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# Competitiveness of Three Beach Destinations in Bali: A MANOVA-Based Comparison

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**Abstract**

Despite Bali's millennia-long history of tourism development, understanding the competitiveness of its beach tourism destinations remains limited. Moreover, the island's relatively small size has led many beach destinations to be located in close proximity to one another, offering similar attractions, activities, and management practices, which may blur their differentiation. This study aims to compare the competitiveness of three closely located beach tourism destinations—Pandawa Beach, Melasti Beach, and Uluwatu Beach—to examine whether significant differences exist among them. It also investigates whether the influence of the indicators used to measure tourism competitiveness differs across these destinations. Adopting a quantitative approach, data were collected from 258 international tourists using a validated self-administered questionnaire. Descriptive statistics were used to profile respondents and to reveal their perceived competitiveness for each destination, while multivariate analysis of variance (MANOVA) was conducted to compare the effects of competitiveness indicators across the three destinations. The findings reveal significant differences in overall competitiveness among the three destinations, with Melasti Beach outperforming Pandawa and Uluwatu across most indicators. The results also indicate that certain competitiveness indicators exert varying effects on overall competitiveness across the destinations, while others show no significant influence. These findings suggest that even geographically proximate beach destinations can exhibit distinct competitiveness profiles. The study concludes with implications for destination management and offers recommendations for enhancing the competitiveness of beach tourism destinations in Bali. This study contributes to the limited empirical understanding of micro-level destination competitiveness in spatially concentrated tourism settings.

**Keywords**: beach destination competitiveness; beach tourism destination; tourism destination management; Bali; MANOVA

## INTRODUCTION

### Background

Competitiveness is increasingly understood as a fundamental influence on tourism destinations in the tourism world market (Goffi and Cucculelli, 2018), where maintaining competitiveness plays an important role in maintaining its survival in the current situation and saturated tourism market (Mior Shariffuddin et al., 2023). Striving for competitiveness will help tourism destinations keep their markets (Cronjé and du Plessis, 2020) and develop sustainably (Kumar and Dhir, 2020). However, there is also a consensus among experts that competitiveness is difficult to define and measure because of the various dimensions and factors that contribute to the competitiveness of a tourism destination (de la Peña et al., 2017; Salinas Fernández et al., 2020).

Given the importance of competitiveness, organisations and experts have put effort into measuring tourism competitiveness. One of the most popular measures available to measure tourism competitiveness is the Travel and Tourism Competitiveness (TTCI) developed by the World Economic Forum (WEF) (Martínez-González et al., 2021; Salinas Fernández et al., 2020) Even though it is highly criticized (Rodríguez-Díaz and Pulido-Fernández, 2019), TTCI remains the index used by countries to document their tourism competitiveness, even after it evolves into the Travel and Tourism Development Index (TTDI).

TTDI was introduced in 2022 as the direct evolution of TTCI (WEF, 2024). TTDI consisted of 102 indicators distributed among 17 pillars of competitiveness, which can be grouped into five dimensions: enabling environment, travel and tourism policy and enabling condition, infrastructure and services, travel and tourism resources and travel and tourism sustainability. TTDI was designed to compare and measure tourism competitiveness based on factors and policies contributing to tourism development's sustainability and resiliency. Based on the Travel and Tourism Development Index 2024, in 2023, Indonesia ranked 22nd out of 119 countries, up from 36th in 2019. This increase highlights the most significant improvement among Southeast Asian countries (ASEAN) and signifies Indonesia's position as one of the leaders in the international tourism industry.

There are two perspectives on competitiveness: the micro and the macro view of competitiveness. While the micro view focuses more on the competitiveness of an industry or a firm, the macro view emphasises the competitiveness on the national level (Hanafiah and Zulkifly, 2019). The measure of TTDI, however, is applied more to a single economy or country rather than a single tourism destination. Given that Indonesia is a vast archipelago consisting of thousands of islands, and understanding that not all islands, regions, provinces or villages in Indonesia are tourism destinations, the TTDI score can't represent the state of development of each tourism destination in Indonesia. Knowing that the current development of tourism in Indonesia is different, efforts to measure the competitiveness of a specific tourism destination in Indonesia are fundamental. However, the effort carried out by the authority or the scholar is still lacking. In this this light, the present study aimed to understand the competitiveness of Bali tourism.

Despite having been developed for more than 100 years, with the growing understanding of the importance of managing a destination's competitiveness (Mertha et al., 2025), literature concerning the competitiveness of Bali Tourism is also still lacking. Academic enquiry toward competitiveness seems less popular than other topics in Bali tourism research. A search using Publish or Perish on 1000 articles on the Google Scholar database of research from 1950 to 2025 using keywords such as "tourism", "competitiveness" and "Bali" produced a surprisingly small number of

six articles discussing Bali tourism's competitiveness, highlighting the needs to put more effort to research the topic. The six researches were carried out over eleven years, where 2014, the first research concerning the topic, was done in Bali, while 2025 is the last time the tourism competitiveness research was done in Bali. While indicating the under-researched condition of the topic, the search result also highlighted that it was only recently that the topic of tourism competitiveness started to gain academic attention.

