e-ISSN 2798-0502

Jurnal Ekonomi, Manajemen, Akuntansi dan Keuangan Vol: 5, No 3, 2024, Page: 1-7

The Influence of *Room Occupancy* and *Average Daily Rate* on the *Revenue Per Occupied Room* of Hotel X

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DOI: https://doi.org/10.53697/emak.v5i3.1761
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Received: 01-05-2024
Accepted: 14-06-2024
Published: 28-07-2024

Abstract: Revenue per occupied room reflects hotel's financial performance. Revenue per occupied room is affected by several factors two of them are occupancy rates and average room rates. The revenue per occupied room in hotel x has increased in the past three years but fluctuates every month. This research was conducted to determine the influence of room occupancy and average daily rate on the revenue per occupied room of hotel x. The data collection methods used in this research are interviews, documentation and library studies. The data used in this research is data in 2021-2023. The method of data analysis used in this research were multiple linear which assisted by SPSS series 25 program. The results of this research showed that partially and simultaneously the room occupancy and average daily rate had a positive and significant impact on the hotel's revenue per occupied room. The coefficient determination test showed room occupancy and average room rate had 90,2 per cent influence on hotel's revenue per occupied room, with the remaining 9,8 per cent being explained by the other variable that was not used in this research.

Keywords: Revenue Per Occupied Room, Room Occupancy, Average Room Rate, Revenue Management

Introduction

The tourism industry today has become one of the industries that has quite an important role in the national development of various countries (Rusyidi, 2018). The tourism industry is a complex sector, characterized by a combination of activities that covers several areas and includes a variety of governmental conditions for accommodation facilities. (Arcese et al., 2020). Accommodation types include hotels, motels, resorts, guesthouses, bed and breakfasts facilities and inns (Nutsugbodo, 2016).

The most important indicators in hotel performance metrics are Average Daily Rate (ADR), occupancy rate by room and revenue per available room (RevPAR) (Oses et al., 2016). Depending on how differently demand is sensitive to price adjustments during high and low seasons, the relative contributions of ADR and occupancy to better hotel performance may vary over time (Bienvenido, 2016). By increasing occupancy and average room rates can result in an increase of three to eight per cent in revenue per occupied room

(Bienvenido, 2016). The statement indicates that occupancy and average daily rate correlate with RevPOR(Bangert, 2018; He, 2019; Hering, 2010; Santiago, 2021; Steitz, 2020).

Room occupancy is one of the Key Performance Indicators that helps a hotel to calculate and indicate the performance and progress accordingly to their plans and actions (Demirtas, 2019). From the room occupancy can be seen the progress of the hotel retreat commercially as well as can be viewed in which month the hotel is in the low or peak season (Ritasary, 2016).

Room occupancy has increased from 2021 to 2023. The same goes to average of the revenue per occupied room. However, room occupancy and RevPOR values are fluctuating every month(Lackey, 2008; Madanoglu, 2008). According to the data, when room occupancy increases, RevPOR also increases and vice versa. The phenomenon indicates that there is a correlation between room occupancy and RevPOR. But there is another phenomenon that when room occupancy increases, RevPOR decreases. It happened in 2021 January to February, April to May, and September to October. The same thing happened in 2022 January to February, February to March, July to Agustus and in 2023 March to April. The opposite phenomenon occurs when room occupancy decreases and RevPOR increases. It happened in 2021 March to April, June to July, and October to November. The same phenomenon happened in 2022 May to June and September to October.

ADR measured as the total rooms revenue divided by the amount of rooms sold during a given period. It shows the average rental income for each paid occupied room for a certain period of time (Oses et al., 2016).

The average daily rate has increased from 2021 to 2023. The same goes to the RevPOR for the same year. However, the ADR and the revPOR value were fluctuating every month. Conditions where the average daily rate and RevPOR decreased in 2021 occurred in January to February, May to June, July to August, and September to October. It also happened in 2022 January to February, February to March, July to August and in 2023 January to February and September to October. The phenomenon indicates that there is a correlation between ADR offered and RevPOR that is constantly changing every month. However, in certain months there are condition where the ADR increases but the RevPOR decreases. It happened in 2021 April to May, 2022 November to December, 2023 Maret to April, July to August, and November to December. The opposite is when ADR is decreased but RevPOR increased in 2021 March to April and June to July. The same is in 2023 February to March and April to May.

