Event-Led Tourism Development and Hospitality Performance: Evidence from Cultural and Tourism Events

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Abstract

In recent years, Surakarta has become an area with a fairly strong economy. Infrastructure development and improved tourism facilities, including those in the hospitality sector, have made it a popular destination for tourists. Additionally, the hosting of national and international events has added value for visitors to Surakarta. Our study aimed to investigate the growth and development of tourism dynamics by presenting empirical evidence of the impact of tourist visits, event organisation and room occupancy rates in Surakarta in 2025, using multiple regression analysis. The results indicate that several international events, such as the Solo International Performing Arts Festival and the Umbrella Festival, positively impact room occupancy rates. Furthermore, events that attract many local tourists, such as Grebeg Sudiro and Haul Habib, have the greatest impact of all. Based on these results, we recommend formulating a tourism development strategy that integrates event organisation with hotel management policies. The local government should prioritise supporting events with broad and consistent appeal in both the international and domestic markets and ensure a continuous event calendar throughout the year to reduce fluctuations in room occupancy rates. Additionally, collaboration between the government, the hospitality industry and the local cultural community must be strengthened to maximise the sustainable economic impact of tourism on Surakarta City.

Keywords: events, hospitality, Surakarta, tourism,

INTRODUCTION

Tourism has increasingly been recognised as a strategic sector for regional economic development, particularly through its ability to generate multiplier effects across accommodation, transportation, food services, and other supporting industries (Lee et al., 2026). Within this context, event-based tourism has emerged as an important strategy for destinations to enhance their attractiveness, stimulate tourist mobility, and strengthen local economic performance (Roy et al., 2026). Cultural festivals and tourism events not only preserve local heritage and identity but also function as economic catalysts that increase visitor expenditure and demand for hospitality services (Yin et al., 2025).

As one of Indonesia's prominent cultural destinations, Surakarta represents a relevant case for examining the economic implications of event-led tourism development. The city possesses strong cultural assets, including the Kasunanan Surakarta Hadiningrat Palace and Mangkunegaran Palace, alongside diverse culinary, religious, and shopping attractions (Setyaningsih et al., 2016).

To strengthen tourism competitiveness, the Surakarta City Department of Culture and Tourism regularly organises various cultural events, such as Solo Batik Carnival, Umbrella Festival, Solo Menari, Solo Keroncong Festival, and Solo International Performing Arts (Setyaningsih et al., 2016). These events are expected to increase destination visibility, attract domestic and international tourists, and create additional demand for local accommodation services.

The development of tourism activities in Surakarta has shown significant growth potential (Hasyimi & Azizalrahman, 2021). In 2025, the city recorded more than 5.26 million tourist arrivals, consisting of approximately 5.23 million domestic visitors and nearly 38 thousand international visitors. This increasing tourist mobility potentially generates higher demand for hospitality services, re-

flected through the Room Occupancy Rate (ROR), which serves as an important indicator of hotel business performance and tourism-related economic activity.

Despite extensive studies examining the relationship between tourism development and economic performance, empirical evidence at micro-level hospitality sector remains limited (Linneberg et al., 2019). Existing studies generally rely on aggregate indi-cators such as total tourist arrivals (Li et al., 2016), regional income (Incera & Fernández, 2015), or overall tourism revenue, which may overlook heterogeneous responses among individual hotels (Loayza et al., 2026).

Various study has simultaneously examined how tourism demand factors and temporal tourism patterns, including public holidays and long weekends, influence hotel occupancy at the individual hotel level. To address this gap, this study employs a balanced panel dataset covering 38 hotels in Surakarta observed monthly from January to December 2025. The study investigates the effects of foreign tourist arrivals, domestic tourist arrivals, public holidays, and long weekends on hotel occupancy rates.

By applying panel data econometric techniques, this study contributes to the tourism economics literature by providing micro-level evidence on the determinants of hospitality performance in an emerging cultural tourism destination. The findings are expected to provide practical implications for tourism policy-makers and hospitality managers.

RESEARCH METHODOLOGY

The research methods section should be written clearly and include technical information and a complete description of the methods used, particularly if the methods are novel. For methods that are already in common use, it is sufficient to cite the relevant references.