A further systematic literature review using VOSviewer, as indicated in Figure 1, shows that research on Bali's tourism competitiveness mainly revolves around developing competitiveness, human resources competitiveness in relation to the ASEAN economic community, and alternative tourism.

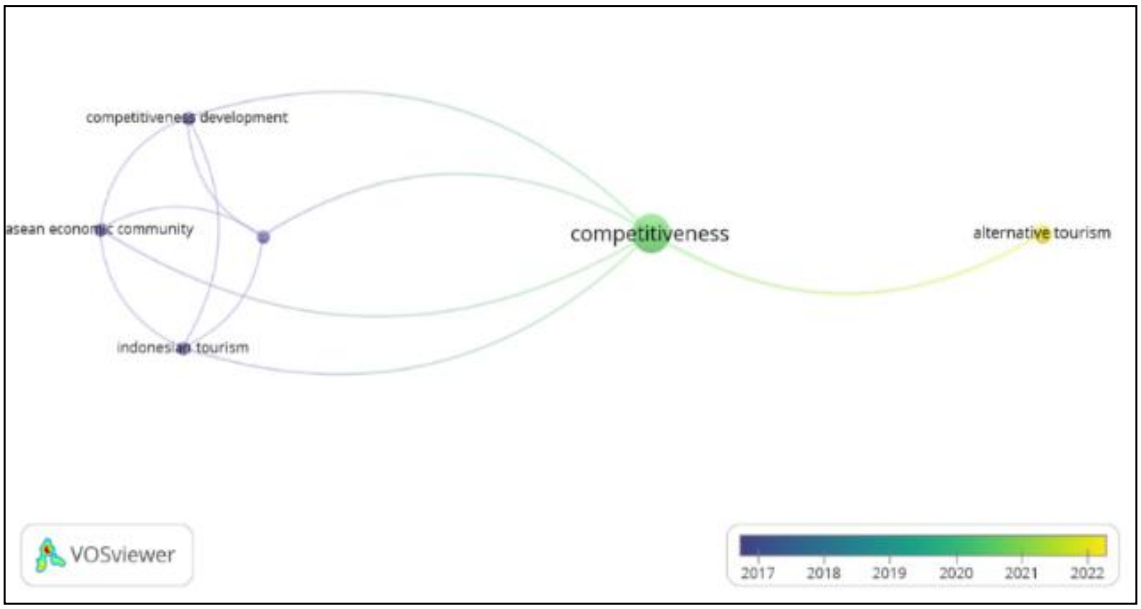


**Figure 1**. Result of VOSviewer's overlay visualisation of papers on Bali tourism competitiveness (Source: The Authors, 2025)

Wiranatha et al. (2024), for example, argued that improving the tourism destination's quality, service excellence, hospitality, reasonable pricing, and ease of access providing excellence service, improving hospitality, reasonable price and better accessibility is important to develop competitiveness in the rural tourism context in Bali. In the context of alternative tourism, especially ecotourism and spiritual tourism, it has been found that its competitiveness is influenced positively and significantly by spiritual tourism and comparative and competitive advantage. It is also argued that ecotourism positively influences alternative tourism, even though the effect is insignificant (Sucandrawati et al., 2022). Concerning the competitiveness of local fruits of Bali, such as banana and citrus, it has been found that how the fruit was harvested, packaged, stored and transported has negatively impacted the quality of the fruit, thus lowering its quality to be served for tourism purposes in Bali (Wirawan et al., 2014). In the accounting field, it is suggested that the competitiveness of Bali tourism will benefit from implementing an accounting-based tourism governance framework that emphasises the importance of transparency, cultural preservation, and sustainability (Putri et al., 2025). Another paper highlights the influence of core competencies, emotional quotient (EQ), local wisdom and capabilities toward developing human resource competitiveness in the hotel context

(Krisnawati et al., 2016). Aripin et al. (2021) on the other hand, maintained that the development of the environment, economy, culture, and religiosity is important to accelerate and enhance the competitiveness of Bali Tourism. The competitiveness of Bali's tourism destination, especially its beach destinations, remains unknown.

For a tourism destination, the availability of tourist attractions, be it in the form of nature, physiography, climate, culture, history, and events, are the core resources and attractions that are essential for the competitiveness of a tourism destination (Ritchie and Crouch, 2003). Tourist attraction is the main reason tourists visit a tourist destination that gives rise to the development of the tourism industry in a region (Cooper, 2016), and it is also believed to be the single most important reason for leisure tourism to a destination (Fletcher et al., 2018). The availability of tourist attractions is fundamental for an area to develop into a proper tourism destination. However, tourist attraction is not the only element of competitiveness. Other components of tourism destinations, such as accessibility, amenities, available packages, price, human resources and tourist organisation (Boniface et al., 2021; Buhalis, 2000; Cooper, 2016; Fletcher et al., 2018; UNWTO, 2007) are developed to ensure the success of the destination. Therefore, it is crucial to understand whether the tourism destination components in Bali contribute to the competitiveness of Bali tourism, that is considered as the premier of tourism destination in Indonesia (Semara et al., 2025).

