

Examining the Effects of Online Travel Agents on Room Revenue: An Empirical Investigation at Aloft Bali Seminyak

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Keywords: Distribution Channel, Online Travel Agent, RevPAR, Aloft Bali Seminyak

Article History

Received on 31st July 2023

Accepted on 17th August 2023

Published on 19th August 2023

Cite this article

Sabudi, I. N. S., Suta, I. P. A. A., & Winarsana, I. G. A. G. (2023). Examining the Effects of Online Travel Agents on Room Revenue: An Empirical Investigation at Aloft Bali Seminyak. *International Journal of Management, Innovation & Entrepreneurial Research*, 9(2), 11-16. <https://doi.org/10.18510/ijmier.2023.922>

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Abstract

Purpose of the study: This study aims to determine the impact of online travel agent distribution channels on the Revenue Per Available Room (RevPAR) at Aloft Bali Seminyak over two years (2021-2022).

Methodology: This study employs classical assumption tests, simple linear regression tests, t-tests, and coefficient of determination tests. These analyses were performed using IBM SPSS version 25 software.

Main Findings: The study found that online travel agent distribution channels significantly influence RevPAR at Aloft Bali Seminyak. The impact, quantified at 59%, is considered strong or high, leaving 41% potentially influenced by factors not evaluated in this study.

Applications of the study: The findings of this study are applicable in the hospitality industry, specifically to hotel operations and revenue management. Additionally, they can assist online travel agencies in understanding their influence on hotel revenues.

Novelty/Originality of the study: This study presents novel insights into the substantial influence of online travel agent distribution channels on hotel revenue, specifically RevPAR. It advances existing knowledge by quantifying this impact and opens the door for further exploration of the remaining 41% of unexplained influence.

INTRODUCTION

The tourism and creative economy sectors play a pivotal role in Indonesia's economy, significantly contributing to its foreign exchange earnings. With the country's rich tapestry of cultural and natural attractions, including internationally acclaimed destinations like Bali, it has been able to draw tourists from around the globe. The revenue generated through tourism activities amounted to a substantial 43 billion US dollars in foreign exchange earnings for the country, as reported by www.dpr.go.id in 2020.

However, the global tourism landscape dramatically changed in 2020 with the onset of the COVID-19 pandemic (Winarsana et al., 2022). As the virus rapidly spread across the world, international travel was severely affected. In response to the escalating health crisis, the World Tourism Organization (UNWTO) announced in March 2020 that the repercussions of the COVID-19 outbreak would be felt across all sectors of tourism.

The pandemic's fallout had profound implications for Indonesia's tourism industry. Widespread travel restrictions, cancellations, and a general reluctance to travel led to a substantial decrease in the arrival of foreign tourists. This unexpected downturn presented unprecedented challenges for the tourism sector, with significant impacts on Indonesia's overall economy given the sector's prominent role in generating foreign exchange earnings.

Aloft Bali Seminyak is a 4-star hotel located between Seminyak and Canggu, in Batu Belig. The hotel, which has been operating for three years under the Marriott International umbrella, has begun to recover and improve its performance following the COVID-19 outbreak, as hotel performance indicates the success of its operations (Pitanatri et al., 2020). Specifically, the key performance measurements from the financial aspect of a hotel include: Revenue Per Available Room (RevPAR), Total Revenue Per Available Room (TrevPAR), Payroll Margins, Gross Operating Profit Per Available Room (GOPPAR), General Repairs & Maintenance Cost, and Fixtures and Fitting Replacement Cost (Chen et al., 2016).

In 2021, the actual Revenue Per Available Room (RevPAR) from January to December did not meet the target, with an average shortfall of IDR 39,601. The low RevPAR in 2021 was due to the COVID-19 pandemic affecting purchasing power, leading to relatively low room prices. However, in 2022, there was an increase in RevPAR realization from month to month. In January 2022, the RevPAR reached the target, exceeding it by IDR 111,500. In February, it exceeded the target by IDR 132,250. From March to December 2022, the RevPAR met the set targets. According to Ivanov (2014), RevPAR is the result of dividing the total room revenue by the total number of available rooms or by multiplying the room occupancy rate by the Average Daily Rate (ADR). In selling a product, in this case, a hotel room, one crucial element is the distribution channel (Kharisma et al., 2020).

