

Scenario for Tourism Development for Community Welfare in the Alas Kedaton Tourist Attraction, Kukuh Village, Marga District, Tabanan-Bali

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Abstract: In the midst of the global COVID-19 pandemic, Bali's tourism industry has experienced a drastic contraction. The COVID-19 pandemic has had an impact on all industries, including the tourism industry. In the new normal era, many tourist destinations in Bali have quickly recovered, but this is not the case for tourist destinations in Alas Kedaton. The Alas Kedaton tourist attraction area, which is part of the 'golden triangle' region, has not yet been able to recover to its former state, which will have an impact on the well-being of the community. The Alas Kedaton Tourist Attraction Area, which is part of the 'golden triangle' area, has not yet been able to recover as before, which will have an impact on the welfare of the community. The purpose of this study is to examine the influence of the penta-helix role and tourism development performance on community welfare and to determine priority scenarios for tourism development in the Alas Kedaton Tourist Attraction Area. In this study, 148 samples were collected from 12 traditional banjars in Kukuh Village through focus group discussions. The data used were perception data and existing data, so the analysis methods used in this study were quantitative approaches in the form of descriptive analysis, structure equation modelling, and Smic-prob prospective analysis. This study found that penta-helix collaboration in tourism development can create tourism development performance and community welfare. The next finding identified five main priority scenarios: (1) Strengthening Digital Promotion and Destination Branding, (2) Improving the Quality of Tourism Services and Facilities, (3) Developing Community-Based Tourism Products, (4) Diversifying Attractions, and (5) Strengthening Cultural Values and penta-helix collaboration for tourism development as a policy framework for tourism development to improve community well-being. It is therefore important for internal stakeholders to pay attention to and develop penta-helix collaboration as an effort to accelerate the recovery of Alas Kedaton's tourist appeal to realize community welfare.

Keywords: *Penta-helix, Stakeholders, Tourism, Welfare*

1. Introduction

The welfare of society is the sum of the choices available to society and the freedom to choose among those choices. Well-being will be maximized when people can read, eat, and exercise their right to vote (TUN, 2019). Tourism, in its role as a driver of global economic growth, has an interest in improving the quality of life for people worldwide, including in poor countries (Adams, 2022). Tourism is beneficial in terms of foreign exchange earnings, economic growth, job creation, and poverty alleviation (Ayu Rustini et al., 2022). Research conducted by (Walker et al., 2021) states that the most important objective of tourism development is the economic and social development of tourist areas (Aida et al., 2024). Tourist villages play an important role in the rural economy of developed countries. The positive effects of tourism include increased income, employment, and new economic resources for local communities; helping to reduce social

imbalances; providing job opportunities; maintaining regional population and high diversity coefficients; reviving local culture; enhancing national pride and self-confidence; and preserving natural and cultural resources (Wilson & Wilson, 2021).

The province of Bali is one of the barometers of national tourism, defined as a tourist destination in Indonesia. As a tourist destination, the province of Bali places the tourism sector as the main sector that is expected to boost economic growth, but the COVID-19 pandemic has disrupted the tourism sector's performance targets (Sanjaya, 2023). In 2020, the number of domestic and foreign tourist visits declined dramatically.

In 2020, the number of domestic tourist visits recorded a contraction of minus 56.41 percent, while in 2021 it was minus 6.41 percent. In 2020, the number of international tourists visiting Bali was recorded at 1,069,473 people, and in 2021, it was recorded at 51 people, representing a contraction of minus 99 percent. In 2022, both international and domestic tourist visits saw an increase. The same trend continued in 2023, with a 144.61% increase in the number of international tourists and a 22.67% increase in the number of domestic tourists (Badan Pusat Statistik, 2024).

Kukuh Village is a village designated as a tourist village. Before the pandemic, tourism in Kukuh Village with its Alas Kedaton Tourist Attraction had been able to improve the welfare of the local community. The proceeds from tourism were used for religious ceremonies at the 58 temples in the Kukuh Village area, providing facilities and infrastructure for temple custodians in the Kukuh Village area, supporting elderly individuals who are no longer able to work, and providing food and healthcare for monkeys in the Alas Kedaton Forest. Before the pandemic, the community in Kukuh Village was considered prosperous, with very low unemployment and poverty rates (Sanjaya et al., 2019).