Bali is known for its beautiful beaches. However, the small size of Bali Island makes some beach destinations located close to each other and relatively similar. Some examples are Pandawa Beach, Melasti Beach and Uluwatu, which are situated on a single tourist route. A Destination Management Organisation (DMO) professionally manages each of the three beaches. They offer similar products, leading to limited differentiation and a high substitutional relationship between the three beaches. It is interesting to learn whether each beach substitutes the other. It is fundamental to learn in which competitiveness indicator their position is strongest and in which indicator they are the weakest (Cimbaljević et al., 2023). Therefore, using the three beach tourism destinations as the case study, this article aimed to reveal whether their competitiveness is significantly different. This article also aimed to understand each competitiveness indicator's effect on the three destinations' overall competitiveness. This study will provide valuable insights for destination management organizations (DMOs) in understanding the competitiveness of their destinations and identifying strategies to sustain and enhance it.

## METHOD

This article is written based on a study aimed to compare the competitiveness of three popular beach destinations of Bali. The competitiveness of the beaches was measured using tourist experience as the dependent variable, while the three beach destinations served as the independent variables. Three well-known beach attractions in Badung Regency were chosen as the location of the study. The beaches are Pandawa, Melasti and Uluwatu. The three of them were chosen for their proximity and the relative similarity of the tourism products and activities offered to their visitors, making them a relevant and suitable location for the study. The fact that they are managed by a business entity within the customary village (*desa adat*) marked another similarity between the destinations.

Tourism competitiveness can be analysed quantitatively or qualitatively (Salinas Fernández et al., 2020). Even though more studies were conducted from the perspective of the supply side (Cronjé and du Plessis, 2020), it is essential to understand that competitiveness is best evaluated from the perspective of tourists because the tourists are the ones who experience and

perceive the indicators of competitiveness. Thus, regardless of the method used, the data should be collected at least from the visitor who experiences the competitiveness of a destination. In that light, this study utilised a quantitative method. The data for the study was collected using a self-administered, five-point Likert Scale questionnaire (Joshi and Pal, 2015; Likert, 1932; Nemoto and Beglar, 2014; Vagias, 2006).

The competitiveness of tourism destination is correlated with the quality of tourist experience (Cimbaljević et al., 2018; Kvasnová et al., 2019; Milicevic et al., 2020), hence, in this study, the tourist experiences are treated as the competitiveness indicators, just as in other research on tourism competitiveness (Aguiar-Barbosa et al., 2020). The literature review shows that one of the concepts suitable for understanding the tourist experience is the concept of destination attributes proposed by Echtner and Ritchie (2003) because of its ability to capture the vast array of experiences that may be perceived by a tourist when visiting a destination. Therefore, the questionnaire for the study was developed based on Echtner & Ritchie (2003). Before being used, the questionnaire was tested for validity and reliability using Item Analysis to ensure it could collect good-quality data. The results show that all corrected items' total correlation values are above the minimum threshold of 0,30, underscoring the validity of all items (Field, 2018). Moreover, the Cronbach's Alpha value of 0,936 which is well above the minimum value of 0,60, indicates a good reliability (Field, 2018; Kline, 2000).

The sample consisted of foreign tourists visiting Pandawa Beach, Melasti Beach and Uluwatu. Based on Hair Jr. et al. (2014), the same number of samples from each beach was used for the study to make the comparison equally. Since 86 samples were the lowest number of valid responses among the three locations, the first 86 valid samples from the other two locations were chosen as the number of samples to be analysed from each of the three beaches, resulting in 258 respondents for the study. Using the same sample size for the three beaches, the quality of the result will be appropriate.

Multivariate Analysis of Variance (MANOVA), which has been widely used in social and behavioural science (Finch, 2020), was used to analyse the data. The hypotheses of the study are:

$H_1$ : There are no significant differences in the competitiveness of the three beach destinations.

$H_2$ : All competitiveness indicators do not significantly and differently impact the competitiveness of the three beach destinations.

Descriptive Statistics Analysis was also carried out to explain the data. The analysis was done with the help of IBM SPSS software based on the guidelines provided by Field (2018) and Hair Jr. et al. (2014).

## RESULTS AND DISCUSSION

### The Profile of the Respondents

The study's sample characteristics are presented in Table 1. The data reveal that the age distributions of respondents from the three destinations are similar, with most respondents aged 26-40.

**Table 1**. The Profile of the Respondents

| Destinations | Market | Sex | Age |
|---|---|---|---|
| Pandawa | The USA (19.77%)<br>Brazil (8.14%)<br>The UK (8.14%) | Female (52.33%), Male (47.67%) | Most are between 26 and 40 (48.84%) |
| Melasti | The USA (17.44%)<br>Russian (16.30%)<br>Australian (11.63%) | Male (58.14%), Female (41.86%) | Most are between 26 and 40 years old (43.2%) |
| Uluwatu | Australia (18.6%)<br>India (16.28%)<br>France (10.47%) | Female (58.14%), Male (41.86%) | Most are between 26 and 40 years old (45.35%) |

Source: The authors (2025)

Respondents from Pandawa and Melasti are similar in that the majority of them are U.S. citizens. On the other hand, respondents from Pandawa and Uluwatu share the characteristic that the majority are female.