[Yoeti \(2003\)](#) explains that distribution channels are used to distribute products. A company can choose to distribute goods or services either directly (direct booking) or indirectly (indirect booking). An online travel agent is a travel agent that serves as a promotional and sales medium online through a website, distributing and facilitating bookings to tourism service providers ([Hendriyati, 2019](#)). Online Travel Agents provide hotels with tools for managing room prices and availability. The hotel is responsible for managing its presence on an OTA's website. Room sales through Online Travel Agents are more effective in providing allotment or pricing that can be carried out by the hotel and, of course, contribute to room revenue, which will affect the Revenue Per Available Room (RevPAR) at the hotel.

It can be noted that in the last two years, namely 2021 and 2022, the Online Travel Agent distribution channel has generated a total of 2,343 room nights. In 2021, room sales through the OTA distribution channel amounted to 950 room nights, which increased by 443 room nights in 2022 to 1,393 room nights. This is due to the improving tourism conditions in 2022, with more tourists visiting Bali. Aloft Bali Seminyak has partnered with several online travel agents (OTAs) to expand room sales and increase room revenue, which will influence RevPAR.

Research conducted by Kharisma and colleagues in 2020 examined the influence of distribution channels, specifically online travel agents (OTAs), on hotel performance metrics such as Revenue Per Available Room (RevPAR). Their findings revealed a significant impact of OTAs on hotel revenue. Specifically, the study determined that OTAs were responsible for a substantial 83.6% of the RevPAR, highlighting the paramount importance of these online channels in the modern hotel industry. Such a significant contribution underscores the need for hoteliers to effectively manage and collaborate with OTAs, considering their pivotal role in driving room revenues.

The phenomenon at Aloft Bali Seminyak involves not meeting the RevPAR target from January to December 2021. An increase in room sales generated by the online travel agent (OTA) distribution channel does not always lead to an increase in RevPAR. Conversely, when room sales generated by the online travel agent (OTA) distribution channel decrease, RevPAR does not necessarily decrease. Therefore, this research aims to delve deeper into the study of the "Influence of Online Travel Agent Distribution Channels on Revenue Per Available Room (RevPAR) at Aloft Bali Seminyak".

LITERATURE REVIEW

Hotel Performance

The performance serves as a management tool to assess and evaluate the progress achieved over a certain period or within a given timeframe. Hotel performance involves the relationship between input and output ([Pitanatri et al., 2022](#)). It signifies the success of a hotel's operations. Specifically, highlights key performance measurements for the financial aspect of hotels, including Revenue Per Available Room (RevPAR), Total Revenue Per Available Room (TrevPAR), Payroll Margins, Gross Operating Profit Per Available Room (GOPPAR), General Repairs & Maintenance Cost, fixtures, and Fitting Replacement Cost ([Wagey et al., 2020](#)). Metrics like room occupancy rate, average daily rates, and RevPAR represent hotel performance indicators well-accepted by researchers and hospitality practitioners.

Room Revenue

Room revenue also referred to as room sales, encompasses all income generated from room sales. Income from public areas like restaurants, bars, function rooms, and others does not fall under room sales. [Tarmoezi & Manurung \(2000\)](#) explain that room revenue is the total revenue derived from renting guest rooms, considering all available rooms. This revenue encompasses earnings from all types of room bookings, regardless of the duration of the stay. Whether a guest rents a room for just a few hours, multiple days, or even for prolonged periods, the revenue generated from these transactions collectively contributes to the total room revenue. Such a definition is crucial for hotel management and stakeholders, as understanding the breakdown and source of room revenue allows for more accurate financial forecasting, effective pricing strategies, and optimized occupancy management. In essence, room revenue stands as a critical performance metric in the hotel industry, offering insights into the establishment's profitability and operational success.

