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Politeknik Negeri Bali
Editor in Chief,

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Table of Content

Gusti Ngurah Joko Adinegara, I Ketut Sirna, Gilbert Nainggolan Remapping the potential of Gumbrih Village for sustainable tourism management.....	126-136
I Wayan Suardana, Saroyeni Piartrini, Ni Made Ariani, I Gede Gian Saputra Factors influencing tourist loyalty to Nusa Penida during the post-COVID-19 recovery period	137-148
Dasril Indra, Endang Sinaga, Samad Chakour, Anwari Masatip Strategic management insights from a SWOT perspective: developing tourism villages in Subang District, West Java, Indonesia.....	149-164
Daniel Adolf Ohyver, Muaz Azinuddin, Ahmad Puad Mat Son The role of POKDARWIS on homestay digital marketing: A case study in South Sulawesi's tourist villages.....	165-176
Ahmad Soimun, Putu Diva Ariesthana Sadri, Dynes Rizky Navianti, Siti Nurlita Fitri The impact of traffic congestion on freight transport efficiency in a tourism corridor: A case study of the Denpasar–Gilimanuk road	177-198
Nyoman Sukma Arida, Saptono Nugroho, Ni Wayan Purnami Rusadi, I Gede Gian Saputra Typology of wellness tourism based on traditional healing in Bali.....	199-210
Dani Adiatma, Deden Firman Syuyaman Rukma, Stanny Dhamayanti Analysis of green tourism development potential in tourist destinations in Garut Regency	211-224
Mohammadsadegh Omidvar, Anisah Deen The effect of CSR on brand attitudes, brand image, and trust: A case of restaurants in Iran.....	225-241

Remapping the potential of Gumbrih Village for sustainable tourism management

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Abstract: Tourist villages are a driving factor in increasing tourist visits, but the COVID-19 pandemic has had an impact on the development of tourist villages. The decline in tourist visits and people's income is one of the pandemic's impacts. This research was to examine the potential of Gumbrih Village as a tourist village destination to support sustainable tourism. This study employs a qualitative descriptive method, using the Ministry of Tourism and Creative Economy's tourist village guidelines, which comprise six criteria, as the basis for measurement. The sources of this study were community groups directly involved in tourism services and the village government. The study showed that Gumbrih Village is still suitable as a tourist destination, but some of its tourism potentials are decreasing in number. This is due to a decline in tourist visits, limited financial support, environmental changes, and a lack of coordination in marketing programs. Cooperation between the government and the private sector is necessary to support the sustainable tourism program of Gumbrih Tourism Village. This includes collaborating with hotels and travel agencies on promotional activities, offering training programs, and providing financial support to the local community.

Keywords: Gumbrih village, remapping, sustainable tourism, tourism potential

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Introduction

Tourist villages are one of the bases for measuring the success of sustainable tourism development (Wijayanti & Purwoko, 2022). As stated by the Minister of Tourism and Creative Economy of the Republic of Indonesia, a tourist village is the main supporting factor in developing the tourism potential of an area. Tourist villages are prioritized to offer visitors a range of attractions, including superior facilities, natural resources, services, culinary experiences, unique culture, and natural beauty, among other factors. The tourist village is a key component in the complex tourism process. The level of interaction and complexity of rural tourism development remains multi-actor because it involves elements that play a role in the tourism service process (Asmoro et al., 2020). Rural tourism development, from the perspective of tourism supply and demand, necessitates the integration of various elements, including cooperation from the government, community members, tourists, tourism operators, academics, professionals, local industries, non-governmental organizations, and local tourism resources (Ho & Lee, 2020). If this integration can be carried out properly, the tourism process and program can be sustainable and provide great benefits for the development of a tourist village.

The development of a Tourist village generally offers tourist attractions that combine various interrelated components. These tourism components are attractions, amenities, accessibility, and ancillary services (Cooper, 2016). Buhalis (2000) mentions that supporting tourism components with the 6A's concept, consisting of attractions, amenities, accessibility, activities, available packages, and ancillary services. However, regardless of the number of components used, stakeholder support is the primary factor in implementing the tourism process, especially when the service process for tourists is prioritized. A tourist village is expected to play a role as a supporter for visitors who desire to enjoy the natural beauty, culture, and superior potential of a destination, accompanied by an understanding of the local culture that already

exists in the community (Aziiza et al., 2023). This has an impact on management in preparing a management system in developing tourist villages that can provide satisfaction to tourists in the service process. The impact of global developments in the tourism sector affects the management of tourist villages, where managers are expected to adapt to changes and implement measurable management standards to provide better services to tourists. It is hoped that the managers will be able to showcase the village's strengths and uniqueness to tourists, highlighting its culinary potential, customs, arts, agriculture, and locally produced goods (Sutarya et al., 2023). However, the development of tourist villages often encounters obstacles among stakeholders, particularly in terms of good management governance, differing perceptions about tourism, and the inability to identify the village's potential in supporting tourism development.

Tourism development, based on several studies, is found to support development in various sectors and has provided significant impact and benefits to the surrounding community, especially in tourist destinations, where these benefits have been felt by community groups (Rangus et al., 2017). The benefits of tourism, especially rural tourism, can contribute to the growth of the local economy by highlighting an area's potential, including its natural resources, culture, and history (Zhang et al., 2016; Silalahi & Asy'ari, 2022). Therefore, community involvement in supporting tourism growth is essential. Sutarya et al. (2023) explain that to strive for the sustainability of rural tourism programs and the ability to develop in the competitive tourism industry, it is necessary to understand the concept of desire that drives tourists to travel to rural areas. The results of a study conducted in rural areas in Korea found that tourist satisfaction was motivated by the availability of physical facilities, existing services, and the quality of services received in tourism (Cho et al., 2014). However, tourists' intention to revisit and recommend a service is closely related to the quality of the service provided. Trustworthy information sources, such as government websites, credible online platforms, and information from relatives, significantly influence tourist satisfaction. This demonstrates that information sources lend credibility to the information received and are positively correlated with customer satisfaction.

Sustainable tourism is a concept that aims to revitalize, particularly in developing tourist destinations. It presents several potential challenges in village tourism development, particularly the lack of knowledge among the community and managers regarding tourism destination management, as well as the absence of integrated planning (Zhang et al., 2016). Efforts that can be taken to mitigate these challenges include preparing a model for developing tourist villages, particularly in strategic planning, which involves determining the vision of the tourist village and outlining the steps to achieve this vision (Priyandoko et al., 2023). According to Wulandari et al. (2024), the development of the tourism paradigm is moving towards aspects that prioritize cleanliness, health, safety, sanitation, and environment (CHSE). This is what the community and business stakeholders need to understand: that Indonesian tourism can grow and develop by prioritizing sustainability, paying attention to cleanliness, health, safety, and comfort, as well as the surrounding environment in the village.

Gumbrih Village in Jembrana Regency has been a popular tourist destination among both domestic and foreign tourists since 2017. However, since the pandemic, the interest of tourists in visiting has decreased, and this has greatly affected the businesses managed by the community. Various potentials managed by the Gumbrih Village community groups that are offered include Tirta Tourism, the Chocolate Farmers Group, Chocolate Co. Jaen San, processed Virgin Coconut Oil (VCO), Mushroom Cultivation, Restaurants, an Animal Rescue Organization (ARO), ATV Attractions, and others (Adinegara et al., 2020). Data on tourist visits to Gumbrih Tourist Village, based on data from Bali Tourism Office (2024), has fluctuated as shown in Table 1.

Table 1. Number of tourist visits to Gumbrih tourist village 2019-2023

Year	Domestic Tourist	Foreign Tourist	Total
2019	854	340	1,194
2020	1,463	32	1,495
2021	927	0	927
2022	14	0	14
2023	347	106	453

Source: Bali Tourism Office, 2024

Based on Table 1, it is evident that tourists are still predominantly domestic tourists (locals) because the village's geographical location is the main connecting route from Denpasar to Gilimanuk. Foreign tourists have started to increase due to support from Pokdarwis, which collaborates with hotels around Gumbrih Village in promotional activities. The number of visits has a direct impact on the businesses of community groups that depend on tourist visits. However, since the pandemic, the number of tourism potential offered has decreased, and some have even closed. This situation has resulted in a decrease in income. Pokdarwis has implemented a program to revive the community's tourism potential, but it still faces obstacles, particularly in terms of operational costs and capital. Therefore, mapping tourism potential requires measuring the strengths and weaknesses of each community business, allowing management and marketing programs to be implemented in an integrated and comprehensive manner. The concept of tourist village development follows the principles based on the Ministry of Tourism and Creative Economy's Guidelines for Tourist Villages (Tourism Village Guidelines, 2021) which contain six (6) criteria, namely (a) There is potential for tourism attractions (natural, cultural, and human-made/creative); (b) There are community groups; (c) There is participation of local human resources in the project planning and implementation process; (d) There are institutional elements; (e) There are facilities and infrastructure available for tourism activities; and (f) There is support for developing the project's potential in tourism marketing programs. These criteria are expected to be a guide for managers in making tourist villages a leading and sustainable destination.

Tourism activities cannot be separated from tourist behavior in determining tourist attractions to visit. Consumer behavior is a research concept that requires time to understand, especially in the field of tourism, as it involves emotional factors that need to be understood more specifically in individual tourists (Kotler & Armstrong, 2018). Many academics acknowledge that understanding the purchasing decision process is a complex task, for example, in determining a place to stay, where tourists need to make quick or deliberate decisions, as it involves several decisions and concepts related to decision-making (Cohen et al., 2014). Understanding tourist behavior has a direct impact on the interaction between individual tourist variables and the surrounding environment that occurs continuously (Van-Vuuren & Slabbert, 2011).

This study aims to map the overall tourism potential in Gumbrih Village based on tourist village indicators. This mapping is expected to provide an overview of managers, enabling them to identify strengths and weaknesses and develop strategies to increase tourist visits while enhancing community income. This study has used a qualitative descriptive approach as an initial step in mapping village potential. The results are presented in a table, allowing for the collection of accurate information about real potential and its application in developing more innovative tourist villages that support sustainable tourism, particularly in the Gumbrih Tourist Village (Vipriyanti et al., 2023). Then discussed more comprehensively the tourism potential based on each tourist village indicator, as well as the feasibility of utilizing it as a tourism resource. The first step is to conduct focus group discussions with stakeholders, including Pokdarwis management, community groups, and tourism business owners, to gather information about the tourism potential of the village that can be developed, as well as identify tourism businesses that are no longer operating. The next step is to create a mapping based on the discussion results and identify village potential based on tourist village indicators for each existing potential (Silalahi & Asy'ari, 2022).

The potential of the community in supporting the concept of sustainable tourism needs to be comprehensively mapped to develop a concept for developing and optimizing village tourism based on its real potential, especially in the Gumbrih tourist village. Mapping of tourism potential has never been done before, either by the local government or academic researchers. This initial study is expected to encourage managers (pokdarwis) and tourism actors to develop a concept and direction for innovative tourism, as well as encourage community groups to contribute to sustainable tourism programs in the Gumbrih Tourist Village. The development of tourist villages towards sustainable tourism needs support and real support to leverage local potential from all elements, from the government to the local community, to enable it to accommodate the community's goals of having villages with sustainable tourism, involving local human resources,

supporting facilities and infrastructure, training and promotion, and continuing to evaluate the processes that have been implemented (Alamanda et al., 2019).

Methodology

The research employed a qualitative descriptive approach, utilizing structured in-depth interviews to investigate the local potential of the tourist village as a driving force for the community's local economy in Gumbrih Village. A qualitative approach was employed in accordance with the research objectives, allowing for a comprehensive exploration of the existing village's potential (Alamanda et al., 2019; Ghati et al., 2020). The results will provide an overview of the direction of innovative tourism development for the village. In this study, purposive sampling and non-probability sampling techniques were implemented. Focus group discussion activities were conducted to collect data from the community with eight participants in a structured discussion with stakeholders including the head of the village-owned enterprise (BUMDES), the head of the tourism awareness group (pokdarwis) "Sarga Nitya", the manager of chocolate "Co Jaen San", representatives of the restaurant group, representatives of Bali reptile rescue, managers of VCO oil "Sudamala". The FGD aims to identify the obstacles faced by community groups, the income generated from community business activities, marketing programs that have been implemented, the role of local government in supporting the tourist village program, and plans for developing community tourism activities.

Furthermore, conducting visits and interviews with community businesses helps to understand the existing potential more clearly. Data is compiled using a table based on the Tourist Village Guidelines and then analyzed to determine the position of Gumbrih Tourist Village based on the collected data. The indicators used in mapping the potential of tourist villages are based on the 4A + H concept from Silalahi & Asy'ari (2022), namely attraction, accessibility, amenities, ancillary service, and hospitality. It is then arranged in a table of indicators for comprehensive guidelines on tourist villages, providing direction for tourism development strategies (Van-Vuuren & Slabbert, 2011).

Results and Discussions

Results

An overview of the potential of Gumbrih tourist village can be explained from the research results below.