The COVID-19 pandemic has resulted in the temporary closure of Kukuh Village, leading to a decline in the number of visitors to the village. This has had a direct impact on the economy of the community, which relies on tourism activities, resulting in a decrease in the number of working hours for the community, particularly those who operate food and beverage stalls or sell souvenirs. This has led to a decline in the income earned by the community, as they are forced to close their stalls earlier due to the lack of visitors.

When viewed from a strategic perspective, Alas Kedaton is in a prime location. It is situated between the tourist attractions of Ulun Danu Beratan, Bedugul Botanical Garden, and Tanah Lot. The number of tourists visiting Ulun Danu Beratan, Bedugul Botanical Garden, and Tanah Lot is significantly higher compared to the number of tourists visiting Alas Kedaton. As seen in the 2023 tourist visitation comparison, domestic tourist visits to Ulun Danu Beratan accounted for 16.28 per cent; Bedugul Botanical Garden 22.70 per cent; Tanah Lot 60.52 per cent; and Alas Kedaton 0.50 per cent. Meanwhile, for international tourists, the figures are as follows: Ulun Danu Beratan 25.42 percent; Bedugul Botanical Garden 2.18 percent; Tanah Lot 70.32 percent; and Alas Kedaton 2.08 percent (Badan Pusat Statistik, 2024). This disparity in visitor numbers can indicate that it has an

impact on the level of welfare disparity among the community. The research questions in this study are: First, what is the influence of the role of the government, the private sector, the community, academics, and the media, as well as the performance of tourism development, on the welfare of the community in Alas Kedaton, Tabanan Regency? And second, what are the potential scenarios for tourism development in the Alas Kedaton Tourism Attraction, Kukuh Tourism Village, Tabanan Regency? Studies on tourism development involving all stakeholders are crucial for improving community welfare. Therefore, this research aims to analyze the influence of stakeholder roles on tourism development and formulate potential policy scenarios. This study is expected to serve as a reference for stakeholders in formulating development plans and regulations related to tourism for community welfare, particularly in Kukuh Tourism Village, Tabanan Regency.

2. Research Method

This type of research is quantitative research because the data in this study is quantitative data that the researcher obtained by collecting it through the distribution of questionnaires or research instruments to 148 heads of families who are indigenous people in Kukuh Marga Tabanan Village. In this study, the sampling technique used was non-probability sampling with purposive sampling technique. Data collection techniques include document analysis, questionnaires, observation, and interviews. The data obtained in this study were quantified so that they could be analysed quantitatively and subsequently interpreted. This study was conducted in Kukuh Tourism Village, Marga District, Tabanan Regency, Bali, with the aim of examining the role of stakeholders and designing tourism development strategies that take uncertainty into account. The researcher employed two primary approaches: a survey targeting a sample of respondents and a focused group discussion involving 20 key stakeholders related to tourism development in Kukuh Tourism Village, particularly the Alas Kedaton Tourism Destination. The results of both methods were used to inform tourism development using SEM PLS and SMICPROB-Expert, which are tools for estimating the probability of various scenarios to identify the likelihood of activities or events occurring (Fauzi, 2019). This method calculates composite scores for various scenarios, assessing whether each activity can be realized.

3. Results and Discussions

Results of SEM PLS Analysis. This study uses a two-stage approach to measure the model before it is used for hypothesis testing, with the aim of verifying the validity and reliability of a study. First, convergent validity is analyzed, followed by discriminant validity. Convergent Validity. The outer model test was conducted to ensure that the research indicators were suitable for use in measuring the research variables. To determine whether a model was valid as a basis for research, certain criteria had to be met, namely: (1) all indicator loadings had to be above 0.5 and

(2) Composite Reliability (CR) had to be above 0.8, and (3) the Average Variance Extracted (AVE) for each construct must exceed 0.5.

