Practitioner Series (2013) *Hospitality finance, revenue and IT professionals Education and Training*, Hospitality professional Association, Wentworth John Limited, Bournemouth, from http://hospa.org/static/cms_page_media/5712/HOSPA%20RM%20eBook_1.pdf
- Singh, A., Dev, C. Mandelbaum, R. (2014). A flow-through analysis of the US lodging industry during the great recession, *International Journal of Contemporary Hospitality Management*, Vol. 26 Issue: 2, pp.205-224, <https://doi.org/10.1108/IJCHM-12-2012-0260>
- Webb, T., Schwartz, Z., (2016). Revenue management analysis with competitive sets: vulnerability and a challenge to strategic co-

petition among hotels. *Tourism Economics* vol 23, 1206-1219. <https://doi.org/10.1177/1354816616671473>

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