Attractions

One of the primary concepts of a destination is the presence of attractions, which can serve as the initial motivation and draw tourists to visit a destination. The main attractions offered are (1) Nature. The natural wealth of Gumbrih Village, situated between the beach and the hills, creates a stunning atmosphere that complements its existing biodiversity. The cocoa trees that grow well are one of the village's potential resources utilized by the "Merta Nadi" cocoa farmer group, whose harvest is then processed into ready-to-eat chocolate with the "Cho Jaen-san" brand, which has been marketed abroad. Furthermore, there is the processing of VCO Oil products with the "VCO Sudamala" brand. This product is made from coconut fruit processed by skilled hands. The type of coconut used is a special type of coconut, namely "a combination of various types of coconut that are believed by the Balinese people to be coconuts that are efficacious for curing various diseases. Its production is carried out only on certain days that are considered to have sacred elements. Then there are mushroom cultivators who produce "White Oyster Mushrooms," which are temporarily marketed to traditional stalls around the village.

(2) Culture. The history of Gumbrih Village can be leveraged as a tourism potential. However, it still needs to be well-organized and presented in a way that creates an interesting impression and is easily understood by tourists. If poured into an inscription, it will be more interesting to publish. Furthermore, the "Legu" Dance, also known as the "mosquito" dance in Indonesian, is a potential local dance that truly needs to be preserved. This dance was formed in response to the early history of Gumbrih Village, when the village was first established. Some people were affected by a malaria outbreak, which was later conveyed through dance art. Cultural

support from the Gumbrih Village community, which comprises two distinct religions or beliefs (Catholic and Hindu), has been maintained in a harmonious manner to date. Catholics in Gumbrih incorporate Balinese culture, such as wearing traditional Balinese attire when praying at church and installing "penjor" in front of their houses during Christmas celebrations. The Catholic Church in Gumbrih Village is the second-oldest in Jembrana Regency, after the Palasari Church. Decorated with Balinese carvings and blending European architecture, the "Santa Maria Ratu Gumbrih Church" is an ideal destination for Catholic religious tourism.

(3) Conservation. Animal conservation, managed by the Animal Rescue & Reforestation Organization (ARRO), formerly known as Bali Reptile Rescue (BBR), is a community group that supports the conservation of reptiles, particularly snakes. ARRO has professional staff in both rescue and education, specializing in venomous and non-venomous snakes. (4) Water tourism. Tirta Lestari water tourism is a tourism activity that allows visitors to enjoy the natural beauty of the Gumbrih Village River by riding a traditional boat, controlled by skilled workers. In addition to riding a boat, tourists can also enjoy the surrounding nature by riding an ATV. Together with the "D Tegal ATV Adventure" group, tourists will be invited to ride ATVs through the gardens of residents around the tourist location.

Accessibility

In addition to attractions, access to tourist villages must be facilitated to facilitate visits. The transportation system is managed by the destination, including the provision of facilities and infrastructure for tourists traveling to and from the destination. Tourists must also be able to travel easily around tourist destinations. Gumbrih Village is 65 km from the city center of Denpasar and Ngurah Rai International Airport. Public transportation can be easily accessed using motorbikes, private cars, or public transportation, which can be reached in approximately 2 hours and 40 minutes, because Gumbrih Village is located on the Denpasar-Gilimanuk national road. Connecting roads is one of the elements in facilitating transportation, which is a special concern of the government.

Amenities

Supporting facilities for tourists, provided by the village in collaboration with community groups, include restaurants, mini-markets, health centers, and temporary toilets. The existence of tour guides is already established and carried out by the local community. The tourist information center is already available and managed by Pokdarwis "Sarga Nitya", which is under the coordination of BUMDES "Catu Graha Mandiri". Pokdarwis Sarga Nitya is an organization that coordinates the development and marketing of Gumbrih Tourist village, which is under the coordination of the village-owned business entity (BUMDES).

Ancillary Services

The management and development of the tourism sector is effectively managed by a community group known as Pokdarwis "Sarga Nitya." This group plays a crucial role in encouraging and maximizing the tourism potential in the village. One of the main tasks is to design and implement tourism promotion and development strategies that can attract more visitors and have a positive impact on the local community. Pokdarwis "Sarga Nitya" collaborates with various community groups (pokmas) in Gumbrih Village to utilize and develop the existing tourism potential. The task is not only focused on tourism promotion, but also on undertaking more in-depth development, including the improvement of facilities and services that support tourism activities. This initiative encompasses various aspects, ranging from improving infrastructure to training for local communities, enabling them to play an active role in the tourism industry.

Hospitality

Gumbrih Tourist Village is renowned not only for its natural beauty and unique culture, but also for the warmth and friendliness of its people. This friendly and welcoming attitude is the result of the positive influence of education and experience possessed by most of the village's youth. Many of the youth have been educated in big cities such as Denpasar, which allows them

to better understand and appreciate the needs and expectations of tourists. Direct interaction with the local community often leaves a deep impression on visitors. Every member of the community, from the youngest to the oldest, shows openness and warmth in welcoming tourists. This friendliness is clearly visible in various aspects, from a friendly greeting when first meeting, to full attention when helping tourists find the places or information they need.

Identification of Gumbrih Tourist village

Identification and mapping of the potential of Gumbrih Tourist village using the criteria of the Regulation of the Minister of Tourism and Creative Economy No. 11 of 2022 concerning the Strategic Plan of the Ministry of Tourism and Creative Economy for 2020-2024 (Tourism Village Guidelines, 2021), which are explained in Table 2. Identification aims to map the tourism potential managed by the community, especially in tourism services to tourists.

Table 2. Identification of Gumbrih Tourist Village (Tourist Village Guidelines)

A		Identifications
There are several potentials for tourist attractions (natural, cultural, and creative tourist attractions)		
1	"D Tegal ATV Adventure"	It already exists but has not been managed optimally due to constraints on capital and very high operational costs. Currently, it is no longer operational.
2	Cocoa Bean Processing Factory "Chocolate Cho Jaensan"	It already exists and is still operational, but its activity has decreased due to a shortage of raw materials, resulting in a decline in quality.
3	Reataurant "Madu Segara"	Still operating and serving consumers, but the variety of menus offered is not yet diverse, and the taste does not match what consumers generally want.
4	Water tourism "Tirta Lestari"	The Tirta Lestari water tourism activity, which is the mainstay of Gumbrih Village, is no longer operating due to sedimentation that has occurred on the coast and in the river.
5	"Animal Rescue & Reforestation Organisation (ARRO)"	ARRO, formerly known as Bali Reptile Rescue (BRR) still operating and supported by skilled workers. Most tourists who visit come from abroad; school children's groups still outnumber local tourists.
6	VCO "Sudamala"	Sudamala VCO oil already exists and is still being produced; however, its production is still constrained by production permits from the local government, and marketing is limited to the surrounding villages.
7	Oyster Mushroom Cultivator "Rindu Alam"	Still operating, marketing is limited to stalls around the village, and production is constrained due to limitations on raw materials for seeds, narrow cultivation areas, and limited capital.
8	Restaurant "Mang Odon"	No longer operating due to high operational costs and inadequate marketing, the restaurant is located quite far from the main road.
9	Pilgrim Tourism of the Catholic Church "Santa Maria Ratu Gumbrih"	It already exists and is still used by Catholics for prayers and other religious activities; tourists who visit are still predominantly from local Bali.
B		Identifications
The existence of community groups		
1	"D Tegal ATV Adventure"	Formed by ten village youths with the spirit to realize a developed Gumbrih Tourist village. However, due to a lack of capital and very high operational costs, ATV no longer operates, and all existing ATV units are damaged. In addition, it is constrained by the path that is already badly damaged and requires many repairs.
2	"Animal Rescue & Reforestation Organisation (ARRO)"	Formed by a community that cares about the safety of residents from venomous and non-venomous snakes. When there is information regarding the presence of a snake, they will go

		directly to the location and immediately rescue the snake. The snake is caught, placed in a breeding cage, and then released into its natural habitat. In addition to rescue, they also often provide education to the community about venomous and non-venomous snakes and serve as speakers at various educational activities.
3	Water tourism "Titra Lestari"	Currently, it cannot operate due to the shallowing of the coastline and river where this tourist activity takes place. This prevents the boats from moving. Additionally, the location where the boats are moored can no longer be used because it has been damaged.
4	Cocoa Bean Processing Factory Chocolate "Cho Jaensan"	It has rarely been operating due to the scarcity of raw materials that do not meet processing standards. Chocolate raw materials that are below standard can affect the quality of the chocolate produced.
C	There is potential for local community involvement	Identifications
1	Support from tourism school graduates	Many young people from Gumbrih Village have graduated from the Tourism College and provide support for tourism programs in existing community groups.
2	Support from residents who have worked in the tourism sector (hotels, restaurants, guides)	Many Gumbrih residents who used to work in hotels, restaurants, and as tour guides have now retired and returned to Gumbrih Village, where they are willing to support rural tourism programs.
3	Citizens who are able to communicate in English	Several residents are proficient in foreign languages, particularly English. They work together with existing community groups when foreign tourists visit.
D	Have a management institution	Identifications
1	Tourism Awareness Group (Pokdarwis) "Sarga Nitya"	The Pokdarwis management consists of a chairman, secretary, and treasurer. It is responsible for managing community groups and promotional programs in collaboration with other parties, such as hotels, travel agents, and others.
2	BUMDes "Catu Graha Mandiri"	As a business entity owned by the village, BUMDES has formed a Tourism Unit Manager, and tourism is one of the business units managed to increase income.
E	Availability of basic infrastructure to support tourism activities	Identifications
1	Tourist information	The Gumbrih Tourist Village information center will focus on BUMDES Gumbrih Village. For now, only "ARRO" can be invited to cooperate regarding the tourism business.
2	Tour Guide	Members of the community group serve as tour guides because they are competent to do so.
F	Have a tourism marketing program	Identifications
1	Offline Promotional Media (brochures)	There are no brochures yet.
2	Online Promotional Media (website)	There are already social media accounts on Facebook and Instagram.
3	The existence of marketing partners (travel agents, hotels, etc)	There is no official cooperation with hotels and travel agencies.
4	Participate in the tourist village exhibition and join the "Jadesta" Community	Never participated in a tourist village exhibition, but have joined the Jadesta Group on Telegram in the promotion program.

Based on the identification of tourism potential in Gumbrih Village, several tourism initiatives managed by the community are no longer operating due to limited capital and a lack of marketing programs. Therefore, the role of the local government and Pokdarwis is necessary in involving the district government or the private sector in helping to develop businesses from

community groups, which is expected to contribute to increasing community income and supporting sustainable tourist villages.

Discussions

Community businesses are one of the key supporting factors for a region's economy. Just as small community businesses can be an attraction and support for the success of tourist villages in addition to natural resources, culture, art, and others. The government, through the Ministry of Tourism, has announced that sustainable tourism programs will begin in tourist villages. Gumbrih Tourism Village currently relies on natural, cultural, and historical attractions as its main attractions to attract tourists and improve the local economy. Through the development of tourist villages, new jobs can be created, small and medium-sized enterprises can be empowered, and the income of village communities can increase. In addition, tourist villages also contribute to the preservation of culture and the environment. Tourist villages not only provide economic benefits but also play a role in community empowerment and preservation of village potential. However, several community businesses supporting tourism in Gumbrih Village have seen a decrease in income, and some have even closed since the pandemic. This is a major challenge for tourist village managers. Synergy and collaboration between the Regional Government and the private sector need to be improved to anticipate and support sustainable tourism programs.

Based on the research results on the potential for natural, cultural, historical, and culinary tourism in the Gumbrih tourist village, it was found that several potential community group businesses were no longer operating. This is due to limited operational costs, a lack of tourists visiting, and insufficient support for marketing programs. Additionally, there is limited knowledge on managing effective tourist attractions. Some people involved in tourism services learn independently to understand the tourism service process, and there has been no integrated training from related parties. These results support the statement by Radović et al. (2020) that the sustainable growth of rural tourism receives at least some support from financial funds that can directly hinder operational activities. This statement indicates that financial resources can stimulate the economic growth of local communities in Gumbrih Village and create employment opportunities. Furthermore, Munien et al. (2018) stated that efforts to improve the economies of rural communities, including those in marginalized areas, can be enhanced by incorporating rural tourism.

The findings suggest that financial resources and special training programs are expected to encourage local economic growth in the area, increase employment opportunities, and better tourism management. This suggests that planned funding and management can help small community businesses grow and become self-sufficient, thereby generating employment prospects. Munien et al. (2018) also support this by stating that rural tourism is increasingly recognized as a viable solution to improve the economic sustainability of rural areas, as well as to encourage social regeneration and improve the quality of life of rural communities. In developing countries, tourism plays a crucial role as a program that can support the growth of small community businesses, improve job availability, and enhance the quality of life (Rogerson & Rogerson, 2020).

