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ANALYSIS OF THE INFLUENCE OF THE NUMBER OF STUDENTS AND TOURISTS ON THE ROOM OCCUPANCY RATE IN BALI

Oleh
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Abstrak
Tourism is a key sector in Bali's economy, with industry growth influenced by various factors, including the presence of tourism students. This research aims to analyze the correlation between the number of tourism students and the level of tourist visits and room occupancy in Bali's tourist destinations. The method used is secondary data analysis from various relevant sources, including tourism statistics, higher education data, and hospitality industry reports. The results show that the number of tourists is the most influential variable on room occupancy rates, whereas the number of students does not show a significant effect on either occupancy or the number of tourists. These findings emphasize that in the context of destination management like Bali, tourism activities remain the main driver of the accommodation industry, not educational activities. This research provides important insights for strengthening sustainable tourism strategies while still considering the synergy between the education sector and the tourism industry.
Keywords: Number Of Students, Tourist Visits, Room Occupancy Rate.

INTRODUCTION

Tourism is an economic sector that plays a significant role in the development of various destinations, including Bali. As a premier destination in Indonesia, Bali continues to experience growth in the number of tourists, which has a direct impact on various aspects, including the higher education sector that provides skilled labor for the tourism industry. Colleges offering tourism study programs play an important role in preparing competent human resources to support the sustainability of this industry. Therefore, there is an urgency to understand the correlation between the number of tourism students and the number of tourist arrivals and the occupancy rate of hotels in tourist destinations in Bali, which until now has rarely been studied in depth. The trend of tourist growth coming to Bali shows a significant increase in recent decades. Data from the Central Statistics Agency (2024a) indicates that the number of foreign tourists visiting Bali in 2024 reached 3.1 million people, a drastic increase compared to the previous year. Along with the increase in the number of tourists, the demand for professional labor in the tourism sector has also increased. Therefore, higher education institutions are using strategies to enhance competency development in order to improve the work skills of graduates, addressing the mismatch between the competencies of university graduates and the needs of employers (Abelha, Fernandes, Mesquita, Seabra, & Ferreira-Oliveira, 2020). However, there is still a gap between the number of tourism graduates and the availability of suitable job opportunities, as well as the impact on the hospitality and tourism services industry.

Previous research has discussed various aspects related to the connection between tourism education and industry needs. Some studies indicate that the national tourism education standards are largely aligned with international standards, such as UNWTO TedQual, ISTTE,

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and various other global certification systems. This aims to ensure that graduates are competitive on an international level (Ma, 2025; McGladdery & Lubbe, 2017). However, some researchers point out that a high number of higher education graduates does not necessarily correlate with an improvement in the quality of tourism services, especially if not supported by the mastery of relevant skills and adequate job readiness (Lee, Croes, & Rivera, 2013; Croes & Rivera, 2016). Therefore, there remains a research gap that needs to be further explored to understand the relationship between the number of tourism students, the level of tourist visits, and the occupancy rates of rooms in destinations like Bali. One of the main challenges faced in this study is how to ensure that the increasing number of tourism students aligns with the needs of the industry, so as to avoid an oversupply of labor that could potentially lead to an imbalance in the labor market. Additionally, there is a debate about the extent to which tourism graduates can contribute to the improvement of service quality that impacts tourists' experiences and hotel occupancy rates. Therefore, the objective of this research is to analyze the correlation between the number of tourism students and the level of tourist visits in Bali, as well as to identify the relationship between the number of tourism students and the occupancy rates in tourist destinations. By understanding this correlation, it is hoped that the research results can contribute to the development of more effective tourism education policies, as well as provide insights for the tourism industry in managing the workforce and enhancing the competitiveness of Bali's tourist destinations.