Based on the phenomenon, it can be stated that the increase in room occupancy or average daily rate is not always followed by an increase in RevPOR. Room occupancy and average daily rate have no consistent effect on RevPOR. The purpose of this research is to determine the influence of room occupancy and Average Daily Rate (ADR) on the Revenue Per Occupied Room (RevPOR) in hotel X.

Methodology

The object of this research is the influence of room occupancy and Average Daily Rate (ADR) on the Revenue Per Occupied Room (RevPOR) in hotel x. The data collection methods used in this research are interviews, documentation and library studies. The data in this research is 36 consisting of data per month for 3 years, namely 2021 to 2023. The types of data used are quantitative data. Data sources are primary and secondary data. Multiple linear regression approaches using the SPSS (Statistical Product and Service Solutions) program series 25 were used for data analysis in this research.

Result and Discussion

Classical Assumption Test

The purpose of the classical assumption test is to give ensure that the model of regression obtained unbiased and consistent.

Table 1 : Classic Assumption Test Result

	Asymp. Sig (2-tailed)	Sig.	Tolerance	VIF	Durbin-Watson
X_1	0,155	0,226	0,289	3,466	1,889
X_2		0,173	0,289	3,466	

Based on the classic assumption test, the data can be conducted for further research. The result of normality test showed that the residual values are distributed normally. Based on the output, Asymp. Sig (2-tailed) has a value of 0,155 > 0,05. It can be determined that the residual values are normally distributed based on the criteria used to make decisions in the Kolmogorov-Smirnov normality test. The glejser test was applied for heteroscedasticity test and obtained the results of the heteroscedasticity test show that the room occupancy and average daily rate variable does not occur heteroscedasticity, which is indicated by the value of significance < 0,05. The multicollinearity test used the variance inflation factor (VIF) and obtained the tolerance value 0,289 > 0,10 and the VIF 3,466 < 10. This is in line with the requirement of multicollinearity test that the tolerance value above than 0,10 and VIF below than 10. Thus, there was no multicollinearity symptom happened. The Durbin-Watson values (d) are 1,889. The dU and dL values on the Durbin Watson table are 1,587 and 1,354. According to the requirement dl<du<d<4-du<4-dl, no autocorrelation occurred 1,5144<1,6518<1,898<2,3482<2,4856.

Table 2 : The recapitulation of analysis result

	Coefficients	*t*	*Sig.*	*F*	*Sig.*	*R Square*
(*Constant*)	109101,370	1,990	0,055	151,648	0,000	0,902
X_1	274110,996	2,159	0,038			
X_2	1,221	7,462	0,000			

The multiple linear regression analysis is formulated as follow:

$$Y = 109.101,370 + 274.110,996X1 + 1,221X2 + e$$

The multiple linear regression equation model shows the direction of change for each independent variable against the dependent variable as follow:

a. Value of constant (α) is 109.101,370 means that if the variables room occupancy and average daily rate are zero, then the revenue per occupied room value will be 109.101,370. In other words, if the independent variable does not contribute, the value of revenue per occupied room is 109.101,370.
b. The value of room occupancy variable is 274.110,996 means there is a positive impact of the room occupancy on the revenue per occupied room. Which means that each increase in room occupancy by one per cent, will result in an increase of revenue per occupied room by 274.110,996 units.
c. The value of average daily rate variable is 1,221 means there is a positive impact of the room occupancy on the revenue per occupied room. Which means that each increase in average daily rate by one unit, will result in an increase of revenue per occupied room by 1,221 units.