**Perceived Competitiveness of the Beach Destinations**

The descriptive statistics for respondents' perceptions of the competitiveness of the three beach destinations, based on each competitiveness indicator, are presented in Table 2.

**Table 2.** Mean difference of Perceived Competitiveness of Three Beaches Destination based on Competitiveness Indicators

| Indicators | Destination | Mean | Std. Deviation |
|---|---|---|---|
| Infrastructure | Pandawa Beach | 4.73 | 0.640 |
| | Melasti Beach | 4.38 | 0.617 |
| | Uluwatu | 3.77 | 0.877 |
| | Total | 4.29 | 0.822 |
| location | Pandawa Beach | 4.64 | 0.572 |
| | Melasti Beach | 4.50 | 0.715 |
| | Uluwatu | 3.87 | 1.060 |
| | Total | 4.34 | 0.873 |
| Staff competency | Pandawa Beach | 4.08 | 0.514 |
| | Melasti Beach | 4.23 | 0.730 |
| | Uluwatu | 4.06 | 0.938 |
| | Total | 4.12 | 0.749 |
| Friendly service | Pandawa Beach | 4.15 | 0.497 |
| | Melasti Beach | 4.36 | 0.649 |
| | Uluwatu | 4.35 | 0.878 |
| | Total | 4.29 | 0.697 |
| Business availability | Pandawa Beach | 3.62 | 0.814 |
| | Melasti Beach | 4.26 | 0.843 |
| | Uluwatu | 3.88 | 0.860 |
| | Total | 3.92 | 0.876 |

| Indicators | Destination | Mean | Std. Deviation |
|---|---|---|---|
| Beautiful view | Pandawa Beach | 4.81 | 0.520 |
| | Melasti Beach | 4.79 | 0.463 |
| | Uluwatu | 4.77 | 0.588 |
| | Total | 4.79 | 0.524 |
| Cultural TA | Pandawa Beach | 4.59 | 0.803 |
| | Melasti Beach | 4.27 | 0.900 |
| | Uluwatu | 4.49 | 0.715 |
| | Total | 4.45 | 0.818 |
| Beach activity | Pandawa Beach | 4.59 | 0.709 |
| | Melasti Beach | 4.10 | 0.908 |
| | Uluwatu | 4.08 | 0.897 |
| | Total | 4.26 | 0.872 |
| Special event | Pandawa Beach | 3.98 | 0.811 |
| | Melasti Beach | 4.21 | 0.842 |
| | Uluwatu | 4.20 | 0.879 |
| | Total | 4.13 | 0.848 |
| Entertainment facilities | Pandawa Beach | 3.56 | 0.928 |
| | Melasti Beach | 4.21 | 0.753 |
| | Uluwatu | 4.23 | 0.850 |
| | Total | 4.00 | 0.900 |
| Tourist facilities | Pandawa Beach | 4.05 | 0.529 |
| | Melasti Beach | 4.27 | 0.803 |
| | Uluwatu | 4.17 | 0.829 |
| | Total | 4.16 | 0.736 |
| Well managed | Pandawa Beach | 3.63 | 0.895 |
| | Melasti Beach | 4.29 | 0.701 |
| | Uluwatu | 4.01 | 0.833 |
| | Total | 3.98 | 0.855 |
| Widely promoted | Pandawa Beach | 2.92 | 1.180 |
| | Melasti Beach | 4.20 | 0.918 |
| | Uluwatu | 3.81 | 0.914 |
| | Total | 3.64 | 1.142 |
| Quality experiences | Pandawa Beach | 4.16 | 0.611 |
| | Melasti Beach | 4.51 | 0.548 |
| | Uluwatu | 4.22 | 0.913 |
| | Total | 4.30 | 0.722 |
| Accessible information | Pandawa Beach | 4.66 | 0.761 |
| | Melasti Beach | 4.26 | 0.800 |
| | Uluwatu | 4.01 | 0.874 |
| | Total | 4.31 | 0.853 |
| Good service quality | Pandawa Beach | 3.65 | 0.823 |
| | Melasti Beach | 4.33 | 0.758 |
| | Uluwatu | 4.31 | 0.911 |
| | Total | 4.10 | 0.888 |