LITERATURE REVIEW
Research on the correlation between the number of tourism students and tourist visits and room occupancy rates in Bali's tourist destinations is an interesting and relevant topic in the development of tourism studies. This research attempts to link higher education

aspects with the dynamics of the tourism industry, which remains a topic of debate in various academic studies. Some previous research has discussed the relationship between tourism education and the improvement of service quality in the industry, but there are still few studies that specifically examine the quantitative impact of the number of tourism students on tourism performance indicators such as tourist visit rates and room occupancy. Several studies have shown that tourism education has a positive contribution to improving service quality in the tourism industry, particularly through enhancing the competencies of graduates. The study conducted by Saepudin, Nurdin, Fajri, and Permana (2022), as well as Akat'eva and Rogozina (2021), revealed that the integration of tourism education with industry needs through curriculum collaboration, practical training, and direct involvement of practitioners can produce graduates who are more job-ready and capable of providing quality services. Further research by Saepudin, Sa'ud, Nurdin, and Kurniatun (2023) also emphasizes the importance of synergy between education and industry in creating competent tourism human resources. In line with this, Croes and Rivera (2016) emphasize that tourism education plays an important role in improving the quality of human resources, which in turn enhances the competitiveness of destinations through superior and innovative services. Nevertheless, until now there has been no empirical evidence directly linking the number of students in tourism education to the growth of the hospitality sector or an increase in tourist visits to a destination.

The research examined in this study shows uniqueness in its efforts to measure the quantitative impact of the number of tourism students on the economic indicators of tourism in Bali. Using data from the Central Statistics Agency (2024b), this research attempts to understand the statistical relationship between the number of students and tourist visits as well

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as room occupancy rates. This provides a new perspective in understanding the relationship between academia and the tourism industry from a more empirical standpoint.

In comparing this study with previous studies, there are several limitations that need to be considered. For example, most existing research has focused more on the impact of education on the quality of the workforce and industrial services, while this study attempts to explore the quantitative impact of the number of students. Additionally, previous studies often only used qualitative methods, such as interviews and case studies, whereas this research employs a quantitative approach with statistical data, which can provide more measurable and generalizable results.

The scientific contributions of this research can be categorized into three main aspects. First, this research offers a new approach to understanding the relationship between education and the tourism industry by using statistical data, which has been lacking in previous studies. Second, this research can serve as a reference for educational institutions in developing curricula that are more aligned with industry needs, considering how the number of students can influence the dynamics of the tourism industry. Third, this research provides insights for tourism industry stakeholders in anticipating the availability of a workforce that matches market developments.

In identifying the state of the art in the field of tourism, it can be found that tourism research is increasingly developing by adopting a multidisciplinary approach that encompasses economic, social, and technological aspects. In terms of methodology, the quantitative approach in this research provides an advantage in identifying clearer patterns and trends compared to the more subjective qualitative approach. From a technological perspective, the development of big data and statistical analysis allows this research to obtain more accurate results in understanding the correlations between variables.

However, there are several weaknesses in this study that could serve as a basis for future research. One of the main weaknesses is the limitation in measuring other factors that may influence tourist visits and room occupancy rates, such as government policies, changing tourist trends, and global economic conditions. Furthermore, this study has not deeply discussed the quality of the workforce produced by tourism education, which can be an important factor in determining the competitiveness of tourist destinations.

Based on this study, it was found that there is a research gap that can serve as the basis for a more comprehensive development model. Further research can develop a model that not only considers the number of tourism students but also the quality of graduates and the relevance of the curriculum to the needs of the industry. In addition, further research can use a longitudinal approach to see the long-term impact of tourism education on the tourism industry in Bali. Thus, this study can serve as an important reference in developing more sustainable education strategies and tourism industry policies.

Based on previous research, the hypothesis of this study is:

• H_{1o}: There is no significant effect of the number of students on the number of tourists.

• H_{1a}: There is a significant effect of the number of students on the number of tourists.

• H_{2o}: There is no significant effect of the number of students on the room occupancy rate.

• H_{2a}: There is a significant effect of the number of students on the room occupancy rate.

• H_{3o}: There is no significant effect of the number of tourists on the room occupancy rate.

• H_{3a}: There is a significant effect of the number of tourists on the room occupancy rate.

RESEARCH METHOD

This research uses a quantitative approach focusing on the analysis of secondary data obtained through document studies. Data was collected from primary sources such as the

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Central Statistics Agency (BPS) and the Higher Education Database (PD-DIKTI), which provide information on the number of tourism students, the level of international tourist visits, and the occupancy rate of star-rated hotels in Bali. Specifically, the data on the number of students used in this research focuses on students at the Institute of Tourism and International Business (IPBI), a private college engaged in the field of tourism and strategically located in the center of Denpasar City.

The methods used in this study are descriptive statistical analysis and linear regression to identify patterns and relationships between the studied variables. Descriptive analysis is used to describe trends in the number of tourism students, the level of tourist visits, and the room occupancy rate. Meanwhile, linear regression analysis is conducted to test the relationship and significance between the number of tourism students and the indicators of the tourism industry using linear regression methods.