Another finding in Gumbrih Village is the limitation in the provision of physical resource facilities, including road access, directional signs, accommodation options, tourist information centers, and rest areas. Additional services, such as the availability of other support facilities, enhance visitor satisfaction and are a significant benefit to tourism industry managers (Adinegara et al, 2020). Based on the availability of supporting facilities, Gumbrih Village has not provided adequate facilities for tourists during their visiting activities. For instance, tourist information centers, toilet facilities, and tourist attraction signs are not yet available. Therefore, the tourism village can collaborate with the local community in the physical tourism resource support service program, particularly for community businesses directly related to tourism activities. Additionally, it can allocate funds for facility improvements through village funds, as the tourism village program is an integral part of the overall village program.

Research findings based on community tourism knowledge revealed that community knowledge about tourism program activities, particularly in tourism villages, was suboptimal. Community understanding is important in supporting sustainable tourism programs, including

improving community skills in serving tourists (Ramkumba, 2024). This has an impact on tourist services and tourism village programs that are not optimal. Programs that can mitigate this impact include community training and business development initiatives (Ramkumba, 2024). The emphasis can be applied to facilitate training activities in specific sectors required by the tourist village, ensuring the sustainability and development of rural tourism businesses. Marais et al. (2017) stated that increased capabilities, skills, and understanding of marketing programs are crucial for the tourism industry. The role and participation of the community in the skills development process significantly influence opportunities in the growing tourism industry. Additionally, the community needs to provide high-quality services that create a positive impression for tourists, as these interactions and service processes occur directly within the service sector, particularly in tourism. At the village level, Gumbrih Village has managers who receive support from the local government and the private sector in helping to sustain community businesses. However, the tourism program has not been running optimally due to a lack of community involvement, resulting in several programs not being implemented properly because the local community's understanding is not yet optimal.

Conclusions

The conclusion of this study shows that Gumbrih Tourism Village remains worthy of being a tourism village, despite some tourism businesses having closed; however, other tourism potentials continue to support it. Gumbrih Tourism Village is supported by accessibility, beautiful natural surroundings, village history and culture, local hospitality, organizational support, and still offers opportunities for sustainability. In addition, there are still challenges, especially in providing supporting facilities for tourists. The suggestion to the manager of Gumbrih Tourism Village is to continue collaborating with other tourism industry parties in the Gumbrih Village area by providing information in the form of brochures, as well as with travel agents who have routes to the West Bali area for tours to Gumbrih Village. To improve services to tourists, training and development should be provided to the community and small businesses, enhancing their abilities to serve tourists effectively. Another thing that needs to be considered is the supporting facilities that need to be realized. In addition, the role of BUMDES (Village-Owned Business) needs to be expanded by serving as a distribution channel for community products, enabling them to become souvenirs that tourists can purchase.

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Factors influencing tourist loyalty to Nusa Penida during the post-COVID-19 recovery period

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Abstract: This study examines the interplay between destination image, social media influencers, and tourist motivation in shaping tourist loyalty during the post-COVID-19 recovery period. Anchored in the context of Nusa Penida—a rapidly emerging coastal ecotourism destination in Bali—this research develops a behavioral loyalty framework relevant to nature-based tourism. Employing a quantitative design, data were collected through a structured online survey administered to 250 international tourists who had previously visited Nusa Penida. Given the unknown population size, quota sampling was applied, and data were analyzed using Structural Equation Modeling (SEM) with SmartPLS 4.0. The findings reveal that social media influencers exert the most substantial direct influence on tourist loyalty, followed by the mediating roles of destination image and tourist motivation. These results underscore the significance of digital storytelling, perceived destination quality, and emotional engagement in fostering revisit intentions, particularly among younger, digitally active travelers. Theoretically, this study contributes to the tourism behavior literature by integrating influencer dynamics into a multi-construct loyalty model, which explains 61.3% of the variance in tourist loyalty. Practically, the research offers strategic insights for destination marketers, emphasizing the importance of authentic influencer collaborations and emotionally resonant digital experiences to strengthen destination competitiveness. From a managerial perspective, the findings highlight the necessity of leveraging targeted digital engagement strategies. Future research should explore cross-generational and cross-cultural variations in tourist responses to influencer-driven content, as well as comparative platform effectiveness across different destination typologies.

Keywords: coastal tourism, destination image, post-pandemic tourism, social media influencer, tourist loyalty, tourist motivation

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Introduction

The COVID-19 pandemic significantly disrupted global tourism, forcing destinations to reassess the key factors that influence tourist behavior, particularly tourist loyalty. In the post-pandemic recovery phase, the ability to build and sustain loyalty has become critical for ensuring destination resilience. Coastal destinations, which traditionally rely on aesthetic appeal and recreational activities, must now navigate shifting travel motivations, heightened health awareness, and the increasing dominance of digital engagement. Contemporary tourists are no longer solely in pursuit of relaxation; instead, they are driven by emotional, psychological, and social experiences that shape their intention to revisit. Ecotourism research plays a pivotal role in analyzing these behavioral shifts and in promoting sustainable practices that balance visitor engagement with coastal resource conservation.

A growing body of literature highlights destination image as a fundamental construct in shaping tourists' cognitive and affective perceptions of place, particularly among environmentally conscious visitors (Chiu et al., 2014; Ky Vien, 2021). In the case of Bali Province, Nusa Penida

has cultivated a strong ecotourism image, enhanced through digital narratives and amplified by social media influencers (Luong, 2025). Empirical studies confirm that destination image plays a decisive role in travel decision-making and behavioral intentions (Pahrudin et al., 2021; Duan & Wu, 2024; Eitzenberger & Thimm, 2024; Gavurova et al., 2023; Gorji et al., 2023). Chi & Qu (2008) further emphasize that a positive image enhances the likelihood of repeat visitation. Importantly, the formation of image is not static but occurs throughout the entire tourist journey—pre-visit, on-site, and post-visit (Prayag et al., 2017). Building on this, recent studies highlight how social media influencers shape and amplify destination perceptions through curated, emotionally engaging content (Jaya & Prianthara, 2020; Jeong & Kim, 2019).

Social media influencers (SMIs) are increasingly positioned as critical agents in post-COVID-19 tourism recovery (Grover et al., 2022), particularly within digital marketing strategies (Fusté-Forné & Filimon, 2025). Their visually immersive and emotionally resonant content contributes not only to brand awareness but also to the enhancement of destination image and loyalty (Ye et al., 2011). Empirical studies show that influencer endorsements positively affect tourist intention and behavior. Wong & Lai (2022) found that influencers played a dominant role in restoring the image of destinations during the post-COVID-19 recovery phase, while (Sabiila & Zulestiana, 2022) demonstrate that destination image and influencers jointly affect loyalty intentions. Despite their growing visibility, empirical investigations on the direct influence of influencers on loyalty—especially in ecotourism settings—remain scarce. Existing scholarship tends to address these constructs in isolation, leaving a theoretical and empirical gap regarding their combined effect on tourist loyalty (Ajuhari et al., 2023; Viviers et al., 2013).

Beyond image and influencer dynamics, tourist motivation remains a central construct in explaining tourist behavior. Motivation captures both psychological and emotional triggers that prompt visitation and loyalty (Carvache-Franco et al., 2022; Rejón-Guardia et al., 2023). Classic frameworks such as Crompton (1979) push–pull model and Deci & Ryan (2015) Self-Determination Theory (SDT) emphasizes intrinsic and extrinsic drivers of travel. Push factors include novelty seeking, social interaction, and escape from routine, while pull factors relate to destination attributes such as natural landscapes and cultural events (Cohen, 1979; Kim et al., 2003). Empirical research supports the relationship between motivation and tourist loyalty, showing that motivated travelers are more likely to revisit and recommend a destination (Suardana & Kristianto, 2022). Moreover, motivation can mediate the effect of external stimuli—such as influencer content—on tourist behavior, reinforcing its relevance in behavioral loyalty models (Hawkins et al., 2015; Osti & Nava, 2020).

In addition, tourist loyalty itself is widely recognized as a multidimensional construct encompassing attitudinal, emotional, and behavioral dimensions (Cossío-Silva et al., 2019). While behavioral loyalty reflects actual return visits, attitudinal loyalty refers to psychological commitment and positive emotions toward a destination (Ermawati & Prihandono, 2018). Studies confirm that loyalty is influenced by satisfaction and post-purchase behavior (Petrick et al., 2001; Qu et al., 2011; Suardana et al., 2014). In the digital era, however, loyalty is shaped not only by on-site experiences but also by pre-visit perceptions—often influenced by influencer credibility and online engagement (Breiby & Slåtten, 2018; Sthapit, 2019).

Despite increasing digital engagement and evolving travel motivations, there remains a limited empirical understanding of how destination image, social media influencers, and tourist motivation jointly affect tourist loyalty, particularly within the context of post-pandemic coastal ecotourism destinations such as Nusa Penida. While the influence of destination image and motivation on loyalty has been well studied (Duan & Wu, 2024; Gursoy et al., 2014), the combined and mediating role of influencers in ecotourism remains underexplored. This study, therefore, addresses a critical gap by integrating digital influencer dynamics into a comprehensive loyalty framework. Specifically, it examines the direct and indirect effects of destination image, social media influencers, and tourist motivation on tourist loyalty in Nusa Penida. By integrating these constructs into a structural model, this research aims to generate empirical insights into the digital, perceptual, and emotional mechanisms that shape repeat visitation in the post-pandemic tourism landscape.

Methodology

This study adopts a positivist approach using a quantitative survey method. The research was conducted in Nusa Penida, Klungkung Regency, Bali, selected due to its rapid growth in tourist visits during the post-COVID-19 recovery phase, with an average daily influx of 1,000–1,500 tourists and a repeated visitation rate of up to 40%. The target population consisted of international tourists who had previously visited Nusa Penida within the last three years.

Data collection was carried out through an online structured questionnaire distributed via international travel forums, social media groups focused on tourism (e.g., Facebook travel communities), and referrals from local tour operators. A quota sampling technique was employed due to the unknown population size of past visitors and to ensure regional diversity. Quotas were set based on geographic origin, including Australia, Asia, Europe, and the Americas. While quota sampling allowed for targeted representation, it also presented certain limitations, particularly the potential for selection bias and limited generalizability due to its non-probabilistic nature.

A total of 250 complete and valid responses were collected and used in the analysis. The data collection process was conducted over a ten-month period, from January to October 2024, encompassing both peak and off-peak tourist seasons to enhance the diversity and robustness of the responses. Responses were screened for completeness, internal consistency, and reliability. The sample size was considered sufficient for Structural Equation Modeling–Partial Least Squares (SEM-PLS) analysis, following (Hair et al., 2019).

To minimize social desirability bias, the survey was anonymous, and questions were neutrally phrased. Content validity was ensured through expert judgment, and all measurement items were adapted from previously validated scales in the tourism literature. Constructs measured included destination image, social media influencer, tourist motivation, and tourist loyalty. Data were analyzed using SmartPLS 4.0 software, employing the SEM-PLS technique to evaluate both direct and indirect relationships among constructs. This method was selected for its predictive capability, suitability for complex behavioral models, and robustness to non-normal data distributions, making it appropriate for theory development in tourism research (Hussain et al., 2024; Nieves-Pavón et al., 2024).

The SEM-PLS technique was selected due to its high predictive power and its suitability for exploratory and theory-building research, especially when examining complex relationships among multiple latent constructs. Given the formative and reflective indicators in this study, along with a sample size of 250 and the potential for non-normal data distribution, SEM-PLS provides greater flexibility compared to CB-SEM. Moreover, in tourism behavior research, SEM-PLS is increasingly favored for modeling indirect effects and mediating relationships (Henseler et al., 2016).

Results and Discussions

Respondent Characteristics

The characteristics of respondents in this study were examined based on several variables, including country of origin, gender, age, occupation, frequency of visits, source of information, and length of stay in the Nusa Penida area. All respondents were international tourists who had previously visited Nusa Penida's tourist attractions during the new adaptation period or prior to the COVID-19 pandemic. In terms of country of origin, the largest proportion of respondents came from Australia (36%), followed by Asia (30%), Europe (23%), the Americas (16%), and Africa (5%). Regarding gender distribution, the sample consisted of 51% female and 49% male respondents, indicating a slightly higher representation of women among visitors to Nusa Penida. Age-wise, respondents were classified into four categories: the majority were aged 17–24 years (45%), followed by those aged 25–44 years (38%), and 45–64 years (17%). These figures suggest that Nusa Penida predominantly attracts younger tourists, consistent with the island's image as an adventurous and nature-oriented destination.

In terms of occupation, the largest group of respondents were students (51%), followed by private sector employees (37%), government employees (4%), homemakers (4%), military personnel (2%), and professionals/executives (2%). Visitation frequency data showed that 32% of respondents were first-time visitors, while 27% had visited more than three times, 23% had

visited twice, and 18% had visited three times. Regarding sources of information, most respondents learned about Nusa Penida through friends or family (52%), followed by social media (45%), and a small fraction through travel agents (3%). The majority of tourists stayed in Nusa Penida for one night (64%), with 28% staying for two nights, and 4% each staying for three nights or more than three nights. These patterns are consistent with the overall tourist profile of Nusa Penida, which primarily appeals to younger travelers engaged in short-duration, adventure-oriented trips.