| Indicators | Destination | Mean | Std. Deviation |
|---|---|---|---|
| Good visitor management | Pandawa Beach | 3,69 | 0.830 |
| | Melasti Beach | 4.30 | 0.813 |
| | Uluwatu | 4.12 | 0.832 |
| | Total | 4.03 | 0.861 |
| Possess waste management system | Pandawa Beach | 3.08 | 1.304 |
| | Melasti Beach | 3.92 | 0.910 |
| | Uluwatu | 3.74 | 1.108 |
| | Total | 3.58 | 1.172 |
| Availability of K3 System | Pandawa Beach | 3.52 | 0.808 |
| | Melasti Beach | 4.08 | 0.800 |
| | Uluwatu | 3.64 | 0.993 |
| | Total | 3.75 | 0.901 |
| Well known destination | Pandawa Beach | 4.08 | 0.514 |
| | Melasti Beach | 4.29 | 0.765 |
| | Uluwatu | 4.10 | 0.933 |
| | Total | 4.16 | 0.760 |
| Well planned development | Pandawa Beach | 3.67 | 0.913 |
| | Melasti Beach | 4.26 | 0.785 |
| | Uluwatu | 4.06 | 0.912 |
| | Total | 4.00 | 0.902 |
| Strategic location | Pandawa Beach | 4.64 | 0.734 |
| | Melasti Beach | 4.37 | 0.798 |
| | Uluwatu | 4.23 | 0.978 |
| | Total | 4.41 | 0.857 |
| Safety & Security | Pandawa Beach | 4.57 | 0.712 |
| | Melasti Beach | 4.09 | 0.835 |
| | Uluwatu | 3.60 | 1.055 |
| | Total | 4.09 | 0.960 |
| Good price | Pandawa Beach | 2.99 | 1.203 |
| | Melasti Beach | 4.22 | 0.742 |
| | Uluwatu | 4.00 | 0.907 |
| | Total | 3.74 | 1.105 |
| Good capacity management | Pandawa Beach | 3.64 | 0.839 |
| | Melasti Beach | 4.21 | 0.769 |
| | Uluwatu | 3.94 | 1.067 |
| | Total | 3.93 | 0.927 |
| Popular among tourist | Pandawa Beach | 4.72 | 0.567 |
| | Melasti Beach | 4.55 | 0.680 |
| | Uluwatu | 4.44 | 0.835 |
| | Total | 4.57 | 0.709 |

Source: The authors (2025)

The name of the beach highlighted in grey indicates the most competitive destination for each competitiveness indicator as perceived by the respondents. Based on the table, Pandawa Beach is the most competitive destination in terms of its infrastructure, accessible location, accessible information, beautiful view, cultural TA, beach activity, strategic location, safety and security, and popularity. Melasti Beach is the most competitive for its quality experiences, staff competency, service quality, friendly service, good visitor management, business availability, availability of waste management system, availability of K3 system, well-known destination,

well-planned development, special event, tourist facilities, reasonable price, well-managed, promotion and good capacity management. On the other hand, Uluwatu only leads in terms of entertainment facilities. Despites differences in the mean values of the three beach destinations based on competitiveness indicators are observable, the significant of the difference can not be concluded before the MANOVA result has been obtained.

**Assumptions Testing for MANOVA**

Some assumptions need to be met before a MANOVA can be carried out. Those assumptions are Normality, Equality of Variance–Covariance Matrices and Absence of Collinearity (Hair Jr. et al., 2014). Given that the assumption of normality was not satisfactorily met, with the Shapiro-Wilk test resulting in Significant values (Sig.) of less than 0.05, which is the minimum threshold for the data to be assumed to be normally distributed. The violation of this assumption resulted in difficulty in implementing the Box's M test, thus resulting in difficulty in meeting the Equality of Variance–Covariance Matrices Assumption due to the Sig. Values that are below the minimum requirement of 0.05.

However, the violation of the assumption of Normality and Equality of Variance-covariance matrices will have a minimal impact if the group are of equal size and if the sample size is greater than 20 observations per group (Hair Jr. et al., 2014, pp. 685). To cope with this violation, the sample size of these three groups has been made equal, each consisting of 86 samples, thus greater than the 20 samples suggested by Hair Jr. et al. (2014). Therefore, the issues with Normality and Equality of Variance-covariance matrices have a minimal impact on the data, hence the use of MANOVA can be justified.

The Pearson correlation coefficients among the dependent variables do not indicate the presence of multicollinearity. None of the correlation values exceed 0.80, and all remain below the commonly accepted threshold of 0.90, above which multicollinearity may be a concern. Therefore, the assumption of no multicollinearity is satisfied, and the use of MANOVA is considered appropriate.

**Result of Multivariate Test of MANOVA**

The results of the multivariate test for this study are presented in Table 3. As shown in the table, the Sig. values for Pillai's Trace, Wilks' Lambda, Hotelling's Trace and Roy's Largest Root are lower than 0.05 as the upper threshold for the result to be deemed significant. Based on the results, all competitiveness indicators influence the three beaches significantly. It can be concluded that the competitiveness of the three beaches is significantly different. Therefore, the first hypothesis of this study is rejected.

**Table 3**. Result of Multivariate Test

| Effect | | Value | F | Hypo df | Error df | Sig. |
|---|---|---|---|---|---|---|
| Beach | Pillai's Trace | 0.788 | 5.771 | 52.0 | 462.0 | 0.000 |
| | Wilks' Lambda | 0.350 | 6.108[b] | 52.0 | 460.0 | 0.000 |
| | Hotelling's Trace | 1.465 | 6.451 | 52.0 | 458.0 | 0.000 |
| | Roy's Largest Root | 1.111 | 9.874[c] | 26.0 | 231.0 | 0.000 |

a. Design: Intercept + Beach Destination

b. Exact statistic

c. The statistic is an upper bound on F that yields a lower bound on the significance level.