With this quantitative approach, the research can provide more objective and generalizable results. Statistical analysis allows this research to identify more accurate correlational relationships compared to qualitative approaches. In addition, this research can provide more relevant data-driven recommendations for stakeholders in the education and tourism industry.

RESULTS AND DISCUSSION

Based on data analyzed from 2011 to 2024, this study shows the dynamics of growth in the number of tourism students, tourist visits, and room occupancy rates in Bali. In general, the number of students at the International Institute of Tourism and Business (IPBI) shows an increasing trend from 701 in 2011 to 1,212 in 2024. However, there were sharp fluctuations in 2019 and 2021, which significantly decreased before rising again.

Meanwhile, the number of international tourist visits experienced consistent growth, reaching its peak in 2019 with 6,275,210 tourists. The COVID-19 pandemic had a drastic impact,

resulting in a sharp decline in 2020 (1,069,473 visits) and even lower in 2021. After that, the number of tourists increased rapidly again, reaching 6,333,360 in 2024.

A similar trend is also seen in the occupancy rate of star-rated hotels. The occupancy rate ranged above 60% until 2019, then drastically dropped to 28.71% in 2020 and only 12.53% in 2021. Recovery was evident after 2022, with room occupancy increasing to 62.23% in 2024.

Table 1. Development of the Number of Students, Number of Tourist Visits, and Hotel Occupancy Rates in Bali 2011–2024

Year	Number of Students (X)	Number of Visits (Z)	Occupancy Rate (Y)
2011	701	2.826.709	63,23
2012	730	2.949.332	63,21
2013	756	3.278.598	60,68
2014	820	3.766.638	60,31
2015	940	4.001.835	60,48
2016	1060	4.927.937	61,75
2017	1120	5.697.739	64,24
2018	1240	6.070.473	64,82
2019	730	6.275.210	59,57
2020	1298	1.069.473	28,71
2021	1172	51	12,53
2022	1060	2.155.747	36,09
2023	1097	5.273.258	52,88
2024	1212	6.333.360	62,23

Source: Central Statistics Agency (BPS) and Higher Education Database (PD-DIKTI)

The results of the statistical tests show that the number of tourists has a significant effect on the room occupancy rate, while the number of students does not show a significant effect, both on the room occupancy rate and on the number of tourists. This indicates that the increase in tourism activity is more determined by external factors such as travel trends, destination promotions, and post-pandemic recovery, compared to the increase in the number of students in the tourism field. The following are

the results and discussions of each regression model:

1. The Influence of the Number of Students on the Number of Tourists (X → Z)

The analysis results show that the number of students (X) has no significant effect on the number of tourists (Z). The coefficient of determination (R^2 = **0.042**) indicates that only 4.2% of the variation in the number of tourists can be explained by the number of students. The remaining 95.8% is influenced by other variables not explained in this model. The significance value (p = **0.500**) > 0.05 reinforces that this relationship **is not statistically significant**.

Table 2. The Regression Coefficient between the Number of Students and the Number of Tourists

Model	Unstandardized Coefficients		Standardized Coefficients		
	B	Std. Error	Beta	t	Sig.
1 (Constant)	3,865	3,372		1,146	0,276
X	-9,094	13,053	-0,206	-0,697	0,500

Theoretically, the concepts of urban tourism and educational mobility suggest that the presence of higher education institutions in a region can drive population dynamics and activate the local economy, both through increased consumption and human movement (Page & Hall, 2003). However, the direct impact of educational institutions on the increase in the number of tourist visits is not always significant. Findings from Calvo, Nofre, and Fuarros (2024), Tomasi, Paviotti, and Cavicchi (2020), as well as Michael, Armstrong, and King (2004) indicate that the contribution of students, particularly international students, is more palpable in the microeconomic sector and in promoting local mobility. Rasool (2024) and López, Fernández, and Incera (2016) also state that although the presence of students can strengthen the dynamics of the city as a living space and global interaction, its impact on visits from national and international tourists tends to be indirect and less significant on a macro scale.

This finding is supported by the research of Choe and Kim (2024), which states that higher education institutions that actively and integratedly participate in the development of tourist destinations can make a significant contribution to the increase in the number of tourist visits. This contribution can be realized through the organization of events, promotional activities, and the development of new innovative tourism products. Conversely, institutions that are not directly involved in the development of the tourism sector generally do not have a significant impact on the growth of the number of tourists in their surrounding areas.