Revenue Per Available Room (RevPAR)

Revenue Per Available Room (RevPAR) is a ratio that provides insight into the revenue generated per room available for sale to guests at a hotel ([Wiyasha, 2007](#)). An increase in RevPAR indicates an increase in room occupancy or room rates or a combination of both. RevPAR is calculated by dividing the total room revenue for a specific period by the number of available rooms or the room occupancy rate multiplied by the average daily room rate ([Ivanov, 2014:47](#)). [Santoro \(2015\)](#) notes that RevPAR serves as a vital Key Performance Indicator (KPI) used by the hospitality industry to assess financial and business performance. The components that constitute RevPAR include:

a. Occupancy rate

The occupancy rate represents the percentage of occupied or rented rooms compared to the total number of available rooms within a specific timeframe, be it daily, monthly, or annually ([Damardjati, 1981](#)). [Sugiarto \(2000:55\)](#) defines the occupancy rate as the extent to which sold rooms compare to the total number of rooms available for sale. A high room occupancy rate benefits a hotel by increasing profits and revenue.

b. Average room rates

The average room rate, as defined by [Juhari \(2016\)](#) is the mean selling price of rooms, representing the core revenue stream for hotel companies. Further, [Cahyani et al., \(2021\)](#) characterize the average room rate as the outcome of average revenue from room sales over a specific period. [Chiang \(2018\)](#) underscores that the average room rate denotes the revenue and profit difference after deducting expenses and losses.

Distribution Channels

In the hotel industry, distribution channels refer to the avenues through which companies market their products and services, including rooms. According to [\(Smith, 2006\)](#) distribution channels facilitate the intermediary role and ensure the efficient delivery of products and services to consumers at the right price and time.

[Kotler & Armstrong \(2010\)](#) define marketing channels or distribution channels as interdependent organizations that aid in making products or services available for consumption or use by customers or business users. [Abubakar, \(2018\)](#) elaborates that distribution channels strive to streamline and facilitate the transfer of goods and services from producers to consumers, ensuring alignment with consumer needs.

Online Travel Agents (OTA): Online Travel Agents (OTA) are travel agencies that operate as online platforms for promotional and sales activities through websites ([Hendriyati, 2019](#)). OTAs execute all transactional activities online, offering reservation services and tools required by customers for their travel arrangements. OTAs represent a web-based technology system widely adopted by today's hospitality industry for promotion and marketing purposes ([Lee et al., 2019](#)). ([Ye et al., 2019](#)) define Online Travel Agents as contact points provided through the World Wide Web (WWW) to enable customers to search and select flight prices and schedules, subsequently booking and acquiring services through OTAs.

METHODOLOGY

This study uses a quantitative descriptive research method, which aims to systematically describe, classify, and interpret the statistical data concerning the influence of Online Travel Agent (OTA) distribution channels on the Revenue Per Available Room (RevPAR) at Aloft Bali Seminyak.

In quantitative research, numerical data is collected and analyzed to detect patterns, relationships, or trends among variables. The descriptive element of this research method signifies the use of statistical and mathematical techniques to describe the data collected.

The specific analytical techniques utilized in this study include:

1. Classical Assumption Tests: These tests are preliminary checks of the data to ensure it meets the necessary assumptions for regression analysis. They include normality tests, which check whether the data follows a normal distribution, and heteroscedasticity tests, which assess the consistency of variance in the regression model's errors.
2. Simple Linear Regression Test: This is used to estimate the relationship between two quantitative variables - in this case, OTA distribution (the independent variable) and RevPAR (the dependent variable). This test helps predict how changes in the OTA distribution might affect RevPAR.
3. Coefficient of Determination Test: Also known as R-squared, this test measures the proportion of the variance in the dependent variable (RevPAR) that can be predicted from the independent variable (OTA distribution). This helps to quantify the strength of the relationship between the two variables.
4. t-Test: This statistical hypothesis test is used to determine if there is a significant difference between the means of two groups, which may be related to certain features.