Source: The authors (2025)

**Result of Test Between Subjects Effects (Univariate)**

To understand the influence of each competitiveness indicator on the three beach destinations, a univariate test has been carried out.

**Table 4**. Result of Between-Subjects Effects Test (Univariate)

| Dependent Variables | Type III Sum of Squares | df | Mean Square | F | Sig. |
|---|---|---|---|---|---|
| Infrastructure | 41.078 | 2 | 20.539 | 39.517 | 0.000 |
| Good price | 74.287 | 2 | 37.143 | 39.499 | 0.000 |
| Widely promoted | 74.101 | 2 | 37.050 | 36.186 | 0.000 |
| Safety & Security | 40.054 | 2 | 20.027 | 25.937 | 0.000 |
| Easily accessible | 28.744 | 2 | 14.372 | 21.956 | 0.000 |
| Good service quality | 25.636 | 2 | 12.818 | 18.472 | 0.000 |
| Entertainment facilities | 25.209 | 2 | 12.605 | 17.584 | 0.000 |
| Well managed | 19.047 | 2 | 9.523 | 14.385 | 0.000 |
| Accessible information | 18.612 | 2 | 9.306 | 14.077 | 0.000 |
| Possesses waste management | 33.558 | 2 | 16.779 | 13.403 | 0.000 |
| Good visitor management | 17.186 | 2 | 8.593 | 12.630 | 0.000 |
| Business availability | 17.744 | 2 | 8.872 | 12.601 | 0.000 |
| Beach activity | 14.357 | 2 | 7.178 | 10.099 | 0.000 |
| Well-planned development | 15.031 | 2 | 7.516 | 9.880 | 0.000 |
| Availability of K3 System | 14.915 | 2 | 7.457 | 9.817 | 0.000 |
| Good capacity management | 13.977 | 2 | 6.988 | 8.619 | 0.000 |
| Quality experiences | 6.008 | 2 | 3.004 | 5.984 | 0.003 |
| Strategic tourist route | 7.357 | 2 | 3.678 | 5.174 | 0.006 |
| Cultural TA | 4.752 | 2 | 2.376 | 3.626 | 0.028 |
| Popular among tourist | 3.419 | 2 | 1.709 | 3.464 | 0.033 |
| Friendly service | 2.380 | 2 | 1.190 | 2.479 | 0.086 |
| Special event | 2.953 | 2 | 1.477 | 2.071 | 0.128 |
| Well known destination | 2.264 | 2 | 1.132 | 1.974 | 0.141 |
| Tourist facilities | 2.116 | 2 | 1.058 | 1.969 | 0.142 |
| Staff competency | 1.543 | 2 | 0.771 | 1.380 | 0.253 |
| Beautiful view | 0.093 | 2 | 0,047 | 0.168 | 0.845 |

Source: The authors (2025)

The Sig. values in Table 4 show significant differences between competitiveness indicators for each beach. The indicators with significant differences are indicated by the Sig. values lower than 0.05. It can be concluded that the competitiveness of the three beaches is different for the indicators of infrastructure, price,

promotion, safety and security, easily accessible location, service quality, entertainment facilities, management, information accessibility, availability of waste management, visitor management, business availability, beach activity, development, K3 system, capacity management, experience, strategic tourist route, availability of cultural tourist attraction and its popularity. Table 2 also shows six competitiveness indicators (highlighted in grey) with Sig. values above 0.05, indicating their insignificant differences between beaches. Therefore, the second hypothesis of this study is rejected.

**Post-Hoc Analysis**

To explore the mean differences in each dependent variable that contributed to its significant or insignificant effect on the three beach destinations, a post-hoc analysis has been carried out.