We employs a quantitative approach using a panel data model to examine the determinants of hotel occupancy performance in Surakarta City, Indonesia. The use of panel data enables the analysis of both cross-sectional variations among hotels and time-series variations across different periods, providing more accurate and consistent estimations.

The study utilizes a balanced panel dataset consisting of 38 hotels in Surakarta City observed monthly from January 2025 to December 2025. Thus, the dataset comprises 456 observations (38 hotels x 12 months). The hotel occupancy data are obtained from official records of participating hotels, while data regarding the number of foreign tourist arrivals, domestic tourist arrivals, public holidays, and long weekends are collected from the Department of Culture and Tourism of Surakarta, the Central Bureau of Statistics (BPS), and official national holiday calendars.

RESULTS AND DISCUSSION

Table 1 shown the regression model demonstrates a strong explanatory power in capturing the determinants of hotel occupancy rates in Surakarta City. This is indicated by the R-squared value of 0.8965, suggesting that approximately 89.65% of the variation in hotel occupancy rates can be explained by the explanatory variables included in the model, namely international tourist arrivals, domestic tourist arrivals, and control variables represented by public holidays and long weekends.

The empirical findings reveal that both international and domestic tourist arrivals exert a positive and statistically significant influence on hotel occupancy rates. These results provide strong evidence that tourism demand is a determinant of accommodation sector performance in Surakarta.

Specifically, the coefficient of international tourist arrivals is 16.4159 with a significance level of 0.0117, indicating that an increase in international tourist arrivals significantly contributes to higher hotel occupancy rates. This finding suggests that growth in foreign visitor flows plays an important role in stimulating demand for accommodation services, particularly among hotels targeting international tourism markets.

Domestic tourist arrivals show a positive and statistically significant effect on hotel occupancy, with a coefficient of 19.0825 and a p-value of 0.0482. This result highlights the dominant role of domestic tourism in supporting the sustainability of the local hospitality industry, given that domestic visitors represent the largest proportion of tourist flows in Surakarta.

Table 1. The Effects of Foreign and Domestic Tourist Arrivals on Hotel Occupancy

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-336,4520	89,7104	-3,7504	0,0199
LONGWEEKEND	3,1488	2,2412	1,4050	0,2327
TGLMERAH	-0,1341	1,1589	-0,1157	0,9134
LOG(FOREIGN)	16,4159	3,7345	4,3957	0,0117
LOG(DOMESTIC)	19,0825	6,7833	2,8132	0,0482
R-squared	0,8965	F-statistic		8,6594
Adjusted R-squared	0,7929	Prob(F-statistic)		0,0299

Source: Data processed, 2025. **FOREIGN= foreign tourist; DOMESTIC= domestic tourist

Table 2. Heterogeneous Effects of International and Domestic Tourist Arrivals on Hotel Room Sales by Star Rating

Hotels	*	**	***	****	*****
Variable	C	C	C	C	C
C	0,4528	0,3263	3,2615	-0,6207	-3,0261
LOG(FOREIGN)	0,6234	0,2374	-0,2551	0,2046	0,2688
Prob.	(0,0312)	(0,2409)	(0,2349)	(0,0148)	(0,0734)
LOG(DOMESTIC)	0,0233	0,5496	0,6023	0,6739	0,7206
Prob.	(0,9554)	(0,1456)	(0,1342)	(0,0008)	0,0180

Source: Data processed, 2025.

Table 3. The Contribution of International and Domestic Tourist Arrivals to Tourism Gross Regional Domestic Product (GRDP)

Variable	Coefficient	Std, Error	t-Statistic	Prob,
C	-5,5962	6,3493	-0,8814	0,4120
LOG(FOREIGN)	0,6088	0,2407	2,5297	0,0447
LOG(DOMESTIC)	1,7241	0,4335	3,9773	0,0073
R-squared	0,7574	F-statistic		9,3636
Adjusted R-squared	0,6765	Prob(F-statistic)		0,0143

Source: Data processed, 2025

The results presented in Table 2 indicate that tourist arrivals significantly contribute to improving hotel occupancy, particularly within the four-star and five-star hotel categories. Both international and domestic tourist arrivals have positive effects on occupancy rates in these premium hotel segments, suggesting that increasing tourism demand directly enhances the performance of high-quality accommodation providers. This finding reflects the existence of market segmentation in the hospitality industry, where hotels offering superior facilities, service quality, strategic locations, and stronger brand recognition are more likely to capture the growing demand generated by tourism activities.