The data used in these analyses was sourced from the sales and marketing department at Aloft Bali Seminyak. The use of this internal data ensures that the findings are grounded in the hotel's actual business operations and performance metrics, enhancing the study's practical relevance.

FINDINGS / RESULTS

This research aims to understand the influence of the independent variable (X) on the dependent variable (Y). In this study, there are two variables: one independent variable and one dependent variable. The independent variable in this study is the Online Travel Agent (OTA) (X), and the dependent variable is the Revenue Per Available Room (RevPAR) (Y). The data used in this study is the level of room sales through the Online Travel Agent (OTA), gathered in the unit of room nights, and the Revenue Per Available Room (RevPAR), collected in the unit amount in Rupiah over the past two years (2021-2022).

It can be observed that the result of the normality test using the Kolmogorov-Smirnov test shows a value of 0.200. Data can be deemed normal when the significance value is greater than 0.05. Based on this, it can be concluded that the data used meets the normality test criteria.

Table 1: Normality Test

One-Sample Kolmogorov-Smirnov Test		
		Unstandardized Residual
N		36
Normal Parameters ^{a,b}	Mean	.0000000
	Std. Deviation	620756.75222582
Most Extreme Differences	Absolute	.118
	Positive	.118
	Negative	-.090
Test Statistic		.118
Asymp. Sig. (2-tailed)		.200 ^{c,d}
a. Test distribution is Normal.		
b. Calculated from data.		
c. Lilliefors Significance Correction.		
d. This is a lower bound of the true significance.		

Source: Research results, 2023

The analysis continues with the implementation of a multiple linear regression test, the aim of which is to determine the extent of the influence of the Online Travel Agent on the Revenue Per Available Room (RevPAR) at Aloft Bali Seminyak. The results are as follows:

Model		Unstandardized Coefficients	
		B	Std. Error
1	(Constant)	308.691	170.182
	OTA	1.812	1.543
a. Dependent Variable: RevPAR			

Source: Research results, 2023

The constant value, represented as 'a', is 308.692. This is an inherent value that implies if the online travel agent's influence is absent or contributes no effect, the Revenue Per Available Room (RevPAR) stands at 308.691. On the other hand, the coefficient, represented as 'b', is 1.812. This value indicates a direct and proportional relationship between the online travel agent variable and RevPAR. Specifically, an increase or decrease by a single unit in the online travel agent variable correlates to a corresponding increase or decrease in RevPAR by 1.812 units. This reciprocal relationship embodies the positive impact that the online travel agent has on RevPAR.

These relationships are summarised in the equation ($Y = 308.691 + 1.812x$), where 'Y' represents RevPAR and 'x' stands for the online travel agent variable. The results are shown below:

Table 2: t-test

Model		t	Sig.	Collinearity Statistics	
				Tolerance	VIF
1	(Constant)	1.814	.003		
	OTA	2.574	.000	1.000	1.000

Source: Research results, 2023

The significance value (sig) is identified as 0.00, and the t-value is 2.547. Given these figures, the significance value of 0.00 is less than 0.05, and the t-value of 2.547 is greater than 1.717. Therefore, the t-test results show that the online travel agent variable significantly influences the RevPAR at Aloft Bali Seminyak.

The next analysis is to calculate the coefficient of the determination test. The coefficient of determination, often represented as R-square in statistical analysis, is a measure that provides information about the goodness of fit of a model. In the context of regression analysis, it quantifies the proportion of the variance in the dependent variable (Y) that can be predicted or explained by the independent variable (X). Results indicate a strong correlation between the two variables. A high-value R-square (close to 1) indicates that the model explains a large portion of the variance in the dependent variable, whereas a low R-square value (close to 0) indicates the opposite.

Table 3: Coefficient of determination test

Model Summary ^b				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.739 ^a	.590	.532	629819.37397
a. Predictors: (Constant), OTA				
b. Dependent Variable: RevPAR				

Source: Research results, 2023

The R-square value, also known as the coefficient of determination, quantifies the degree of variance in the dependent variable (RevPAR, in this case) that can be attributed to the independent variable (distribution through the online travel agent, in this context).