**Table 5**. Results of Post-Hoc Analysis

| Dependent variables | Dstn (I) | Dstn (J) | Mean difference (I-J) | Sig. | Dstn. rank |
|---|---|---|---|---|---|
| Infrastructure | Pndw | Mlst | 0.35 | 0.01 | 1. Pndw |
| | Pndw | Ulwt | 0.97 | 0.00 | 2. Mlst |
| | Mlst | Ulwt | 0.62 | 0.00 | 3. Ulwt |
| Strategic tourist route | Pndw | Mlst | 0.14 | 0.78 | 1. Pndw |
| | Pndw | Ulwt | 0.77 | 0.00 | 2. Mlst |
| | Mlst | Ulwt | 0.63 | 0.00 | 3. Ulwt |
| Business availability | Pndw | Mlst | -0.64 | 0.00 | 1. Mlst. |
| | Pndw | Ulwt | -0.27 | 0.11 | 2. Ulwt |
| | Mlst | Ulwt | 0.37 | 0.01 | 3. Pndw |
| Cultural TA | Pndw | Mlst | 0.33 | 0.03 | 1. Pndw |
| | Pndw | Ulwt | 0.10 | 1.00 | 2. Ulwt |
| | Mlst | Ulwt | -0.22 | 0.22 | 3. Mlst |
| Beach activity | Pndw | Mlst | 0.49 | 0.00 | 1. Pndw |
| | Pndw | Ulwt | 0.51 | 0.00 | 2. Mlst |
| | Mlst | Ulwt | 0.02 | 1.00 | 3. Ulwt |
| Entertainment facilities | Pndw | Mlst | -0.65 | 0.00 | 1. Ulwt |
| | Pndw | Ulwt | -0.67 | 0.00 | 2. Mlst |
| | Mlst | Ulwt | -0.02 | 1.00 | 3. Pndw |
| Well managed | Pndw | Mlst | -0.66 | 0.00 | 1. Mlst |
| | Pndw | Ulwt | -0.38 | 0.01 | 2. Ulwt |
| | Mlst | Ulwt | 0.28 | 0.08 | 3. Pndw |
| Widely promoted | Pndw | Mlst | -1.28 | 0.00 | 1. Mlst |
| | Pndw | Ulwt | -0.90 | 0.00 | 2. Ulwt |
| | Mlst | Ulwt | 0.38 | 0.04 | 3. Pndw |
| Quality experiences | Pndw | Mlst | -0.35 | 0.00 | 1. Mlst |
| | Pndw | Ulwt | -0.06 | 1.00 | 2. Ulwt |
| | Mlst | Ulwt | 0.29 | 0.02 | 3. Pndw |
| Accessible informations | Pndw | Mlst | 0.41 | 0.00 | 1. Pndw |
| | Pndw | Ulwt | 0.65 | 0.00 | 2. Mlst |
| | Mlst | Ulwt | 0.24 | 0.15 | 3. Ulwt |
| Good service quality | Pndw | Mlst | -0.67 | 0.00 | 1. Mlst |
| | Pndw | Ulwt | -0.66 | 0.00 | 2. Ulwt |

| Dependent variables | Dstn (I) | Dstn (J) | Mean difference (I-J) | Sig. | Dstn. rank |
|---|---|---|---|---|---|
| | Mlst | Ulwt | 0.01 | 1.00 | 3. Pndw |
| Good visitor management | Pndw | Mlst | -0.62 | 0.00 | 1. Mlst |
| | Pndw | Ulwt | -0.43 | 0.00 | 2. Ulwt |
| | Mlst | Ulwt | 0.19 | 0.42 | 3. Pndw |
| Possess waste management system | Pndw | Mlst | -0.84 | 0.00 | 1. Mlst |
| | Pndw | Ulwt | -0.66 | 0.00 | 2. Ulwt |
| | Mlst | Ulwt | 0.17 | 0.92 | 3. Pndw |
| Availability of K3 System | Pndw | Mlst | -0.56 | 0.00 | 1. Mlst |
| | Pndw | Ulwt | -0.12 | 1.00 | 2. Ulwt |
| | Mlst | Ulwt | 0.44 | 0.00 | 3. Pndw |
| Well planned development | Pndw | Mlst | -0.58 | 0.00 | 1. Mlst |
| | Pndw | Ulwt | -0.38 | 0.01 | 2. Ulwt |
| | Mlst | Ulwt | 0.20 | 0.42 | 3. Pndw |
| Easily accessible | Pndw | Mlst | 0.27 | 0.12 | 1. Pndw |
| | Pndw | Ulwt | 0.41 | 0.01 | 2. Mlst |
| | Mlst | Ulwt | 0.14 | 0.84 | 3. Ulwt |
| Safety Security | Pndw | Mlst | 0.48 | 0.00 | 1. Pndw |
| | Pndw | Ulwt | 0.97 | 0.00 | 2. Mlst |
| | Mlst | Ulwt | 0.49 | 0.00 | 3. Ulwt |
| Good price | Pndw | Mlst | -1.23 | 0.00 | 1. Mlst |
| | Pndw | Ulwt | -1.01 | 0.00 | 2. Ulwt |
| | Mlst | Ulwt | 0.22 | 0.41 | 3. Pndw |
| Good capacity management | Pndw | Mlst | 0.57 | 0.00 | 1. Mlst |
| | Pndw | Ulwt | -0.30 | 0.09 | 2. Ulwt |
| | Mlst | Ulwt | 0.27 | 0.16 | 3. Pndw |
| Popular among tourist | Pndw | Mlst | 0,17 | 0.31 | 1. Pndw |
| | Pndw | Ulwt | 0.28 | 0.03 | 2. Mlst |
| | Mlst | Ulwt | 0,10 | 0.99 | 3. Ulwt |

Note: Dstn. = Destination, Pndw = Pandawa, Mlst = Melasti, Ulwt = Uluwatu
Source: The authors (2025)

Post-hoc analyses using the Bonferroni correction were conducted only for dependent variables (20 variables) that showed significant effects of beach destinations. Although several pairwise comparisons did not reach statistical significance, the mean scores suggest that Melasti ranked highest in 11 competitiveness indicators, followed by Pandawa, which ranked highest in 8 indicators, and Uluwatu, which ranked highest in only 1 indicator. These findings suggest an overall pattern of competitiveness across destinations. However, because several pairwise differences were not statistically significant, the apparent ranking of destinations should not be interpreted as definitive.