Measurement Model Evaluation

Validity testing in this study was conducted using the discriminant validity approach, supported by the evaluation of internal consistency reliability through Cronbach's alpha and composite reliability coefficients. All constructs demonstrated satisfactory reliability, with Cronbach's alpha values exceeding the 0.70 threshold: destination image ($\alpha = 0.82$), social media influencer ($\alpha = 0.75$), motivation ($\alpha = 0.85$), and loyalty ($\alpha = 0.86$). Composite reliability (ρ_c) values were also robust, with destination image ($\rho_c = 0.88$), influencer ($\rho_c = 0.85$), motivation ($\rho_c = 0.88$), and loyalty ($\rho_c = 0.91$), indicating strong internal consistency across all latent constructs. The results confirm that each construct met the criteria for both convergent and discriminant validity. The measurement model analysis demonstrated that all indicators significantly reflected their respective latent variables, as detailed in Table 1. These findings provide empirical support for the adequacy of the measurement model in capturing the underlying constructs used in this research.

Table 1. Statistical feasibility of construct measurements

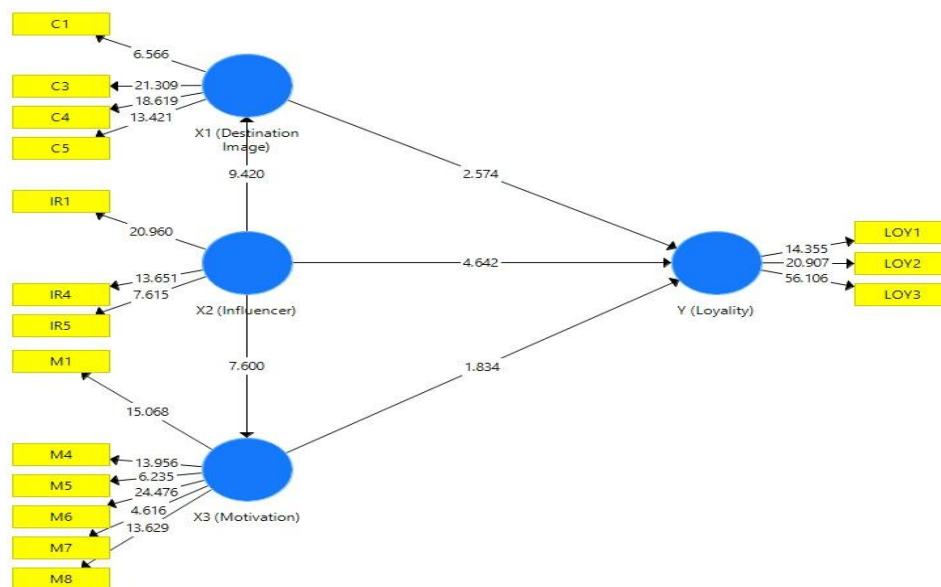
Construct	Mean	O	(SM)	STD	O/STDEV	CR	AVE
Destination Image						0.93	0.50
Quality of infrastructure and supporting facilities	3.72	0.71	0.69	0.10	6.95		
Exotic appeal of the destination	4.26	0.89	0.88	0.04	19.17		
Comfort and safety	4.00	0.87	0.86	0.05	16.71		
Quality of the travel experience	4.28	0.76	0.76	0.06	12.62		
Social Media Influencer						0.95	0.66
Engaging visual content on social media	4.60	0.71	0.69	0.10	6.95		
Up-to-date travel information provided	4.22	0.89	0.88	0.04	19.17		
Intention to share influencer content with others	4.44	0.87	0.86	0.05	16.71		
Motivation						0.93	0.77
Building friendships with like-minded individuals	4.61	0.81	0.80	0.05	13.61		
Escaping daily routines	3.49	0.73	0.71	0.11	6.32		
Engaging and stimulating activities	4.44	0.85	0.85	0.03	23.89		
Success in favored tourism activities	4.03	0.73	0.60	0.14	4.56		
Feeling connected with nature	4.37	0.70	0.70	0.05	12.97		
Demonstrating prestige or competition	3.13	0.81	0.80	0.05	13.60		
Loyalty						0.92	0.67
Enjoyable experience during the visit	4.55	0.87	0.86	0.06	14.40		
Intention to revisit Nusa Penida	4.18	0.85	0.85	0.04	21.15		
Willingness to recommend the destination to others	4.49	0.93	0.93	0.01	54.45		

Source: Primary Data, 2024

Table 1 presents the indicators used to assess construct validity, with all outer loadings exceeding the threshold value of 0.70, indicating strong and reliable relationships between the observed variables and their respective latent constructs. The average scores for each indicator also reflect positive respondent perceptions across constructs.

The model's overall fit was evaluated using several fit indices. According to established criteria, a model is considered to have an acceptable fit when the Standardized Root Mean Square Residual (SRMR) is less than 0.10 and a perfect fit when SRMR is below 0.08. The Normed Fit Index (NFI), which ranges between 0 and 1, was also employed to assess model fit. Based on the results (SRMR = 0.10; d_ULS = 1.37; d_G = 1.15; Chi-Square = 503.37; NFI = 0.61), all variables were confirmed as significant within the model at the 0.05 level. The overall model explained 61.3% of the variance, indicating a moderately good fit.

Predictive relevance was assessed using the Q^2 value, which evaluates the model's capacity to predict observed data. The Q^2 values for each endogenous variable were as follows: destination image = 0.31 (31.3%), motivation = 0.25 (24.9%), and loyalty = 0.46 (46.6%). All Q^2 values exceeded zero, confirming that the model possesses adequate predictive relevance. The next step in the analysis involved evaluating the structural model through path analysis, as illustrated in Figure 1.



(Source: Primary Data, 2024)

Figure 1. Structural model of tourist loyalty

Following the completion of the path analysis, a bootstrapping procedure was performed to assess the significance levels and probability estimates of the direct, indirect, and total effects among the constructs. The results of these analyses are presented in Table 2 (direct effects), Table 3 (indirect effects), and Table 4 (total effects).

Table 2. Direct effects of exogenous variables on endogenous variables

Hypothesis	Var. Exogen → Endogen	Original Sample (O)	Mean (M)	STDEV	t Statistics	p Values
H1	X1 (Destination Image) → Y (Loyalty)	0.24	0.10	0.10	2.43	0.01
H2	X2 (Influencer) → X1 (Destination Image)	0.72	0.08	0.08	9.08	0.00

H3	X2 (Influencer) (Motivation)	->	X3	0.71	0.09	0.09	7.93	0.00
H4	X2 (Influencer) (Loyalty)	->	Y	0.48	0.10	0.10	4.52	0.00
H5	X3 (Motivation) (Loyalty)	->	Y	0.14	0.07	0.07	1.90	0.05

Source: Primary Data, 2024

Based on Table 2, five direct relationships between the variables were identified, tested at a 5% significance level (critical t-value = 1.98) with corresponding p-values less than 0.05.

H1: The influence of destination image (X1) on tourist loyalty (Y) was found to be positive, with an original sample estimate of 0.24, a t-statistic of 2.43 (> 1.98), and a p-value of 0.01 (< 0.05). Thus, destination image exerts a statistically significant and positive effect on tourist loyalty.

H2: The effect of social media influencers (X2) on destination image (X1) was also positive, with an estimate of 0.72, a t-statistic of 9.08 (> 1.98), and a p-value of 0.00 (< 0.05). This indicates that social media influencers significantly enhance the perceived image of the destination.

H3: The influence of social media influencers (X2) on tourist motivation (X3) was confirmed with an estimate of 0.71, a t-statistic of 7.93 (> 1.98), and a p-value of 0.00 (< 0.05), demonstrating a strong and statistically significant relationship.

H4: The direct effect of social media influencers (X2) on loyalty (Y) yielded an estimate of 0.48, a t-statistic of 4.52 (> 1.98), and a p-value of 0.00 (< 0.05), suggesting that influencers play a pivotal role in shaping tourist loyalty.

H5: The effect of motivation (X3) on loyalty (Y) was positive with an estimate of 0.14, a t-statistic of 1.90, and a p-value of 0.05. Although the t-value is marginally below the critical threshold, the p-value confirms the relationship as statistically significant at the 5% level, indicating that tourist motivation contributes positively to loyalty.

In addition to the direct effects, the model also reveals several indirect pathways through which exogenous variables exert influence on endogenous variables, as presented in Table 3.

Table 3. Indirect effects of exogenous variables on endogenous variables

Hypothesis	Var. Exogen → Endogen	Original Sample (O)	Mean (M)	STDEV	t Statistics	p Values
H6	X2 (Influencer) -> X1 (Destination Image) -> Y (Loyalty)	0.17	0.17	0.07	2.26	0.02
H7	X2 (Influencer) -> X3 (Motivation) -> Y (Loyalty)	0.10	0.10	0.05	1.84	0.06

Source: Primary Data, 2024

H6: The indirect effect of social media influencers (X2) on tourist loyalty (Y) through destination image (X1) is positive and statistically significant, with an original sample estimate of 0.17, a t-statistic of 2.26 (> 1.98), and a p-value of 0.02 (< 0.05). This indicates that destination image partially mediates the relationship between influencers and tourist loyalty. Since both the direct and indirect effects are positive and significant, the mediation model is classified as consistent and complementary.

H7: The indirect effect of social media influencers (X2) on tourist loyalty (Y) through tourist motivation (X3) is also positive, with an estimate of 0.10. However, the t-statistic is 1.84 (slightly below the 1.98 threshold), and the p-value is 0.06 (> 0.05), indicating that the indirect effect is not statistically significant. Given that the direct effect of influencers on loyalty is significant while the indirect effect through motivation is not, this represents a case of full mediation. Nevertheless, because both the direct and indirect coefficients are positive, the overall mediation structure remains consistent in direction and exhibits a positive influence.

Table 4. Total effects of exogenous variables on endogenous variables

Var. Exogen → Endogen	Original Sample (O)	Mean (M)	STDEV	t Statistics	p Values
X1 (Destination Image) -> Y (Loyalty)	0.24	0.24	0.10	2.43	0.01
X2 (Influencer) -> X1 (Destination Image)	0.72	0.72	0.08	9.08	0.00
X2 (Influencer) -> X3 (Motivation)	0.71	0.70	0.09	7.93	0.00
X2 (Influencer) -> Y (Loyalty)	0.77	0.77	0.05	14.60	0.00
X3 (Motivation) -> Y (Loyalty)	0.14	0.15	0.07	1.90	0.05

Source: Primary Data, 2024

Based on the results presented in Table 4, the total effects indicate the cumulative influence of exogenous variables on endogenous constructs. Among all relationships examined, social media influencers exhibit the strongest total effect on tourist loyalty, with a coefficient of 0.77, surpassing the effects of both destination image and motivation. This finding provides robust empirical evidence that influencers play a dominant role in shaping tourists' intention to revisit, highlighting their strategic importance in post-pandemic destination marketing and loyalty-building efforts.

Discussions

This study reveals that destination image, social media influencers, and tourist motivation are significant predictors of tourist loyalty in the context of post-COVID-19 coastal tourism. Among these factors, social media influencers emerged as the most dominant, influencing tourist loyalty both directly and indirectly. This finding aligns with recent literature highlighting the growing influence of digital opinion leaders in shaping travel behavior, particularly through emotionally engaging and visually persuasive content (De Veirman et al., 2017; Han et al., 2025; Nandagiri & Philip, 2018).

The positive and significant effect of destination image supports prior studies indicating that tourists are more inclined to revisit destinations perceived as safe, aesthetically appealing, and emotionally resonant (Chi & Qu, 2008; Geyer et al., 2024). This finding also reinforces earlier destination image models that link perceived image to behavioral intentions, including loyalty and satisfaction. As Chen & Tsai (2007) noted, the image is composed of both cognitive (e.g., infrastructure and cleanliness) and affective (e.g., emotional impressions) components. In the case of Nusa Penida, the island's dramatic coastal landscapes, unique marine biodiversity, and rapid transformation from a remote fishing village to a digital tourism hotspot have helped shape a strong and favorable image. Moreover, the blend of traditional Balinese life and modern tourism infrastructure—often showcased by influencers—has enhanced the island's emotional appeal and brand authenticity among tourists (Gorji et al., 2023; Luong, 2025).

Although tourist motivation showed a positive direct effect on loyalty, the statistical significance was marginal. This finding contrasts with several previous studies (Carvache-Franco et al., 2022; Suardana & Kristianto, 2022) which found a stronger relationship. One possible explanation is the dominance of first-time or short-stay visitors among the sample, which may have diluted the motivational impact on loyalty formation. Moreover, this suggests that motivation alone is not a sufficient driver of loyalty unless supported by external stimuli such as emotional engagement through influencer content or a strongly perceived destination image. This emphasizes the increasingly central role of digital narrative in reinforcing internal motivations.

