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# Location as a Determinant of Accommodation Prices: Managerial Approach

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#### INTRODUCTION

In the presentation authors discuss the location-based factors' impact on accommodation prices. The aim of the presentation is to compare the results of qualitative and quantitative research on location-based determinants of accommodation prices in Lodz Metropolitan Area (Poland). The authors employ methodological triangulation (Yeung 2000), both to explore statistical significance of location-based determinants of accommodation prices, and to present managerial opinions about the influence of location on accommodation prices.

#### LITERATURE REVIEW

Location-based variables explaining accommodation prices were suggested by other researchers: assessment of the location made by tourists (Zhang et al. 2011), urban and rural location (White and Mulligan 2002), location in the city center or in the tourism business district (Andersson 2008; Bull 1994; Chen and Rothschild 2010), distance from the city center (Adamiak and Napierala 2013; Balaguer and Pernias 2012; Bull 1994; Egan and Nield 2000; Hung et al. 2010; Lee and Jang 2011; Schamel 2012), distance from other competitors (Becerra 2013; Urtasun and Gutiérrez 2006), distance from main transport nodes and tourist attractions (Andersson 2008; Balaguer and Pernias 2012; Lee and Jang

2011; Thrane 2007; Zhang et al. 2011). Most of price determinants listed above were considered by the authors. Therefore, authors were unable to recognize tourists opinion about location of accommodation facilities. Zhang, Ye and Law (2011) used data from tripadvisor.com. However, only limited number of accommodation facilities in Lodz Metropolitan Area was presented on mentioned website.

## **METHODOLOGY**

The sample for quantitative part of research included all of 155 accommodation enterprises in Lodz Metropolitan Area. The data for the quantitative study were obtained from various sources: governmental and regional registers of accommodation enterprises, websites of accommodation companies and websites of reservation systems. Furthermore, missing data were replaced by telephone interviews with the stuff of accommodation enterprises. The data collection procedure was conducted in June and July 2012. The final sample for qualitative part of the study consisted of 17 various accommodation enterprises (chain-affiliated and independent hotels, guesthouses and others) in Lodz Metropolitan Area. The in-depth interviews with owners and managers of selected accommodation enterprises were conducted in the summer 2012.

In quantitative research, the authors verified statistical significance of various location-based determinants of accommodation prices. As dependent variables, the authors considered logged rates (Best Available Rates) of rooms offered in Lodz Metropolitan Area, sold in the summer and autumn 2012, on working days and weekends. Therefore, semilogarithmic regression model was employed four times for accommodation prices for each period. As Israeli (2002) suggested, accommodation quality should explained a large part of price variation. Thus, types of accommodation establishments defined by Polish Central Statistical Office (hotels, motels and boarding houses, other hotel establishments, other accommodation establishments and private rooms and agrotourism lodgings) were considered as independent, dummy variables. Furthermore, independent variables included location-based factors. The following, discussed above variables were used in this study: urban location (dummy), location in the city center (dummy), distance from the city center, distance from the nearest competitor, distance from the nearest accommodation establishment, and finally distance from the nearest transport node. Results of regression analysis are presented below in a table.

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Simultaneously, location-based determinants of accommodation prices were defined and verified in qualitative part of the study. Managers of 17 various accommodation companies operating in Lodz Metropolitan Area were interviewed: managers of 6 hotels located in the center of Lodz – the core city in metropolitan area, and 1 other accommodation establishment in the same location, managers of 6 hotels located out of the center of the core city, and 4 other accommodation establishment in the same location.

## **RESULTS**

Table 1 shows how the room rates in Lodz Metropolitan Area are affected by the various determinants. Prices of services offered throughout the MICE tourism seasons (rather in the autumn than in the summer, rather on working days than on weekends) are better explained by estimated models. It is not surprising that accommodation prices are significantly affected by quality of offered services. It must be recalled that types of accommodation listed in the table base on quality of accommodation services. Only three location-based determinants are statistically significant determinants of accommodation prices in Lodz Metropolitan Area. If the accommodation establishment is located in central district of Lodz, the prices are approximately (Halvorsen and Palmquist 1980) 17,2%-21,1% higher than prices of accommodation services offered out of the area, ceteris paribus. Furthermore, close distance from the nearest competitor (understood as the establishment of the same quality-based type) negatively affects room rates. However, spatial concentration of accommodation establishments (representing various quality-based types) has positive, but not significant influence on the prices. Finally, the better access to the transportation system an accommodation establishment has, the higher room rates are.