Interestingly, the analysis also reveals that international tourist arrivals positively influence the number of rooms sold in one-star hotels. This finding indicates that foreign tourists do not represent a homogeneous market segment exclusively associated with luxury accommodation. A proportion of

international visitors continue to prefer more affordable lodging options due to differences in travel purpose, budget constraints, length of stay, and individual travel preferences. This evidence highlights the diversity of tourist behaviour and suggests that tourism growth creates economic opportunities across various categories of the accommodation sector.

Given the significant role of tourist arrivals in shaping hotel performance, the next analysis examines whether the increase in tourism demand also translates into broader economic benefits, particularly tourism-generated revenue in Surakarta City. The estimation results presented in Table 3 demonstrate that both international and domestic tourist arrivals positively contribute to tourism revenue. A 1% increase in international tourist arrivals is associated with an approximately 0.6% increase in tourism revenue, while a 1% increase in domestic tourist arrivals leads to a larger increase of around 1.72%.

These findings suggest that although international tourists contribute positively to the local tourism economy, domestic tourism remains the primary driver of tourism revenue in Surakarta during 2025. This pattern may be explained by the substantially larger volume of domestic visitors compared to international tourists, resulting in a stronger aggregate economic contribution. This evidence confirms that domestic tourism plays a crucial role in maintaining the resilience and sustainability of local tourism destinations, particularly in emerging cultural cities where the domestic market constitutes the largest share of tourist demand.

The findings demonstrate that the economic impact of tourism in Surakarta extends beyond increasing hotel occupancy. Growing tourist mobility also stimulates tourism-related income, indicating the presence of a tourism multiplier effect in which increased visitor demand generates wider economic benefits for the local economy (Navarro-Dols, 2025; Tam, 2024).

To determine the extent to which each event contributed to visitor numbers, the number of visitors to each event held during the observation period was calculated. The following table shows the number of visitors to each event, which was then used as the basis for analysing the relationship between the organisation of events and the hotel occupancy rate in Surakarta.

Table 4. Visitor Attendance at Cultural and Tourism Events in Surakarta

No	Event	Visitor
1	Bakdhan Ning Solo	3.854
2	Ramadhan Light	54.326
3	Grebeg Sudiro	363.300
4	Solo Indonesia Culinary Festival	25.250
5	Gamelan Ethnic Music Festival 2025	15.462
6	Solo Keroncong Festival	6.467
7	Solo Menari	14.795
8	Solo Int. Performing Arts	23.943
9	Kirab Satu Suro	5.000
10	Festival Jenang Solo	8.275
11	Festival Payung Indonesia XIII	32.809
12	Kampung Ramadhan	52.894
13	Solo Batik Carnival	25.000
14	Solo Run Fest 2025	5.851
15	Pengembangan Hadrah	2.118
16	Abhipraya Ageng Museum	453
17	Solo Heritage	6.031
18	Haul Habib	10.000
19	International Mask Festival (IMF)	9.119

Furthermore, the visitor numbers for each of these events were used as independent variables in the regression analysis. The aim of this analysis was to determine which events had the most significant impact on the hotel occupancy rate in Surakarta.

By using a regression approach, the relative contribution of each event to changes in hotel occupancy rates can be identified, both partially and simultaneously. The results of this analysis are expected to provide a clearer picture of the effectiveness of event organisation in boosting the performance of the hospitality sector, whilst also serving as a basis for formulating event development strategies that are more targeted and have a broader economic impact.

Table 5. The Effects of Event-Based Tourism on Hotel Occupancy and Tourism Economy

Variable	Coefficient	Prob.
Religious Event		
Haul Habib	0,293	0,024
Bakdhan Ning Solo	0,008	0,792
Ramadhan Light	1,722	0,445
Kampung Ramadhan	1,768	0,429
Arts and Culture Event		
Solo Keroncong Festival	0,005	0,000
Festival Payung Indonesia XIII	2,673	0,000
Solo Batik Carnival	0,279	0,000
Solo Menari	0,013	0,024
Solo Int. Performing Arts	2,576	0,001
Grebeg Sudiro	0,131	0,005
Solo Indonesia Culinary Festival	0,158	0,006
Kirab Satu Suro	0,007	0,096
Solo Heritage	0,086	0,149
Abhipraya Ageng Museum	0,009	0,151
Festival Jenang Solo	0,075	0,187
Gamelan Ethnic Music Festival 2025	0,044	0,416
Pengembangan Hadrah	1,727	0,525
Sports Event		
Solo Run Fest 2025	0,060	0,245