The analysis results show that the outer loadings have values above 0.5, ranging from 0.517 to 0.958, which are within the recommended range. Furthermore, the Composite Reliability (CR) values range from 0.729 to 0.937, all above 0.7, meaning that all constructs formed have good consistency as a research model. Thirdly, the Average Variance Extracted (AVE) values are all above 0.5, ranging from 0.562 to 0.842, so it can be concluded that the research model in this study has good validity.

Discriminant Validity. To evaluate discriminant validity, a model must have cross loadings for indicators on its construct that are greater than those on other constructs. The results of cross loadings of indicators on the constructs of government role (X_1), private sector role (X_2), community role (X_3), academic role (X_4), media role (X_5), tourism development performance (Y_1) and community welfare (Y_2)

The analysis results indicate that discriminant validity is met, as the cross-loadings are well fulfilled, with the indicators having higher cross-loadings on their respective constructs compared to other constructs. The loading factor value of $X_{1.1}$ on the government role construct is 0.958, which is higher than the loading factor value of $X_{1.1}$ on other constructs, namely: $X_{1.1}$ on the private sector role is 0.476; $X_{1.1}$ on the community role is 0.445; $X_{1.1}$ loading factor for the role of academics is 0.477; $X_{1.1}$ loading factor for the role of the media is 0.433; for tourism development performance is 0.416 and for community welfare is 0.327.

Inner Model Test. The structural model focuses on the hypothesized correlations or paths between latent variables. Coefficient of Determination (R^2). The coefficient of determination of the model is calculated using all the coefficients of determination (R^2) in the model. The R^2 value for the tourism development performance variable is 0.604. This value indicates that 60.4 per cent of the variation in tourism development performance is explained by the roles of the government, the private sector, the community, academia, and the media, while the remainder is explained by other variables. The R^2 value for the community welfare variable is 0.700. This value indicates that 70.0% of the variation in community welfare is explained by the roles of the government, private sector, community, academia, and media, as well as tourism development performance, while the remaining variation is explained by other variables. Hair et al. (2014) state that, in general, the coefficient of determination is considered high if it is 0.20 or higher, while in this model, the coefficient of determination is 0.652 (higher than 0.20).

The Influence of Penta helix and Tourism Development Performance on Community Welfare

Discussion. This study has one hypothesis, which states that the role of the government, the role of the private sector, the role of the community, the role of academics, the role of the

media, and the performance of tourism development have a positive effect on the welfare of the community in the Alas Kedaton Tourist Attraction, which is closely related to the test of six path coefficients on community welfare. The results of the calculation show that the path coefficient of the role of the government ($b=0.476$; $p=0.000$), the private sector ($b=0.209$; $p=0.032$), the community ($b=0.739$; $p=0.000$), academia ($b=0.130$; $p=0.021$), the media ($b=0.258$; $p=0.024$), and tourism development performance ($b=0.239$; $p=0.001$) indicate a positive and significant influence between the variables of government role, private sector role, community role, academic role, media role, and tourism development performance on community well-being. Thus, the results of this test support the second hypothesis. Tourism is one of the leading sectors that contributes significantly to the national and regional economies. One of the main indicators of the success of this sector is the increase in the number of tourist visits, both domestic and international.

This increase in visits not only impacts national income through foreign exchange and taxes but also provides direct economic benefits to local communities, particularly those involved in tourism (Hermawan & Hutagalung, 2023). Local communities involved as tourism stakeholders, such as homestay owners, tour guides, souvenir vendors, food stall operators, local artists, and craftsmen, are the parties most affected by the increase in tourist visits (Ozdemir et al., 2023). Every tourist who comes brings potential consumption that is directly channeled into various community businesses (Ananda & Mahaendra, 2024). The higher the number of tourist visits, the greater the economic turnover at the local level (Chamidah et al., 2021). This creates business opportunities, jobs, and increases income and welfare for the community (Purbadharmaja et al., 2023). Additionally, the increase in visitor numbers encourages the community to improve service quality, innovate products, and expand market reach through digital media (Bridoux & Stoelhorst, 2022). This momentum contributes to the growth of a creative economy rooted in local wisdom and strengthens the economic resilience of the community from the non-agricultural sector (Ananda & Mahaendra, 2024). The increase in tourist visits is directly proportional to the growth in income of the surrounding community, as seen in the Alas Kedaton Tourism Attraction. Visitors not only enjoy the natural attractions and the presence of hundreds of free-roaming monkeys but also purchase local souvenirs, sample traditional cuisine, utilize guide services, and make use of other local facilities. Communities of artisans and small and medium-sized enterprises (SMEs) directly benefit from these activities. Thus, the increase in tourist visits has a tangible and significant impact on improving community income (Adi et al., 2017).