Table 1: Regression coefficients for accommodation prices in Lodz Metropolitan Area in 2012

Independent variables:	Dependent variable: logged accommodation prices				
	In the sum- mer, on work- ing day	In the sum- mer, on weekend	In the au- tumn, on working day	In the autumn, on weekend	
R <sup>2</sup>	0.5188	0.4904	0.5725	0.5333	
Intercept	****4.7258 (0.1516)	****4.7028 (0.1471)	****4.7187 (0.1492)	****4.7062 (0.1459)	
Luxury hotels, motels and boarding houses (dummy)	****1.0260 (0.2375)	*****0.8652 (0.2305)	****1.0905 (0.2332)	****0.8554 (0.2280)	

Budget hotels, motels and boarding houses (dummy)	****0.5193	****0.4712	*****0.5516	****0.4817	
	(0.0750)	(0.0728)	(0.0739)	(0.0722)	
Other hotel establishments (dummy)	*0.2374	*0.2295	*0.2240	*0.2198	
	(0.1237)	(0.1201)	(0.1218)	(0.1190)	
Other accommodation establishments (dummy)	****-0.4152	****-0.3909	****-0.4974	****-0.4778	
	(0.1129)	(0.1096)	(0.1142)	(0.1116)	
Private rooms and agrotourism lodgings (dummy)		not defined because of singularities			
Urban location (dummy)	0.0390	0.0348	0.0695	0.0619	
	(0.1096)	(0.1064)	(0.1085)	(0.1061)	
Location in the city center (dummy)	0.1610	0.1590	*0.1918	*0.1912	
	(0.1010)	(0.0981)	(0.0995)	(0.0973)	
Distance from the city center	-0.0041	-0.0018	-0.0043	-0.0023	
	(0.0080)	(0.0078)	(0.0079)	(0.0077)	
Distance from the nearest competitor	**0.0449	**0.0446	**0.0493	**0.0488	
	(0.0198)	(0.0192)	(0.0196)	(0.0191)	
Distance from the nearest accommodation establishment	-0.0200	-0.0214	-0.0140	-0.0156	
	(0.0289)	(0.0280)	(0.0284)	(0.0278)	
Distance from the nearest transport node	**-0.0202	**-0.0216	**-0.0244	**-0.0256	
	(0.0096)	(0.0094)	(0.0096)	(0.0094)	

Values in parentheses are the corresponding standard errors. Coefficients statistically significant at the: \* 10% level, \*\* 5% level, \*\*\* 1% level, \*\*\* 0.1% level.

The results of regression analysis were compared to the outcomes of indepth interviews. Every interviewed manager of accommodation establishments located in the center of Lodz defines the competitors as accommodation establishments offering services at similar quality and standard in the same location. Moreover, half managers of hotels, located out of the center of Lodz, think the same way. One manager proves that controlling prices of services offered by different type of accommodation establishments even makes no sense. Most of managers of establishments operating out of the center of Lodz argue that distance from the city center is not determinant of the accommodation prices. Prices are influenced by the fact that the accommodation establishment is (or not) located in the city center. Furthermore, they suggest that location in a city center and appropriate standard of accommodation services are the key factors considered by MICE travelers (or even travelers at all), and are key determinants of accommodation prices. Therefore, it is possible to offer the accommodation services out of the city center at the same prices as in the city

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center. However, it is necessary to locate accommodation establishment close to the transportation nodes and tourism attractions. Only one of 17 interviewed managers thinks that distance from the city center has significant influence on accommodation prices. Managers of half hotels, located out of the center of Lodz, suggest that the only way to compete with hotels located in a center of a core city, is to reduce the prices. One third part of managers of establishments located out of the Lodz center are not able to define relation between location and prices. Interestingly, the same managers use cost-based pricing techniques.