Source: Data processed, 2025

Table 5 reveal that the effects of tourism events on hotel occupancy in Surakarta vary substantially across event, including religious events, cultural and arts events, and sports events. The findings suggest that not all tourism events generate similar economic benefits for hospitality sector (Thommandru et al., 2023). Instead, the magnitude of their impact depends on event scale, visitor attraction, market reach, and the ability to encourage overnight stays.

Among all event categories, cultural and arts events emerge as the strongest drivers of hotel occupancy growth. In particular, the Festival Payung Indonesia XIII, Solo International Performing Arts (SIPA) and Solo Batik Carnival demonstrate the largest positive and statistically significant effects on hotel occupancy.

Festival Payung records the highest coefficient ($\beta = 2.673$), followed by SIPA ($\beta = 2.576$). These findings indicate that large-scale cultural events with strong visual appeal,

unique cultural identity, and national or international exposure are more effective in attracting tourists who require accommodation services (Plekhov & Levine, 2018; Rizzuti et al., 2026). This evidence supports the concept of event-led tourism development, which suggests that strategically designed cultural events can enhance destination attractiveness, extend tourists' length of stay, and generate economic benefits for the local hospitality industry (Iversen, 2026).

Several other cultural events, including the Solo Keroncong Festival, Solo Batik Carnival, Solo Menari, Grebeg Sudiro, and the Solo Indonesia Culinary Festival, also exhibit significant positive effects on hotel occupancy. This suggests that diverse forms of cultural expression, such as traditional music, performing arts, dance, culinary heritage, and annual festivals, play a strategic role in strengthening Surakarta's competitiveness as a cultural tourism destination. However, other cultural activities, such as Kirab Satu Suro, Solo Heritage, Abhipraya Ageng, Festival Jenang Solo, Gamelan Ethnic Music Festival, and Hadrah Development Programs, show positive but statistically insignificant effects. Although these events contribute to destination promotion, their relatively limited scale, shorter duration, or stronger orientation toward local audiences may reduce their ability to stimulate significant increases in hotel demand.

Regarding religious events, the findings indicate that Haul Habib is the only event that has a significant positive effect on hotel occupancy ($\beta = 0.293$; $p < 0.05$). This result implies that large-scale religious gatherings attracting participants from outside Surakarta are capable of generating measurable economic impacts through increased accommodation demand. In contrast, other religious events held during the Eid holiday period, including Bakdhan Ning Solo, Ramadan Light Festival, and Kampung Ramadan, show positive but statistically insignificant coefficients. This suggests that the increase in tourist arrivals and hotel occupancy during the Eid period is likely driven more by the broader holiday effect rather than the individual contribution of those events.

In the sports event category, Solo Run Fest 2025 exhibits a positive coefficient ($\beta = 0.060$) but does not have a statistically significant effect on hotel occupancy ($p > 0.05$). This finding suggests that, within the observed period, the scale and visitor profile of this sport tourism event were insufficient to generate a substantial increase in accommodation demand. It is possible that many participants were local residents or day visitors who did not require overnight stays.

CONCLUSION

This study provides empirical evidence that tourism demand and event-based tourism significantly influence hotel performance and tourism economic growth in Surakarta. The findings reveal that both international and domestic tourist arrivals positively affect hotel occupancy and tourism GRDP, with domestic tourists playing a more dominant role. Furthermore, the impact of tourism is heterogeneous across hotel categories, where four- and five-star hotels benefit the most, while the influence on lower-category hotels remains limited.

We confirms the existence of event heterogeneity, demonstrating that not all events generate equal economic benefits. Large-scale cultural events, such as the Indonesian Umbrella Festival, Solo International Performing Arts (SIPA), and Solo Batik Carnival, provide the strongest contribution to increasing hotel occupancy, whereas most religious and sports events have limited impacts. Moreover, the benefits of tourism events are unevenly distributed, with strategically located and highly competitive hotels capturing greater advantages.

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