Potential Scenarios for Tourism Development in the Alas Kedaton Tourist Attraction, Kukuh Tourism Village, Tabanan Regency

Probability analysis was conducted by considering a number of key factors that influence the success of the strategy, such as government policy support, active participation of the local community, integration of culture-based tourism, and the use of environmentally friendly tourism

practices. Each proposed strategy was evaluated based on its level of success probability through a probabilistic model. Four scenarios were developed: Strengthening Digital Promotion and Destination Branding (PRBR), Improving Tourism Accommodation (ACCM), Developing Community-Based Tourism Products (COMM), and Diversifying Tourism Attractions (DVRS). These four scenarios were used as the basis for the FGD, with probabilities presented in Figure 1

	Probabilities		Probabilities
1 : PRBR	0.9	1 : PRBR	0.657
2 : ACCM	0.95	2 : ACCM	0.593
3 : COMM	0.88	3 : COMM	0.657
4 : DVRS	0.85	4 : DVRS	0.649

Figure 1. Raw Data (a) and Clean Data (b) Simple Probabilities
Source: Analysis Results

In Figure 1, which represents the results of the raw data, the scenario with the highest probability value is ACCM (0.95). This indicates that in the initial conditions (before the data cleaning process), the PRBR variable is considered the most likely scenario or the most influential in the system being analyzed. Furthermore, PRBR (0.9) and COMM (0.88) also have high probability values, indicating the importance of these two scenarios in the initial perception of the system. This is followed by DVRS (0.85). Analysis of realized and unrealized conditional net data opportunities in Figure 2

	PRBR	ACCM	COMM	DVRS
1 : PRBR	0,657	0,976	1	0,98
2 : ACCM	0,882	0,593	0,882	0,911
3 : COMM	1	0,976	0,657	0,98
4 : DVRS	0,969	0,998	0,969	0,649

	PRBR	ACCM	COMM	DVRS
1 : PRBR	0	0,191	0	0,058
2 : ACCM	0,041	0	0,041	0,004
3 : COMM	0	0,191	0	0,058
4 : DVRS	0,037	0,141	0,037	0

Figure 2. Net Conditional Opportunity Data: Realized (a) and Unrealized (b)
Source: Analysis Results

Figure 2 part (a), which represents the Net Conditional Probabilities of the data cleaning results, shows that the PRBR and COMM variables have the highest values in influencing other variables. For example, PRBR has a strong influence on COMM (1), DVRS (0.98), and ACCM (0.976). Similarly, COMM shows a strong correlation with PRBR (1), DVRS (0.98), and ACCM (0.976). This indicates that PRBR and COMM play a central role in shaping the interrelationships among system components, thereby serving as the primary drivers in the dynamics of inter-

variable relationships. Further analysis of the impact of the realization and non-realization of these factors on other variables can be seen in Figure 3.