Tourist motivation also plays an essential role in loyalty formation, particularly through push factors such as the desire to escape routine, seek adventure, and connect with nature. emphasize that tourist motivation is influenced not only by rational factors but also by personal values, emotions, and past experiences. While its direct effect on loyalty was positive, the magnitude was weaker compared to other variables. This suggests that motivation alone may not be sufficient to drive loyalty unless complemented by external influences like destination image or persuasive digital content. Importantly, motivation demonstrated a meaningful mediating role between influencers and loyalty, indicating that emotionally resonant influencer content can

stimulate deeper internal drives that reinforce revisit intentions (Alves et al., 2016; Carvache-Franco et al., 2022; Lee, 2009).

A critical aspect that emerged from the respondent profile is the demographic composition dominated by younger tourists aged 17–24, many of whom are students. This segment represents digital natives who are highly responsive to social media and influencer content. Previous studies affirm that younger tourists often consider influencers as trustworthy and aspirational sources of travel recommendations, especially when content is visually immersive and emotionally authentic (Seric et al., 2024); Bastrygina et al., 2024). The influencer-driven content that aligns with destination values can significantly enhance loyalty. This generational trend may explain why social media influencers demonstrated the strongest total effect on loyalty in this study.

Furthermore, the analysis supports a complementary mediation model, wherein both destination image and tourist motivation act as pathways through which influencer content strengthens loyalty. This synergy suggests that influencer strategies are most effective when they not only attract attention but also enhance perceptions of destination quality and tap into tourists' emotional and psychological aspirations (Wong et al., 2022; Nieves-Pavón et al., 2024; Šerić et al., 2024).

Theoretically, this study contributes by integrating influencer-based marketing into the behavioral loyalty framework. It offers an expanded model for understanding tourist decision-making in the digital era, particularly by acknowledging digital opinion leaders as a crucial factor shaping perception, motivation, and commitment. The validated model explains 63% of the variance in tourist loyalty, underscoring the robustness of a multi-construct approach in explaining post-crisis travel behavior. It affirms that in the digital era, tourist loyalty is shaped not just by tangible experiences at the destination, but also by the narratives and emotional frames presented online before the trip even begins (Assaker et al., 2011).

Despite these contributions, this study has several limitations. The use of quota sampling may limit the generalizability of findings across broader demographics, especially older tourists or those with limited social media exposure. The reliance on self-reported intentions rather than observed behavior also poses a constraint on behavioral inference. Moreover, the study focused solely on international tourists and did not explore the perceptions of domestic visitors, who may differ in their digital consumption patterns.

Practically, the findings offer strategic insights for destination marketers and tourism stakeholders. Influencer partnerships should be carefully curated to ensure content authenticity, alignment with target market values, and emotional resonance. Meanwhile, efforts to maintain and enhance the destination image through sustainable development, improved infrastructure, and consistent digital storytelling will further reinforce positive tourist perceptions and encourage repeat visitation.

Finally, considering the youthful demographic trend of Nusa Penida visitors, future marketing strategies should be tailored to digitally engaged audiences while remaining inclusive of other age groups. Further research is recommended to compare generational responses to influencer-driven tourism marketing and to evaluate the influence of different social media platforms across diverse tourist segments.

Conclusions

This study identifies destination image, social media influencers, and tourist motivation as key determinants of tourist loyalty in the context of post-pandemic coastal tourism. Among these, social media influencers exert the most substantial influence, both directly and through their effect on motivation and destination image. This finding underscores the rising importance of digital narratives in shaping tourist behavior—especially among younger travelers who engage deeply with visually rich and emotionally compelling content.

From a theoretical perspective, the study advances the loyalty framework by integrating influencer-based marketing as a behavioral determinant. This integration provides a broader understanding of how digital trust, perceived destination value, and internal motivations jointly shape loyalty in the era of digital travel decision-making. Practically, the findings suggest that destination marketers should prioritize partnerships with authentic influencers who reflect the values and aspirations of their target audiences. Enhancing destination image through

sustainability, accessibility, and emotionally resonant storytelling is also critical for fostering repeat visits.

However, this study has several limitations. The use of quota sampling may introduce selection bias and restrict generalizability beyond the sample. Additionally, the dominance of younger respondents (aged 17–24) may limit insights into broader age demographics. The model was also tested in a single destination Nusa Penida, so contextual factors may not fully reflect other tourism settings.

Future research should consider comparative studies across different generational cohorts and destinations, using longitudinal designs to observe shifts in loyalty over time. Investigating the influence of platform-specific content (e.g., Instagram vs. TikTok) or cross-cultural differences in influencer perception could also offer more nuanced insights. In sum, this research contributes both theoretically and practically by framing social media influencers not merely as marketing tools but as agents of behavioral change within a comprehensive loyalty model. It emphasizes the critical interplay between digital engagement, emotional connection, and sustainable destination branding in fostering enduring tourist loyalty.

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Strategic management insights from a SWOT perspective: developing tourism villages in Subang District, West Java, Indonesia

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Abstract: The research provides strategic management insights by applying a SWOT analysis framework to develop Subang District, West Java, Indonesia tourism villages. It focuses on formulating an effective management and development strategy for Sari Bunihayu Tourism Village, one of the region's earliest tourism sites. Developing tourism villages in Indonesia is a strategic effort to strengthen rural economies, preserve cultural identity, and promote sustainable tourism. Despite its strong tourism potential, Sari Bunihayu faces key challenges, including weak institutional governance, underdeveloped infrastructure, limited digital promotion, and fragmented stakeholder coordination. Using a mixed-method research design, the research integrates qualitative approaches, field observations, document analysis, and stakeholder interviews, with quantitative techniques involving weighted SWOT matrices validated by expert input. Findings show that Sari Bunihayu falls within Quadrant II of the SWOT matrix, indicating that internal strengths can be utilized to address external threats. Strategic priorities include enhancing community participation, preserving traditional knowledge, and strengthening destination branding to support cultural and agrotourism. Recommended initiatives involve developing educational tourism programs, hosting annual cultural festivals, improving digital marketing led by local youth, and forming a tourism cooperative to reinforce institutional capacity. The research recommends stronger collaboration among communities, government, academia, and the private sector. It also highlights the need for improved infrastructure, human capital development, and policy integration to ensure inclusive, adaptive, and sustainable tourism governance. Ultimately, this research presents a replicable strategy model for rural tourism development in Subang Regency, supporting broader equity, sustainability, and cultural preservation goals.

Keywords: strategy management, sustainable tourism, SWOT analysis, tourism village

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Introduction

Tourism plays a vital role in driving economic transformation in developing countries, contributing significantly to employment, income generation, and rural revitalization (Briedenhann & Wickens, 2019). As the sector grows, the demand for integrated infrastructure, spanning transportation, accommodations, attractions, and services, becomes essential in supporting visitor satisfaction and destination competitiveness (Hanafiah et al., 2021). In Indonesia, tourism is a national economic driver and a catalyst for rural transformation through locally initiated tourism models.

In this context, rural-based tourism, particularly the tourism village model, has emerged as a key approach to community empowerment and sustainable development. Tourism villages emphasize localized experiences by integrating cultural authenticity with economic participation (Dangi & Jamal, 2019). Government programs have actively promoted this model to decentralize tourism benefits and stimulate rural economies through village-led initiatives that blend traditional

livelihoods with tourism services such as culinary arts, crafts, and guided tours (Sigala, 2020). Despite these initiatives, many tourism villages still face significant challenges in maximizing their potential due to fragmented planning, limited market exposure, and weak institutional coordination.

One notable example is the Sari Bunihayu Tourism Village in Subang Regency, West Java. Established in 1989 and located at an altitude of 500–1,700 meters, this village spans three hectares and offers visitors a unique combination of ecological landscapes, agricultural activities, and cultural heritage. Despite its longstanding presence and proximity to major attractions such as Mount Tangkuban Perahu and Ciater Hot Springs, Sari Bunihayu Tourism Village suffers from underutilization due to the absence of an integrated strategy that connects its natural and cultural assets with regional tourism circuits. Its promotional efforts remain limited and outdated, relying largely on traditional word-of-mouth channels without the support of digital platforms or data-driven marketing. Additionally, the village's management system lacks professional structure and clear role division among stakeholders, which results in disjointed planning, minimal innovation, and weak institutional responsiveness. The absence of standardized service protocols and performance monitoring further hampers its ability to deliver consistent visitor experiences. These operational shortcomings are exacerbated by a lack of investment in capacity building and local tourism training, leading to underdeveloped human resources and service quality gaps. Consequently, the village struggles to build a strong destination identity and maintain competitiveness in the increasingly dynamic rural tourism market. These issues align with the concerns raised by Niezgoda and Kołodziejczak (2020), who underscore how inadequate visibility and strategic misalignment can obstruct sustainable tourism development.

However, few studies have examined how SWOT analysis can be practically applied to improve tourism village development in regions like Subang, where contextual factors such as rural governance, limited digital promotion, and fragmented stakeholder coordination remain key challenges. Most existing studies focus on theoretical discussions or general tourism development without offering concrete strategic frameworks tailored to the realities of individual villages. This gap highlights the need for practical, site-specific strategic tools that diagnose current conditions and guide the formulation of actionable, locally appropriate development strategies.

Applying a SWOT (Strengths, Weaknesses, Opportunities, Threats) analysis offers a structured method for diagnosing current conditions and formulating actionable strategies tailored to the village's local context (Gössling & Hall, 2021). Despite the village's strategic location near key tourist nodes, including the Ciater Tea Plantation and the Sacred Tomb of Ranggawulung, there is no integrated plan to capitalize on these synergies, limiting the village's ability to attract a broader visitor base and sustainably manage its tourism resources.

While previous studies have explored sustainability and community participation in rural tourism (Seraphin et al., 2021), few have operationalized SWOT analysis in real-world tourism village contexts, particularly in Indonesia. Moreover, the recent global shifts caused by the COVID-19 pandemic and digitalization underscore the need for adaptive, resilient planning (Tran et al., 2023). The Smart Village Tourism Framework and Triple Bottom Line models offer relevant paradigms for enhancing governance, innovation, and socio-environmental balance (Cavagnaro & Curiel, 2023).

Therefore, this research aims to design effective management and development strategies by producing a SWOT-based strategy tailored to the specific conditions of Sari Bunihayu Tourism Village. As one of the earliest established tourism villages in Subang District, Sari Bunihayu holds a unique position in the region's rural tourism landscape. While it may not fully represent the diversity of all tourism villages across Subang, it serves as a valuable case due to its longevity, strategic location, and hybrid offerings of ecological, cultural, and agricultural experiences. According to data from the Subang Regency Tourism Office, there are currently more than 20 officially recognized tourism villages in the district, each with a varying thematic focus, development stage, and level of community involvement. Sari Bunihayu was among the first to be promoted as a rural tourism site in the late 1980s, making it a relevant and insightful subject for examining long-term development patterns, institutional challenges, and strategic potential in a rapidly evolving tourism environment.

Tourism villages are not merely alternative destinations but represent an integrated strategic model that combines cultural heritage, natural resources, and community engagement to deliver authentic and sustainable tourism experiences (Ruhanen et al., 2021; Nuryanti, as cited in Nalayani, 2016). This concept aligns with the principles of Community-Based Tourism (CBT), which promotes equitable distribution of benefits, active local participation, and community empowerment (Dangi & Jamal, 2019; Rahmawati et al., 2021).

To strengthen the theoretical framework of this study, it is critical to revisit the original contribution of Nuryanti (1993), who conceptualized the tourism village as a postmodern response to the commodification of culture and heritage. In her seminal work, Nuryanti outlines five interrelated dimensions that are essential for effective tourism village management: economic empowerment, cultural preservation, ecological balance, political inclusion, and institutional governance. These dimensions serve not only as normative pillars but also as analytical tools for evaluating tourism village performance and sustainability.

Within the context of this research, Nuryanti's framework provides a foundation for developing SWOT-based strategies tailored to the specific characteristics of Sari Bunihayu Tourism Village. By analyzing each of the five dimensions, this study aims to identify the internal strengths and weaknesses that influence the village's capacity to evolve into a resilient, community-oriented, and competitive rural tourism destination.

Empirical studies highlight that successful tourism villages leverage indigenous resources and local knowledge to drive development, enhancing community resilience and preserving ecological and cultural integrity (Niezgoda & Kołodziejczak, 2020). Managing visitor numbers through carrying capacity frameworks helps protect the destination from overtourism, ensuring sustainable experiences for locals and tourists alike. This reinforces the relevance of SWOT analysis for formulating place-specific tourism strategies in Sari Bunihayu.