In this specific study, the R-square value of 0.590, or 59%, indicates that 59% of the variation in RevPAR at Aloft Bali Seminyak can be explained by its relationship with the distribution through the online travel agent. This substantial percentage suggests a strong or high level of influence exerted by the distribution through the online travel agent on RevPAR.

However, it's also important to note that this R-square value doesn't account for all the variability in RevPAR. The remaining 41% of the variability is influenced by other factors not examined in this study. These could be other promotional methods, competitive dynamics, seasonal fluctuations, or various operational and market factors. This underscores the complexity of RevPAR as a performance metric and suggests further areas of investigation for a more comprehensive understanding of the factors influencing RevPAR at Aloft Bali Seminyak.

CONCLUSION

The study aimed to investigate the impact of the Online Travel Agent (OTA), an independent variable, on the Revenue Per Available Room (RevPAR) at Aloft Bali Seminyak. The simple linear regression test's findings reveal a positive correlation between the OTA and RevPAR, expressed mathematically as ($Y = 308.691 + 1.812X$). Here, 'Y' represents RevPAR, and 'X' stands for the OTA. This equation implies that an increase in OTA activity directly corresponds with an increase in RevPAR.

Additionally, the t-test results reinforce this relationship. With a t-table value of 2.574 and a significance value of 0.00, it is clear that the influence exerted by the OTA distribution channel on RevPAR is statistically significant.

The magnitude of this influence was further quantified using the coefficient of determination, which produced a value of 0.59 or 59%. This suggests that 59% of the variability in RevPAR can be explained by the OTA's influence, placing it in the high or strong impact category.

However, while the OTA's role is substantial, it does not account for all the variability in RevPAR. The remaining 41% can be attributed to other factors not examined in this study. These could include other marketing strategies, competitive dynamics, operational efficiency, market conditions, or a range of other external and internal factors. These unexamined factors highlight potential areas for future research to gain a more comprehensive understanding of the forces shaping RevPAR at Aloft Bali Seminyak.

LIMITATION AND STUDY FORWARD

While the research provides valuable insights into the influence of Online Travel Agents (OTAs) on Revenue Per Available Room (RevPAR) at Aloft Bali Seminyak, there are a few potential limitations that should be noted:

1. The research primarily focuses on the role of OTAs, potentially overlooking other factors that could have a significant impact on RevPAR. These may include internal hotel operations, strategic pricing decisions, customer preferences, and broader market conditions.
2. The study is time-bound, covering the years 2021-2022. This specific time frame, characterized by the unique influence of the COVID-19 pandemic, may not reflect typical tourism trends and hotel operations, limiting the wider applicability of the findings.
3. The results are derived from data collected from a single hotel, Aloft Bali Seminyak, located in Bali, Indonesia. This geographical limitation may restrict the broader application of the findings to other hotels in different locations or with different characteristics.
4. The research employs a quantitative approach, which, while valuable for concrete measurements, may not capture qualitative factors such as customer satisfaction, brand reputation, and other elements that can influence RevPAR.
5. The study leaves 41% of the variability in RevPAR unaccounted for by the OTA variable, suggesting that other factors not explored in this research may be at play.

These limitations, while notable, do not detract from the study's value but instead highlight potential areas for future research to provide a more comprehensive understanding of RevPAR determinants.

CONFLICT OF INTEREST AND ETHICAL STANDARDS

There exists no conflict of interest with the current organization and no unethical practices followed during the study.

AUTHOR'S CONTRIBUTION

First Author Contribution: the primary researcher, played a significant role in the design and conceptualization of the study. Carried out data collection, performed initial data analysis, and interpreted the results.

Second Author Contribution: provided critical feedback and intellectual input into the research design and methodology. Assisted with data collection and performed secondary data analysis.

Third Author Contribution: helped interpret the results. Took part in revising the draft manuscript and ensuring the overall quality of the paper.

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