	PRBR	ACCM	COMM	DVRS		PRBR	ACCM	COMM	DVRS
1 : PRBR	0	0,32	0,343	0,324	1 : PRBR	-0,657	-0,465	-0,657	-0,599
2 : ACCM	0,289	0	0,289	0,318	2 : ACCM	-0,552	-0,593	-0,552	-0,589
3 : COMM	0,343	0,32	0	0,324	3 : COMM	-0,657	-0,465	-0,657	-0,599
4 : DVRS	0,32	0,349	0,32	0	4 : DVRS	-0,612	-0,508	-0,612	-0,649

Figure 3. Scenario Opportunities: Impact of Realized Scenarios (a) and Impact of Unrealized Scenarios (b) on Others

Source: Analysis Results

Figure 3 shows how the realization and non-realization of a scenario affects other variables in tourism development and improves the welfare of the community in the Alas Kedaton tourist attraction in Tabanan Regency. In part (a), which represents the impact when the scenario is fully realized, it is evident that all inter-variable values are positive. This indicates a mutually reinforcing relationship among the elements in the system. For example, COMM has an influence of 0.343 on PRBR and 0.32 on DVRS, meaning that community-based tourism product development can drive digital promotion and enrich cultural value in tourist attractions. Meanwhile, DVRS has a significant impact on ACCM (0.349), indicating that the diversity of cultural attractions also drives improvements in tourism facilities and services. This shows that in a situation where all scenarios are successfully realized, each factor reinforces the others, creating synergy that supports the sustainability of the system. Conversely, part (b) shows the impact matrix when the scenario is not realized, where all inter-variable relationship values turn negative. For example, the non-realization of COMM has a negative impact on PRBR (-0.657) and ACCM (-0.465), indicating that without community-based development, efforts in digital promotion and service improvements weaken.

Sensitivity scenario analysis driving tourism development

Table 1 illustrates scenario elasticity, which is the extent to which a variable in tourism development and improving community welfare in the Alas Kedaton tourist attraction in Tabanan Regency is sensitive to changes in other variables.

Table 1. Elasticity of Tourism Development Scenarios

Scenario	PRBR	ACCM	COMM	DVS	Absolute Value
PRBR	1	0,428	0,608	0,439	1,475
ACCM	0,209	1	0,209	0,221	0,639
COMM	0,608	0,428	1	0,439	1,147
DVS	0,348	0,492	0,348	1	1,118
Absoulute Value	1,165	0,899	1,165	1,099	

Source: Data Processing Result,2025

This elasticity is measured from the absolute value of the relationship between variables in the matrix, where the higher the absolute value, the greater the sensitivity or response of a variable to changes in the system. Conversely, a lower value indicates that the variable tends to be more stable and resistant to external changes in the system. Based on the figure, the variables with the highest elasticity values are PRBR (Strengthening Digital Promotion and Destination Branding) with an absolute value of 1.475 and COMM (Community-Based Tourism Product Development) with an absolute value of 1.147. This indicates that these two variables are highly sensitive to changes in other variables. In other words, even minor changes in scenarios such as service quality or cultural attractions can trigger significant impacts on community-based development or digital promotion strategies. This high sensitivity highlights that PRBR and COMM are critical components that must be strategically considered in the implementation of sustainable tourism village development policies.

4. Conclusions

The results of this study provide several conclusions. The roles of the government, the private sector, the community, academics, the media, and tourism development performance have a positive and significant impact on the welfare of the community in the Alas Kedaton Tourism Attraction Area, Tabanan Regency. Tourism development policies to enhance community well-being at the Alas Kedaton Tourism Attraction in Kukuh Tourism Village, Tabanan Regency, can be implemented through Community-Based Tourism Product Development and Strengthening Digital Promotion and Destination Branding through a collaborative approach between the community, government, and industry stakeholders. The COMM and PRBR scenarios can create an inclusive and sustainable tourism ecosystem. Limitations in this research are an inherent part of any study. Therefore, the researcher hopes that readers will exercise caution in interpreting the results of this research and consider conducting further research, such as by further analyzing the roles that stakeholders have played in tourism development or re-examining the strategies needed for the development of Alas Kedaton Tourism Attraction, or by adding other variables not used by the researcher or formulating additional hypotheses. The results of this study are hoped to serve as

one form of analysis/evaluation that can be conducted by internal stakeholders for the development of the Alas Kedaton Tourism Attraction, enabling it to recover as soon as possible and improve the well-being of the community in the Kukuh Tourism Village, Marga Sub-district, Tabanan Regency.

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