## Discussion

This study found that, overall, the competitiveness of Pandawa Beach, Melasti Beach, and Uluwatu is significantly different, highlighting the different performances of each destination across the competitiveness indicators. Of the 26 competitiveness indicators used to measure competitiveness, 20 indicators significantly influence each beach destination's overall

competitiveness. At the same time, the other six have insignificantly different effects on the overall competitiveness of each beach.

Infrastructure, price, promotion, safety security, easily accessible location, service quality, entertainment facilities, management, information accessibility, provision of waste management, visitor management, business availability, beach tourism activity, development, provision of K3 system, capacity management, tourist experience, strategic location, availability of cultural tourist attraction and its popularity are the twenty competitiveness indicator with significantly different effect toward the competitiveness of each beath tourism destination. The significantly differing effects of the 20 indicators indicate different management and strategies implemented by the DMOs of the three beaches, as also evidenced in a study conducted by Ebrahim & Ganguli (2019).

On the other hand, friendly service, special events, well-known destinations, tourist facilities, staff competence, and beautiful views indicate that the three beaches performed similarly, raising concerns about direct competition given the complementarity of the three destinations. Pandawa Beach, Melasti Beach, and Uluwatu are close by. Even though Uluwatu was developed long before the relatively new Pandawa and Melasti Beaches, the management of the three beaches is at a similar level, resulting in very little differentiation in terms of promotion, tourist products, facilities, and staff competencies. Thus, the three beach tourism destinations performed similarly regarding the six competitiveness indicators.

The post-hoc analysis indicated that several pairwise mean values comparisons did not reach statistical significance, suggesting that differences between specific beach destinations were not consistently large across all competitiveness indicators. Nevertheless, an examination of mean scores revealed a general pattern in which Melasti ranked highest in 11 indicators, followed by Pandawa, which ranked highest in 8 indicators, and Uluwatu, which ranked highest in only 1 indicator. This pattern suggests that Melasti tended to perform more favourably across multiple aspects of competitiveness. However, as several pairwise differences were not statistically significant, the apparent ranking of destinations should not be interpreted as conclusive.

## CONCLUSION

This article aimed to examine whether three beach tourism destinations—Pandawa Beach, Melasti Beach, and Uluwatu Beach—differ significantly in terms of their competitiveness, and whether the effects of competitiveness indicators vary across these destinations. The findings demonstrate that even geographically proximate beach tourism destinations exhibit significant differences in their competitiveness. This challenges the common assumption that spatial proximity and similar resource endowments necessarily lead to homogeneous competitiveness profiles. Instead, the results suggest that competitiveness is shaped not only by physical attributes but also by how destinations strategically leverage their resources and capabilities. Furthermore, the results indicate that while certain competitiveness indicators have a significant influence on overall competitiveness, others do not demonstrate differential effects across the three destinations.

## IMPLICATIONS

Based on the results, some managerial implications are formulated for the Destination Management Organisation (DMO) of the three beach destinations, as follows:

1. First, despite being the oldest among the three destinations, Uluwatu must continuously maintain and enhance its competitiveness. Although these destinations may not explicitly position

themselves as direct competitors, their geographical proximity and similar offerings inevitably place them in competition. Competitiveness, defined as the ability to compete effectively with rivals (Kumar and Dhir, 2020), requires the establishment of a clear competitive advantage. In this regard, Uluwatu benefits from a strong cultural tourist attraction in the form of Uluwatu Temple, which is complemented by scenic ocean views and the presence of wildlife. Tourist attractions constitute a key source of destination competitiveness (Cronjé and du Plessis, 2020), as they represent core elements sought, evaluated, and compared by visitors (Goffi & Cucculelli, 2018; Manrai et al., 2018). Although not the sole determinant of competitiveness (Salinas Fernández et al., 2020), such attractions can be strategically leveraged to strengthen Uluwatu's competitive position, particularly given the relatively limited cultural differentiation of Melasti Beach and Pandawa Beach.

2. Second, Pandawa Beach faces increasing competitive pressure, particularly from Melasti Beach. Despite being more established, Pandawa shares similar physical characteristics with Melasti, thereby intensifying direct competition. In this context, human resources emerge as a critical determinant of competitiveness. Prior research highlights the role of human capital in enhancing a destination's ability to compete (Cronjé and du Plessis, 2020; Della Corte et al., 2019; Mior Shariffuddin et al., 2023; Moradi et al., 2022). Accordingly, improving the ability to deliver high-quality service (Hossain and Islam, 2019) is essential for strengthening Pandawa's competitive position.
3. Third, the diversification of tourist activities based on existing natural and cultural resources represents an additional strategy for enhancing the competitiveness of Pandawa Beach. By expanding and varying its activity offerings, Pandawa can develop a more distinctive tourism profile and reduce direct comparability with competing destinations, particularly Melasti Beach.

## AI USAGE DISCLOSURE

To increase the readability, ChatGPT was used to edit and refine the wording of the manuscript. All outputs were reviewed and verified by the authors, and the author take full responsibility for the accuracy, integrity, and originality of the content.

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