The value of the determinant coefficient (r square) is 0,902 indicates that the independent variable explained 90,2 per cent of the dependent variable's explanation, with the remaining 9,8 per cent being explained by the other variable that was not used in this research. Based on the t-test:

a. Variable room occupancy coefficient with the value of $t_{count} > t_{table} = 2,159 > 1,691$ and significance value $< \alpha = 0,038 < 0,05$, means that room occupancy partially has a positive and significant impact on revenue per occupied room.
b. Variable average daily rate coefficient with the value of $t_{count} > t_{table} = 7,462 > 1,691$ and significance value $< \alpha = 0,000 < 0,05$, means that average daily rate

F-test obtained result, the value of $F_{count} > F_{table} = 151,648 > 4,13$ and significance value $< \alpha = 0,000 < 0,05$ indicate that room occupancy and average daily rate simultaneously have a significant impact on the revenue per occupied room.

Discussion

According to the descriptive analysis, there are up to 36 data consisting of data per month for 3 years, namely 2021 to 2023. In this research, normality test that applied is Kolmogorov-Smirnov test and obtained the results of the value of Asymp. Sig (2-tailed) 0.155 > 0.05. It can be determined that the residual values are normally distributed based on the criteria used to make decisions in the Kolmogorov-Smirnov normality test. The glejser test was applied for heteroscedasticity test and obtained the results of of the value Sig 0,05 > 0,026 for room occupancy rate and 0,05 > 0,173 for average daily rate. That was in line with the requirement of heteroscedasticity test that Sig. value above than 0,05. Hence, this research has no concerns relating to the heterocedasticity. The multicollinearity test used the variance inflation factor (VIF) and obtained the tolerance value 0,289 > 0,10 and the VIF 3,466 < 10. This is in line with the requirement of multicollinearity test that the tolerance value above than 0,10 and VIF below than 10. Thus, there was no multicollinearity symptom happened. The autocorrelation test used Durbin-Watson and obtained 1,889, then can be continued by obtaining dU point at 1,587 and dL point at 1,354. According to the

requirement dl<du<d<4-du<4-dl, no autocorrelation occurred 1,354<1,587<1,889<2,413<2,646.

Based on the multiple linear analysis test, constant coefficient value was 109.101,370, means even that the dependent variable did not contribute then the hotel revenue was 109.101,370, because other variables like guest rating, market orientation, exchange rate, service quality, cleanliness, economic status and hotel location had an impact on hotel revenue per occupied room. Room occupancy rate coefficient was 274.110,996, it indicated that respectively increased on room occupancy rate by one percent will increasing hotel revenue per occupied room of 274.110,996 units. Average room rate coefficient was 1,221. It was increase on average room rate by one unit will increasing hotel revenue per occupied room of 1,221 units.

The r-square value as determined by the coefficient determination test was 0,902. It was pointed that independent variable can be explained by dependent variables as much as 90,2 per cent with the remaining 9,8 per cent being explained by the other variable that was not used in this research. Based on the t-test, room occupancy rate $t_{count} > t_{table} = 2,159 > 1,691$ and significance value $< \alpha = 0,038 < 0,05$, while average room rate of $t_{count} > t_{table} = 7,462 > 1,691$ and significance value $< \alpha = 0,000 < 0,05$. It can hereby be stated that the room occupancy rate and average room rate partially has a positive and significant impact on the hotel revenue. F-test obtained result,

$F_{count} > F_{table} = 151,648 > 4,13$ and significance value $< \alpha = 0,000 < 0,05$ indicate that room occupancy and average daily rate simultaneously have a significant impact on the revenue per occupied room.

The resulf of this study shows that an increase or decrease in room occupancy and average daily rate affected hotel revenue per occupied room. Based on data from 2021 to 2023 if the increase or decrease in room occupancy rate and average room rate was not accompanied by the same increase or decrease in hotel revenue per occupied room or even vice versa, then it was likely to be influenced by the decrease and increase in other variables beyond this study, such as variable service quality, cleanliness, hotel location, exchange rate, economic status, guest rating, and market orientation.

Conclusion

Room occupancy partially has a positive and significant impact on hotel's revenue per occupied room.Average daily rate partially has a positive and significant impact on hotel's revenue per occupied room. Room occupancy and average daily rate silmutaneously has a significant impact on hotel's revenue per occupied room. The combination affects 90,2 per cent on hotel's revenue per occupied room with the remaining 9,8 per cent being explained by the other variable that was not used in this research.

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