Effective governance is equally vital. Zamfir & Corbos (2015) emphasize the role of multi-stakeholder collaboration involving local government, businesses, academia, and communities in enhancing innovation and ensuring equitable outcomes. In contrast, Suansri (2003) highlights the importance of bottom-up leadership in driving sustainable tourism. Both perspectives stress that stakeholder synergy is essential for successful tourism governance. The case of Penglipuran Village in Bali, for example, demonstrates how local regulations and transparent revenue-sharing systems can strengthen destination management (Novriyanti & Ristanti, 2022).

Cultural heritage preservation further enriches tourism villages. Richards & Du Cros (2020) note that tourism sustains local traditions, while intergenerational knowledge transfer through crafts and rituals strengthens community pride and visitor engagement (Salouw, 2022). Strategic planning for tourist villages thus requires integrating governance, heritage preservation, and participatory management into holistic destination development.

From a marketing perspective, destination planning must include visitor flow management, infrastructure enhancement, and identity branding. Andrades & Dimanche (2022) highlight that tourism experiences must be emotionally resonant, while Prayag et al. (2023) emphasize the importance of cultivating strong destination identities. Complementarily, Sigala (2020) underscores digital transformation as a critical differentiator, suggesting that smart technologies and digital storytelling complement place branding.

The Triple Bottom Line framework introduced by Cavagnaro & Curiel (2023) encourages balancing economic viability, environmental responsibility, and social inclusiveness in tourism development. Additionally, digital innovations such as virtual tours, ICT platforms, and online marketing have become essential tools for expanding the reach of rural destinations (Tran et al., 2023; Sigala, 2020). This reinforces the relevance of SWOT analysis for formulating place-specific tourism strategies in Sari Bunihayu.

Despite the wealth of research on tourism village development, few studies explore how SWOT analysis can be operationalized at the village scale with a focus on integration, branding, and institutional coordination in the Indonesian context. This study seeks to bridge that gap by applying SWOT as a strategic planning framework tailored to the unique realities of Sari Bunihayu. By embedding SWOT analysis within broader paradigms of community empowerment, digital transformation, and sustainability, this research contributes theoretically and practically to tourism village development in Indonesia.

The sustainable development of tourism villages necessitates an integrated approach that harmonizes cultural heritage, community empowerment, and modern innovation. Karyono (1997) asserts that tourism villages should offer unique attractions rooted in local arts, traditional lifestyles, and natural landscapes to create meaningful visitor experiences. Supporting infrastructure, including transportation, waste management, and public utilities, must be adequately developed to meet visitor expectations and ensure environmental sustainability. Moreover, strengthening human resources and institutional governance is essential for delivering quality services and sustaining long-term tourism growth. Karyono also highlights the importance of targeting both domestic and international markets to maintain economic viability.

Contemporary scholars expand this foundation by integrating new perspectives. Sihombing et al. (2023) emphasize the significance of digital literacy and smart tourism technology in enhancing village competitiveness, particularly in the post-pandemic era. Putra and Ardiansyah (2022) stress that local entrepreneurship and innovative tourism products are key to strengthening rural destination competitiveness. Yuliani et al. (2023) advocate embedding sustainability principles—environmental conservation, cultural preservation, and social inclusiveness into tourism planning. Santosa and Hermawan (2022) emphasize participatory planning and community empowerment as drivers of success, while Rahmawati et al. (2021) underscore the role of local wisdom in enriching visitor experiences. Widodo and Nugroho (2024) further highlight how destination branding aligned with local identity enhances market appeal. Collectively, these insights suggest that the future of tourism villages depends on balancing heritage values with technological innovation to foster resilience and inclusive growth.

The development of tourism villages requires a comprehensive and integrated approach involving multiple critical components. Karyono (1997) emphasizes that tourism villages should offer unique attractions rooted in local arts, culture, historical heritage, traditional lifestyles, and natural beauty to create distinctive tourist experiences. Accommodation options, often in the form of homestays or community-based lodgings, enhance the authenticity of the stay while promoting local economic development. A competent institutional structure and well-trained human resources are crucial for ensuring effective governance, high-quality services, and long-term sustainability. Furthermore, supporting tourism infrastructure such as communication networks, waste management, and public utilities must be adequately developed to meet tourist expectations and environmental standards. Reliable drainage systems and transportation access are equally vital for maintaining operational efficiency and visitor satisfaction. Karyono also notes the importance of leveraging both domestic and international tourist markets to sustain economic viability and stimulate local growth. These foundational elements remain relevant but must be integrated with modern strategies to adapt to evolving tourism trends and challenges.

SWOT analysis serves as a fundamental framework for identifying an organization's internal strengths and weaknesses alongside external opportunities and threats that shape its strategic direction (Pearce & Robinson, 2010). Through this approach, management aligns internal resources with external factors to maximize advantages and address vulnerabilities. King et al. (2023) expand this by integrating big data analytics and external factor analysis, enhancing strategic precision. Chuang and Huang (2019) emphasize the importance of prioritizing factors by impact and scalability for better decision-making. Grant (1998) asserts that effective strategies arise when internal resources align with external opportunities, while Norberg and Brown (2001) integrate the Balanced Scorecard with SWOT to form a balanced strategic framework.

Andrade et al. (2023) underscore SWOT's enduring relevance in strategic management, supported by quantitative evaluation tools such as IFAS and EFAS matrices (Memah & Potolau, 2019). The TOWS matrix (Wehrich, 1982; Lohrke et al., 2022) enhances this by pairing internal and external factors into actionable strategies. David (2016) highlights the need for continuous matrix reassessment in dynamic environments.

Further, frameworks like the Composition-Based View (Luo & Child, 2015) suggest that ordinary resources can be recombined innovatively, while Tourism 4.0 (2021) demonstrates how digital twin and IoT technologies transform SWOT into predictive, sustainability-driven tools.

Despite the wealth of research on tourism village development, few studies explore how SWOT analysis can be operationalized at the village scale with a focus on integration, branding,

and institutional coordination in the Indonesian context. This study contributes to filling that gap by offering a site-specific strategic framework designed to strengthen the holistic development of Sari Bunihayu Tourism Village.

Methodology

This research employs a descriptive qualitative research method, where the researcher seeks to comprehensively understand a particular subject through qualitative approaches. Existing theories are further developed based on the data collected during the research process. According to Creswell and Poth (2021), qualitative research is an approach that aims to explore and understand the meanings that individuals or groups attribute to a social or human problem. This method involves emerging research questions, data typically gathered in natural settings, and positions the researcher as the key instrument, collecting data from various sources such as interviews, observations, and documents.

In alignment with the research's objectives, data collection involved direct engagement with a purposively selected group of 15 participants representing diverse institutional, managerial, socio-cultural, and economic perspectives, comprising 3 government officials from the local tourism and culture department who were directly engaged in formulating and implementing tourism development policies, regulatory frameworks, and strategic planning; 4 tourism village managers responsible for overseeing daily operations, product innovation, visitor services, and destination promotion within designated tourism villages; 4 community leaders who served as respected elders and cultural custodians with extensive knowledge of local traditions, historical heritage, and community engagement practices essential for tourism sustainability; and 4 private-sector representatives from the hospitality and tourism-related industries, including accommodation providers, travel service operators, and retail enterprises that contribute to the regional tourism value chain, thereby ensuring that the data collected reflected a comprehensive and multidimensional understanding of the tourism ecosystem while enhancing the analytical depth, credibility, and validity of the research findings through methodological triangulation.

While the core methodology is qualitative, this research also incorporates quantitative components during the strategic analysis stage, particularly through applying a SWOT matrix using weighted scores and ratings. These numerical values were derived from expert assessments and field data, combining subjective evaluations with systematic calculation to prioritize strategic factors. Thus, the approach can be classified as a mixed-method design.

This research employed documentation and observational methods to gather relevant data. The data collection process was conducted over four months directly in the field, focusing on various tourism destinations across Subang Regency. The overall research took place over five months, from February to June 2024, followed by interviews conducted in the subsequent month with several related institutions to validate findings and gather expert insights. Data analysis and further data collection were carried out in August, followed by the data processing stage after gathering all the necessary information.

The methodological rigor of this research was further reinforced through the involvement of experts whose professional backgrounds and domain knowledge were directly relevant to the research objectives. The expert panel consisted of individuals with substantial experience in tourism development, destination management, and regional policy making within the context of Subang Regency. Among them were senior officials from the regional tourism and culture department, who possess in-depth expertise in designing and implementing tourism policies, regulatory frameworks, and sustainable development strategies.

Their insights ensured the research's approach aligned with current governmental priorities and legal provisions. Additionally, the panel included seasoned tourism village managers with over a decade of operational leadership experience, bringing practical knowledge of visitor management, product innovation, and community-based tourism models. Their contributions were invaluable in contextualizing the observational findings with real-world operational challenges.

Furthermore, cultural heritage specialists and community leaders provided authoritative perspectives on preserving local traditions, intangible heritage, and cultural narratives, which are critical for ensuring the sustainability and authenticity of tourism initiatives. Including these

experts not only strengthened the methodological validity through triangulation but also enhanced the analytical depth by integrating policy-oriented and practice-based perspectives, ensuring that the findings reflect a comprehensive understanding of Subang Regency's tourism ecosystem.

A SWOT matrix analysis was utilized to determine effective development strategies for tourism destinations. This analytical approach enabled the identification of opportunities and threats by aligning them with the sector's internal strengths and weaknesses. The rating, weighting, and scoring system used in the SWOT matrix followed a structured procedure based on the relative importance of each factor, with calculations grounded in field observations, stakeholder feedback, and supporting documentation.

The research is classified as a survey-based study. It involved systematic observation of tourism-related activities and the review of supporting documentation. No experimental setup or simulation tools were used. The research did not rely on any specific software or hardware products. All observations were conducted under natural conditions without technological intervention. The framework of this research was grounded in SWOT theory, which has been widely recognized for its strategic planning capabilities. All procedures and conditions were designed to allow other researchers to replicate the research under similar contexts.

Based on the data obtained, the number of tourist visits to Subang Regency from 2020 to 2024 is shown in Table 1 as follows:

Table 1. Subang regency tourist visits (domestic & international) 2020–2024

Year	Domestic Visits (Approx.)	International Visits	Notes
2020-2021	Not Available	-	Pandemic Years
2022	7.8 million	Not separately reported	Domestic rebound
2023	10.8 million	-	Record domestic
2025	4,011,335 (drop) Ongoing	-	Decline vs 2023

(Source: Data from the Subang Regency Tourism Office, West Java, 2024)

In 2020 and 2021, tourist visits were significantly affected by the COVID-19 pandemic, resulting in limited or unavailable data for both domestic and international travelers. In 2022, tourism began to recover, with approximately 7.8 million domestic tourist visits recorded. This upward trend continued in 2023, with total domestic visits reaching around 10.8 million. However, in 2024, there was a noticeable decline. According to official data, domestic tourist visits dropped to approximately 4,011,335, marking a 23.4% decrease compared to the previous year. International visitor data remains unavailable or unrecorded, indicating minimal regional foreign tourism activity.

Results and Discussions

Results

Tourism development in Subang Regency has been systematically assessed through the construction of a 3×3 SWOT matrix, designed to map internal dynamics against external challenges and opportunities. The matrix illustrates a structured analysis of internal strategic elements, including the destination's attractiveness, efficiency in tourism operations, institutional frameworks, and promotional mechanisms. Notably, each component is evaluated through a percentage-based scoring system, enabling a more precise comparison of its contributions to overall performance. The SO (Strengths–Opportunities) strategies utilize the region's rich natural and cultural assets to promote ecotourism and agrotourism in line with sustainable tourism trends. ST (Strengths–Threats) strategies emphasize community participation and traditional knowledge to address environmental risks and over-tourism. The WO (Weaknesses–Opportunities) strategies aim to resolve infrastructure and service gaps through collaborations with public and private stakeholders. WT (Weaknesses–Threats) strategies adopt a conservative approach by leveraging digital marketing and inter-agency cooperation to overcome promotional and funding limitations. This structured matrix provides a strategic lens for aligning internal capabilities with external conditions and serves as a framework for formulating inclusive, sustainable, and community-

oriented tourism development policies. The comprehensive interpretation of this matrix is presented in Table 2 and Table 3 as follows:

Table 2. Matrix of internal aspects

Internal Attribute Framework of Subang's Tourism Villages				
Internal Strategy Component		Rating (R)	Weight (B) (%)	Score (RxB) (%)
Strength				
Tourism Destination Attributes				
1	The region boasts a wealth of natural attractions, stretching across land and marine environments.	3	7	21
2	Tourism in the area is heavily centered around natural landscapes, with a particular focus on mountainous and forested terrains.	3	5	15
3	Local traditions, including artistic expressions and cultural customs, remain well-preserved and continue to thrive.	3	6	18
4	The tourism development areas have been designated by geographic zones, northern, central, and southern, each aligned with a specific thematic focus.	3	5	15
5	A spatial master plan has been formulated to guide the long-term development of tourism across the district.	3	5	15
6	The area is easily accessible via major toll exits, including those located in Subang and Kalijati.	3	7	21
7	Basic public utilities such as clean water, electricity, drainage systems, and waste management are already in place.	2	6	12
8	Tourism-related facilities and infrastructure in Subang Regency are generally sufficient to support visitor needs.	2	6	12
Tourism Industry Development				
1	The hospitality sector, especially hotels and restaurants, is relatively well-established in the central and southern regions of the district.	2	7	14
2	Subang benefits from existing research, databases, and investment feasibility studies that provide a strong foundation for tourism planning and growth.	2	6	12
Tourism Market and Marketing				
1	There is an evident potential in both domestic and international tourism markets that can be further tapped into.	2	6	12
2	Marketing strategies have begun to leverage digital platforms, with tourists increasingly playing an active role in promotion by sharing their own experiences.	2	7	14
3	Tourism-related associations in the region show a high level of enthusiasm and commitment, particularly in organizing and coordinating tourism events and promotional activities collectively.	2	5	10
4	Subang Regency is widely recognized as a destination for family-oriented recreation, with well-known attractions such as Sari Ater and Mount Tangkuban Perahu shaping its public image.	3	7	21
Institutional Framework				

Internal Attribute Framework of Subang's Tourism Villages				
Internal Strategy Component		Rating (R)	Weight (B) (%)	Score (RxB) (%)
1	The district benefits from a sizable population of individuals within the productive age range, offering significant potential as a human resource pool for the tourism sector.	3	5	15
2	The local community's strong adherence to Islamic values contributes to shaping Subang Regency's reputation as a region that is both spiritually grounded and secure for visitors.	3	5	15
3	In specific tourist destinations, a revenue-sharing arrangement has been implemented, allowing financial benefits from tourism levies to be distributed between local authorities, private operators, and the surrounding community.	2	5	10
Total Strength (S)			100	252
Weakness				
Tourism Destination Attributes				
1	The natural ecosystems in the area are highly sensitive and prone to degradation due to the intensity and diversity of tourism-related activities.	-2	4.5	-9
2	The current tourism development is heavily concentrated in the southern region, which primarily focuses on mountain-based attractions. As a result, there is a pressing need to diversify tourism themes, including the promotion of coastal tourism in the south and urban tourism in the central region.	-2	3	-6
3	Many of the existing tourism facilities and infrastructure, particularly those serving community-level tourism hubs, fall short of acceptable standards.	-3	4.5	-13.5
4	The disparity in regional accessibility means that tourism growth tends to cluster around areas with reliable road networks, leaving other locations less developed due to limited infrastructure.	-3	4.3	-12.9
5	Public transport options to key tourist destinations remain sparse, with limited schedules and availability. Consequently, visitors often have no choice but to use private vehicles, which can involve extended travel times.	-4	5	-20
6	There is an uneven distribution of basic utilities across the district—both in terms of coverage and service quality—especially in the northern region, which remains underserved.	-4	5	-2
7	The northern parts of Subang lack adequate support services for tourism, including lodging, dining establishments, souvenir shops, directional signage, and tourist information centers.	-4	5	-2
8	Most tourism sites and supporting facilities, such as hotels, do not yet incorporate disaster risk reduction measures. Essential features like designated evacuation routes, earthquake-resistant infrastructure, and emergency rooms are largely absent.	-3	5	-15
Tourism Industry Development				

Internal Attribute Framework of Subang's Tourism Villages				
Internal Strategy Component		Rating (R)	Weight (B) (%)	Score (RxB) (%)
1	The tourism business sector lacks consistent standards of operation—for instance, some accommodations are classified as star-rated but deliver services that fall below that level.	-3	4	-12
2	Policy frameworks and planning documents are often underutilized and do not effectively inform actual tourism-related policymaking.	-2	5	-10
3	There are currently no incentive policies aimed at encouraging sustainable investment in the tourism sector by individuals or private enterprises.	-2	4	-8
4	There are no environmental accountability mechanisms or penalties to address harmful practices by tourism business operators.	-2	4	-8
5	Environmental impact assessments (AMDAL) have not been systematically developed to evaluate the consequences of tourism industry operations and expansions.	-3	5	-15
Tourism Market and Marketing				
1	There is an absence of comprehensive market research aimed at understanding tourist demographics, behavior patterns, and preferences.	-3	4	-12
2	Marketing and promotional campaigns lack precision and are not strategically directed at specific audiences or destinations.	-3	5	-15
3	Subang Regency has yet to establish an official, centralized tourism website that serves as a digital gateway for visitors.	-4	5	-20
4	There is no well-maintained database containing detailed information on tourist attractions and the available supporting services.	-4	4	-16
5	The region does not yet possess a cohesive brand identity—elements such as slogans and logos are either undeveloped or poorly publicized.	-4	6	-24
Institutional Framework				
1	Many individuals working in the tourism industry lack adequate skills, indicating an urgent need for targeted training programs to improve service quality.	-3	3,5	-10.5
2	Policy-makers and tourism planners often have limited technical expertise and practical understanding of tourism development dynamics.	-2	2,7	-5.4
3	Bureaucratic fragmentation and poor inter-agency collaboration hinder integrated tourism development due to sectoral silos.	-2	3	-6
4	The number of dedicated institutions focused on tourism remains low, limiting administrative and developmental capacity.	-2	4	-8
5	Reliable data and analytical information related to various dimensions of tourism—destinations, markets, institutions—are still scarce, particularly for emerging or underdeveloped areas.	-3	1.5	-4.5

Internal Attribute Framework of Subang's Tourism Villages			
Internal Strategy Component		Rating (R)	Weight (B) (%)
			Score (RxB) (%)
6	Local communities often lack awareness and understanding of the expectations and operational standards of the tourism industry, including the core values represented by Sapta Pesona (seven tourism charms).	-2	1.5
7	Collaborative frameworks involving stakeholders—especially community participation—are still underdeveloped, with engagement limited to only a handful of tourism sites.	-3	1.5
Total Weakness (W)			100
Total Internal Component (X)		S+W = 252 + (-298.3) =	
		-46	

Table 3. Matrix of external aspects

External Attribute Framework of Subang's Tourism Villages			
External Strategy Component		Rating (R)	Weight (B) (%)
			Score (RXB) (%)
Opportunity			
Tourism Destination Attributes			
1	Specific tourist sites with high strategic value have been identified for designation as flagship attractions, priority tourism zones, and core tourism areas.	3	9
2	Both nature-based and urban tourism destinations continue to draw the highest levels of visitor interest.	3	15
3	Financial support—whether sourced from national government, local authorities, or international donors—can be directed toward tourism initiatives in line with regional development agendas.	3	10
4	Local commodities such as agricultural products, fisheries, plantation goods, and processed items offer strong potential to be transformed into tourism-linked economic sectors.	4	9
Tourism Industry Development			0
1	There is growing openness to both domestic and foreign investment in the tourism sector, creating opportunities for expanded business development.	2	7
2	The region has the potential to adopt sustainable tourism practices, including the integration of low-carbon travel and environmentally conscious visitor experiences.	2	8
Tourism Market and Marketing			0
1	Cultural tourism is increasingly favored by travelers, presenting a key area for product and experience diversification.	3	9
2	Advances in digital technology and the rise of geo-social platforms present new tools for enhancing tourism promotion and engagement.	3	10
3	National-level promotional efforts have begun to position Subang Regency as a leading recreational tourism	3	9

External Attribute Framework of Subang's Tourism Villages			
External Strategy Component	Rating (R)	Weight (B) (%)	Score (RXB) (%)
destination, offering marketing momentum for local stakeholders.			
Institutional Framework			0
1 The expanding tourism labor market offers chances for competitive human resources, including professionals from other regions or even international talent, to contribute to industry growth.	2	5	10
2 Corporate Social Responsibility (CSR) initiatives from various companies can be leveraged to support tourism-related infrastructure and community-based projects.	3	9	27
Total Opportunity (O)		100	289

(Source: Analysis Results, 2025)

In conducting the SWOT analysis, each internal and external factor is assigned a weight that reflects its relative significance in the context of regional development, with the total weight for all internal factors summing to 1, as does the total for all external factors, ensuring proportional representation within the analysis. Each factor is then evaluated using a rating scale ranging from -4 to +4, where higher negative scores reflect severe weaknesses or threats, while higher positive scores indicate significant strengths or promising opportunities. The importance level of each factor influences its assigned rating. Finally, the overall score of each factor is calculated by multiplying its respective weight by its assigned rating value, providing a quantified assessment of its strategic impact.

Using data from the internal and external analysis matrices, the cumulative strength score for tourism villages in Subang Regency stands at 252, while the cumulative weakness score is -298,3. These combined yield a net internal score of -46. This result places the position of tourism development on the negative side of the X-axis, indicating that current internal strengths are insufficient to compensate for the prevailing weaknesses. On the other hand, the evaluation of external conditions shows a total opportunity score of 289 and a total threat score of -279. The net external score, therefore, is 10, placing the village's development position slightly on the positive Y-axis. This suggests that, despite internal shortcomings, there is a favorable external environment. Existing opportunities, especially in expanding and enhancing tourism destinations, could be strategically leveraged to reduce or neutralize the negative effects of potential threats.

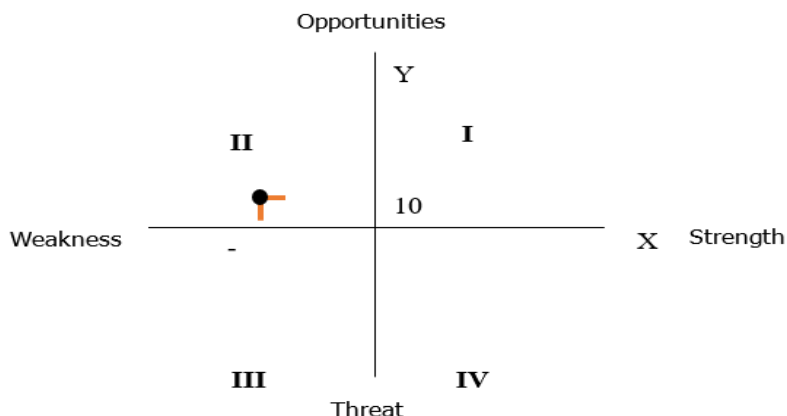


Figure 1. Subang's tourism villages

The process of determining the weights and ratings for the SWOT analysis of Sari Bunihayu Tourism Village employed a participatory approach. This approach actively involved key stakeholders, including tourism village managers, local business actors, community leaders, and representatives from the local government, ensuring that the analysis reflected diverse perspectives and local realities.

In the first stage, weights were assigned to each SWOT factor to reflect their relative importance in the village's tourism development context. The weighting scale ranged from 0.0 to 1.0, and the total weight for internal factors (strengths and weaknesses) and external factors (opportunities and threats) was normalized to 1.0, respectively. Factors considered highly influential in driving tourism growth or presenting critical challenges received greater weighting.

After assigning weights, each factor was rated based on its present condition or potential impact on the tourism village. Strengths and opportunities were evaluated using a scale of 1 to 4, where higher ratings indicated a more substantial contribution or greater potential. In contrast, weaknesses and threats were rated according to the severity of their negative impact, with higher scores reflecting higher levels of risk or vulnerability.

These weights and ratings were later multiplied to calculate composite scores, which provided a quantitative basis for mapping the tourism village's strategic position within the SWOT matrix.

The application of weights and ratings to the identified SWOT factors generated several essential insights regarding the present condition and future prospects of Sari Bunihayu Tourism Village. These insights reflect both the internal capacities and external dynamics that shape the village's tourism development potential.

The primary strengths identified include the village's rich cultural heritage, picturesque natural landscapes, and active community engagement. These elements form a solid foundation for sustainable tourism growth, aligning with community-based tourism principles that emphasize authenticity and local participation.

However, the analysis also uncovered several internal weaknesses. Most notably, the village faces limitations in its digital marketing capabilities, hindering its ability to reach broader tourism markets. In addition, deficiencies in tourism-related infrastructure, especially in transportation systems and public facilities, constrain the overall visitor experience and accessibility.

On the external front, several promising opportunities exist. The rising popularity of experiential tourism and the Indonesian government's supportive policies, such as the initiative to develop 3,000 tourism villages (Kemenparekraf, 2024), create a favorable environment for tourism growth. These factors, if leveraged effectively, can position the village competitively within the rural tourism sector.

Despite these opportunities, external threats remain. Competition from other rural tourism destinations continues to intensify, while persistent infrastructure deficits in the broader region could hinder the village's ability to attract and retain visitors. Addressing these challenges will require targeted strategies that build on internal strengths while mitigating external risks.

Based on the computed results, the tourism village of Sari Bunihayu was positioned in Quadrant II of the SWOT matrix. This strategic position suggests that the village maintains relatively strong internal capabilities, allowing it to manage external threats effectively. In this context, a Strength-Opportunity (SO) strategy is recommended to leverage internal advantages and pursue emerging opportunities, such as market expansion or product diversification. Additionally, considering the presence of specific weaknesses, a Weakness-Opportunity (WO) strategy could be applied to address internal limitations while capitalizing on external growth potential.