Thus, although there is a theoretical link between higher education and tourism activities, the influence is contextual and depends on the role of institutions within the overall ecosystem of tourist destinations.

2. The Influence of the Number of Students on Room Occupancy Rates (X → Y)

The second model shows that the influence of the number of students on the room occupancy rate is also not significant. The R^2 value of **0.090** indicates that only 9% of the variation in room occupancy rate is explained by the number of students, and the significance value of **0.319** indicates that the relationship **is not statistically meaningful**.

Table 3. The Regression Coefficient between the Number of Students and the Room Occupancy Rate

Model	Unstandardized Coefficients		Standardized Coefficients		
				t	Sig.

	B	Std. Error	Beta		
2(Constant)	0,155	0,170		0,909	0,383
X	-0,688	0,660	-0,300	-1,043	0,319

Conceptually, the presence of students in campus areas can serve as a latent demand for accommodation needs, especially in urban areas (Douglas et al., 2015). However, in the context of tourist destinations like Bali, the pattern of accommodation demand is more influenced by seasonal and short-term tourist visitation trends. Students' accommodation needs are not directly integrated with the commercial hotel sector, as students tend to prefer housing that aligns with their long-term needs, such as campus dormitories or boarding houses (Simpeh & Shakantu, 2020; Kenna & Murphy, 2021; Reynolds, 2020). This is in line with the findings of Kinton, Smith, and Harrison (2016) which show that although the student population can increase the occupancy of non-commercial accommodations, such as student housing or purpose-built student accommodation (PBSA), its effect on the occupancy rates of star-rated hotels is relatively insignificant. This type of accommodation is more preferred because it offers more affordable prices, long-term rental contracts, and facilities that support students' learning activities.

Thus, although students have the potential to create demand for accommodation, their contribution to the occupancy rate of general hotel rooms is not significant in the context of major tourist destinations like Bali, which is more influenced by fluctuations in domestic and international tourist flows.

3. The Influence of the Number of Tourists on Room Occupancy Rates (Z → Y)
The third model shows very strong results. It was found that the number of tourists has a significant influence on the room occupancy rate, with an R² value of **0.842**, meaning that

84.2% of the variation in room occupancy can be explained by the number of tourists. A p-value of **0.000** (< 0.05) indicates that this relationship **is highly statistically significant**. The positive regression coefficient indicates that an increase in the number of tourists directly impacts an increase in the room occupancy rate.

Table 4. The Regression Coefficient between the Number of Tourists and the Room Occupancy Rate

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
3(Constant)	-0,047	0,071		-0,658	0,524
Z	0,048	0,006	0,917	7,649	0,000

This finding is in line with the tourism demand theory, which states that the number of tourist visits is one of the main determinants of demand for accommodation services (Goeldner & Ritchie, 2009). Logically, an increase in the number of tourists will create a surge in the demand for lodging facilities, especially in tourist destinations with high visitation intensity like Bali. This result is also supported by the research of Descals-Tormo and Ruiz-Tamarit (2022), as well as Descals-Tormo, Murgui-García, and Ruiz-Tamarit (2024), which mention that the demand for accommodation services is derived demand from the number of tourist visits. In other words, the greater the volume of tourist visits, the higher the demand for hotel rooms and other types of accommodation.

Thus, the empirical data in this study consistently proves that the flow of tourist visits is a dominant factor in determining the fluctuations in hotel room occupancy rates at major tourist destinations.

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CONCLUSION

Overall, the results of this study show that the number of tourists is the most significantly influential variable on the hotel room occupancy rate, while the number of students does not show a significant influence, both on the room occupancy rate and on the number of tourist visits. These findings emphasize that in the context of tourist destinations like Bali, tourism activities remain the main driving force of the accommodation industry, not educational activities or the presence of tourism higher education institutions.

From a practical implication perspective, this indicates that the strategy for developing the tourism sector in Bali needs to focus on enhancing destination attractiveness, service quality, as well as connectivity and accessibility that support travelers' comfort. The role of higher education institutions, especially those in the tourism sector, is more relevant to be developed in the context of contributing to the strengthening of the local economy and educational area development, rather than as a direct factor in increasing the occupancy of commercial accommodations.

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