#### CONCLUSION AND IMPLICATIONS

Comparison of results of qualitative and quantitative methods, was the significant part of the study. Authors confirmed Andersson (2008), Bull (1994) and Chen and Rothschild (2010) findings. In Lodz Metropolitan Area, location in the center of the core city is crucial for accommodation prices. As interviewed managers argued, the distance from city center is not significant determinant of the prices. Prices are influenced rather by the fact that the accommodation establishments are (or not) operating in the city center. Regression analysis brings the same conclusion. As Becerra (2013) and Urtasun and Gutiérrez (2006) suggested, geographical distance from indirect competitors is significant determinant of accommodation prices. Interviewed managers of establishments operating in Lodz Metropolitan Area defined the nature of competition in accommodation industry. They argued that indirect competitors offer services at similar quality and standard in the same location. As regression analysis showed, the smaller distance between indirect competitors is, the cheaper rooms they offer. Moreover, spatial concentration of various non-competing accommodation establishments and close distance to transportation nodes and tourist attractions allowed accommodation enterprises to request higher prices. This is consistent with findings of Andersson (2008), Balaguer and Pernias (2012), Lee and Jang (2011), Thrane (2007) and Zhang et al. (2011).

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## REFERENCES

- Adamiak, M., & Napierała, T. (2013). Przestrzenne zróżnicowanie cen usług noclegowych w Łódzkim Obszarze Metropolitalnym. *Prace Geograficzne*, 134, 37–50.
- Andersson, D.E. (2010). Hotel attributes and hedonic prices: An analysis of internet-based transactions in Singapore's market for hotel rooms. The Annals of Regional Science, 44(2), 229–240.
- Balaguer, J., & Pernias, J.C. (2013). Relationship between spatial agglomeration and hotel prices: Evidence from business and tourism consumers. *Tourism Management*, 36, 391–400.
- Becerra M., Santaló, J., & Silva, R. (2013). Being better vs. being different: Differentiation, competition, and pricing strategies in the Spanish hotel industry. *Tourism Management*, 34, 71–79.
- Bull, A.O. (1994). Pricing a motel's location. *International Journal of Contemporary Hospitality Management*, 6(6), 10–15.
- Chen, C., & Rothschild, R. (2010). An application of hedonic pricing analysis to the case of hotel rooms in Taipei. *Tourism Economics*, 16(3), 685–694.
- Egan, D.J., & Nield, K. (2000). Towards a theory of intraurban hotel location. *Urban Studies*, 37(3), 611–621.
- Halvorsen, R., & Pamquist, R. (1980). The interpretation of dummy variables in semilogarithmic equations. *The American Economic Review*, 70(3), 474–475.
- Hung, W., Shang, J., & Wang, F. (2010). Pricing determinants in the hotel industry: Quantile regression analysis. *International Journal of Hospitality Management*, 29(3), 378–384.
- Lee, C. (2011). The determinants of hotel room rates: Another visit with Singapore's data. *International Journal of Hospitality Management*, 30(3), 756–758.
- Schamel, G. (2012). Weekend vs. midweek stays: Modelling hotel room rates in a small market. International Journal of Hospitality Management, 31(4), 1113–1118.
- Thrane, C. (2006). Examining the determinants of room rates for hotels in capital cities: The Oslo experience. *Journal of Revenue and Pricing Management*, 5(4), 315–323.
- Urtasun, A., & Gutiérrez, I. (2006). Hotel location in tourism cities: Madrid 1936–1998. Annals of Tourism Research, 33(2), 382–402.
- White, P.J., & Mulligan, G.F. (2002). Hedonic estimates of lodging rates in the Four Corners Region. *The Professional Geographer*, 54(4), 533–543.
- Yeung, H.W.C. (2000). Practicing new economic geographies? Some methodological considerations. Paper presented at RGS-IBG annual conference, Brighton, University of Sussex, 4–7 January.
- Zhang, H., Zhang, J., Lu, S., Cheng, S., & Zhang, J. (2011). Modelling hotel room price with geographically weighted regression. *International Journal of Hospitality Management*, 30(4), 1036–1043.
- Zhang, Z., Ye, Q., & Law, R. (2011). Determinants of hotel room price: An exploration of travelers' hierarchy of accommodation needs. *International Journal of Contemporary Hospitality Man*agement, 23(7), 972–981.