The SWOT analysis and the village's strategic positioning in Quadrant II produced several strategic directions to support tourism development in Subang Regency. These strategies reflect the internal and external factors identified during the analysis process and outline practical steps for enhancing the tourism sector's capacity and sustainability.

The strategic directions for tourism development in Subang Regency emphasize the identification of flagship attractions and the promotion of tourism growth in areas aligned with local characteristics. Infrastructure improvement, integration of agriculture and local industries

into tourism activities, and enhanced transportation systems are essential to support accessibility and visitor experience. Investment optimization, cultural heritage preservation, and standardized management practices in tourism enterprises aim to increase competitiveness. Collaboration with national tourism agencies will strengthen destination branding, while community-based training will develop human capital in tourism. Finally, leveraging Corporate Social Responsibility (CSR) programs from local industries will contribute to infrastructure development and empower local communities. These strategic directions represent the key outcomes of the SWOT analysis and provide a comprehensive framework for guiding the tourism development agenda in Subang Regency.

Discussions

The findings from the SWOT analysis, derived through a carefully weighted and rated process, reinforce the importance of leveraging local resources and active community involvement in shaping sustainable tourism. These internal strengths, particularly the village's rich cultural heritage and community-based initiatives, reflect the principles of community-based tourism (CBT) discussed by Nuryanti (1993) and later expanded by Dangi and Jamal (2019). Both scholars emphasize that grassroots collaboration fosters authentic and resilient tourism development in rural areas.

On the other hand, the identified weaknesses—specifically the underdeveloped digital promotion and infrastructure—correspond with the challenges highlighted by Astuti and Cahyono (2020). Their research pointed out that many rural tourism destinations in Indonesia still lack robust digital marketing strategies and adequate tourism infrastructure, limiting their competitiveness in an increasingly digitalized tourism market.

The external environment analysis further reveals promising opportunities. National tourism policies supporting the development of thousands of tourism villages align with Suansri's (2003) assertion that rural destinations must differentiate themselves by embracing their unique cultural and environmental assets. Nevertheless, the analysis highlights persistent threats like competition from other rural areas and ongoing infrastructure deficits. These concerns are consistent with the warnings from Oktaviani and Siregar (2022), who argue that rural tourism destinations risk stagnating without continuous innovation and infrastructure development.

The positioning of Sari Bunihayu Tourism Village in Quadrant II indicates a relatively strong internal condition capable of confronting external threats. This positioning supports proactive strategies that build on the village's existing advantages while addressing environmental challenges. Given its placement in Quadrant II, the strategic focus should prioritize leveraging strengths to mitigate threats (Strength-Threat strategy) and capitalize on available opportunities (Strength-Opportunity strategy). This approach enhances resilience against external challenges and positions the village for sustainable growth.

The Strengths–Opportunities (SO) strategy could involve developing agro-educational tourism packages in collaboration with local farmers and schools. By integrating agriculture with educational tourism while stimulating the local economy, the village can create authentic visitor experiences. This approach effectively connects the village's natural and cultural strengths with emerging market trends in experiential tourism.

To address external competition, the Strength–Threat (ST) strategy proposes establishing an annual cultural event, such as the Sari Bunihayu Cultural Harvest Festival. This festival would celebrate Sundanese arts, cuisine, and folklore, creating a unique identity for the village and attracting visitors seeking cultural authenticity, an important differentiator in the crowded rural tourism sector.

Addressing internal weaknesses is essential through the Weakness–Opportunity (WO) strategy. For example, youth organizations like Karang Taruna could lead digital marketing initiatives, enhancing the village's online presence through social media training and promotional content creation. These efforts could be supported by corporate social responsibility (CSR) programs or partnerships with nearby universities, turning a current weakness into a growth area.

Finally, the Weakness–Threat (WT) strategy suggests forming a village-level tourism cooperative to build institutional resilience and reduce dependency on external stakeholders.

Additionally, business incubation programs could nurture new tourism entrepreneurs from within the local community, preparing them to face future market fluctuations.

Successfully implementing these strategies requires coordinated efforts among multiple stakeholders. Village leaders and tourism managers play a key role in mobilizing local resources and initiating product innovation aligned with the village's strengths. Youth groups are pivotal in driving digital transformation and expanding market reach through online platforms. Local government bodies must continue supporting tourism growth through infrastructure investment, policy facilitation, and institutional strengthening. External partners, including universities and corporations, can contribute technical expertise, mentorship, and financial support through collaborative programs and CSR initiatives.

Despite the promising outlook, several challenges must be addressed. Limited financial resources, gaps in human resource capacity, and fluctuating market dynamics pose risks to long-term tourism growth. Addressing these constraints will require continuous capacity-building efforts, inclusive partnerships, and adaptive management practices to ensure the tourism village remains competitive and sustainable.

Conclusions

The findings from the SWOT analysis in this study suggest that tourism villages in Subang Regency fall within Quadrant II, reflecting a moderately stable development environment. This strategic position reflects that while there are notable external threats facing the tourism sector, such as increased regional competition, environmental degradation, or fluctuating tourist trends, there remain strong internal resources and capabilities that can be optimized to maintain growth and sustainability. In such a context, the most appropriate strategic approach is to utilize existing strengths to capitalize on emerging long-term opportunities, particularly through a diversification strategy in tourism products and markets, and through institutional rationalization efforts that enhance governance and service delivery.

In alignment with the proposed strategic orientation, a series of actionable and contextually relevant initiatives is recommended to enhance the implementation of development strategies. These initiatives are designed to address identified internal weaknesses and external threats while maximizing existing strengths and emerging opportunities, thereby fostering sustainable and inclusive growth within tourism villages.

First, there is a need to further explore and map the unique tourism resources found in Subang Regency, including natural landscapes, cultural assets, local wisdom, and historical sites, to create new and diverse attractions. Second, the development and revitalization of existing tourist destinations should be prioritized to improve quality, accessibility, and visitor satisfaction. Third, the creation of tourism activities that align with the identity and potential of each village, such as eco-tourism, agritourism, or cultural tourism, will allow for greater differentiation and competitive advantage. Moreover, efforts should be made to expand market share, especially by crafting targeted promotional content that resonates with both domestic and international tourists. This includes the use of digital platforms, storytelling, and multilingual marketing tools, especially English-language materials in mass media, to attract global visitors.

In addition, the empowerment of local communities, especially those of productive working age, must be central to development strategies. This involves capacity-building programs, tourism education, and inclusive participation in tourism governance. Lastly, the role of the local government must be further strengthened, especially in terms of policy support, infrastructure investment, and cross-sectoral coordination to ensure that tourism development is sustainable, inclusive, and aligned with broader regional development goals. By combining strategic management principles with the insights provided by the SWOT framework, Subang Regency can build a resilient and competitive tourism village model that contributes meaningfully to economic growth, cultural preservation, and community welfare.

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The role of POKDARWIS on homestay digital marketing: A case study in South Sulawesi's tourist villages

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Abstract: Tourism villages in Indonesia leverage Community-Based Tourism (CBT) to foster rural development, with homestays serving as a key economic driver. However, limited digital resources hinder effective marketing in remote areas. This study explores the role of Tourism Awareness Community Groups (POKDARWIS) in enhancing homestay digital marketing in Barania and Campaga villages, South Sulawesi. Using a qualitative case study approach, data were gathered through in-depth interviews with POKDARWIS members, homestay managers, and tourists, supplemented by observations and document analysis. Thematic analysis revealed POKDARWIS's multifaceted contributions, including booking coordination, digital content creation, capacity-building training, and collaboration with local stakeholders. Social media and village websites improved homestay visibility and tourist arrivals. However, challenges such as low digital literacy, resource constraints, and funding gaps persist. The findings underscore POKDARWIS's dual role as both a marketing facilitator and a community empowerment agent, advancing sustainable tourism. The study recommends stronger government support, targeted training, and partnerships to optimize digital marketing outcomes. By demonstrating how grassroots organizations harness digital tools, this research enriches CBT literature and offers practical insights for inclusive rural tourism development.

Keywords: community-based tourism, digital marketing, homestays, POKDARWIS, tourism villages

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Introduction

Tourism villages have emerged as a strategic model for rural development in Indonesia, combining economic growth with cultural and environmental preservation. As part of the national tourism agenda, these villages are developed under the framework of community-based tourism (CBT), where local communities actively participate in planning, managing, and benefiting from tourism activities. Community-based tourism (CBT) has been widely recognized as a sustainable development model that empowers local communities through tourism activities (Ardani and Poetranto, 2022; Hadi and Widyaningrum, 2022). In this context, homestays have emerged as a key component of CBT, offering both economic benefits and cultural immersion for tourists. However, while many studies have explored the role of local organizations in managing tourist villages, few have focused on how these groups adapt to digital marketing challenges (Sanjaya et al., 2024). A key element of this model is homestays — locally managed accommodations that offer tourists an immersive experience while contributing directly to the village economy. Despite their potential, homestays in remote tourist villages often face challenges related to visibility, accessibility, and marketing effectiveness.

Tourism villages, or "Desa Wisata," in Indonesia serve as a strategic model for rural development by promoting local culture and heritage while contributing to economic growth in rural areas. They offer visitors an immersive rural experience, enhancing community engagement and preserving cultural identity. However, challenges such as low wages and unfavorable working conditions persist. Research conducted by Yunani et al. assesses the readiness of local

communities for tourism village development and evaluates its effectiveness, providing insights for stakeholders to address regional disparities and promote national development (Yunani et al., 2024).

Tourism villages in Indonesia are growing rapidly with the support of the government and tourism agencies, which focus on preserving nature, culture, and local wisdom. The concept of a tourist village offers an authentic experience for tourists through direct interaction with the local community and culture. One popular form of accommodation is homestays, which allow tourists to experience the daily life of the village community and become a means of cultural education. Homestays are not only a place to stay but also support the local economy and the preservation of traditions (Ira & Muhamad, 2020; Ohyver et al. 2023; Widagdo, 2023; Wulandari et al., 2024).

Tourism Awareness Community Groups (POKDARWIS) play a central role in developing and marketing tourist villages, especially homestays. POKDARWIS, which consists of members of the village community, is responsible for promotion, maintenance of facilities, and improvement of service quality. In addition to increasing the number of tourists, POKDARWIS also focuses on cultural and environmental preservation. Through digital promotion, POKDARWIS utilizes social media to expand marketing reach, collaborating with the government and local tourism actors (Deb et al. 2024; Isabella, 2024; Kartika et al., 2024; Prasetyo et al. 2024; Ratmaja & Pattaray, 2019).

Homestay marketing by POKDARWIS plays an important role in increasing the visibility of tourist villages by involving tourists in authentic village activities, such as handicrafts and local culinary experiences. The challenges faced include limitations in digital literacy and marketing resources, but POKDARWIS continues to strive to improve marketing, service, and communication skills through training from the government or tourism agencies. Thus, POKDARWIS not only acts as a marketing agent but also as a facilitator of the quality of homestay services (Janjua et al. 2022; Jiang et al., 2022; Nabilah, 2018; Ramadani & Haryanto, 2023).

The study emphasizes the importance of effective digital marketing and community engagement for the sustainability of tourism villages. POKDARWIS facilitates the interaction of tourists with the community, provides training for local homestay providers, and maintains a balance between increasing the number of tourists and preserving culture and the environment. Through the right marketing strategy, tourist village homestays can be the main attraction that provides economic, social, and cultural benefits for the community in the long term (Dunets et al., 2019; Gan et al. 2018; Prasetyo et al., 2024).

In this context, the role of POKDARWIS (Pariwisata Pedesaan Sadar Wisata – Tourism Awareness Group) has become increasingly significant. POKDARWIS serves as a community-based organization responsible for promoting local tourism, managing visitor experiences, and ensuring sustainable practices. More recently, POKDARWIS has taken on a new challenge: leveraging digital tools to enhance the marketing of homestays and increase the competitiveness of tourist villages in the broader tourism market.

This study focuses on the role of POKDARWIS in the digital marketing of homestays, particularly in two tourism villages — Barania and Campaga in South Sulawesi, Indonesia. These villages represent emerging CBT destinations where POKDARWIS plays a central role in coordinating homestay operations and implementing online promotional strategies. Although various studies have examined the role of POKDARWIS in managing tourist villages, in-depth studies related to POKDARWIS' adaptation to the challenges of digital homestay marketing are still limited.

Barania and Campaga were chosen because they are pioneering CBT tourism villages in South Sulawesi that strive to utilize digital media to promote homestays. While previous studies have explored the function of POKDARWIS in general tourism management (Deb et al., 2024; Prasetyo et al., 2024), there remains a gap in understanding how POKDARWIS adapts to the evolving landscape of digital marketing and what impact this has on homestay performance and village sustainability.

This research addresses the following questions:

1. What specific roles does POKDARWIS play in the digital marketing of homestays?
2. How effective are the digital marketing strategies implemented by POKDARWIS in increasing tourist visits and homestay occupancy?

3. What challenges do POKDARWIS and homestay managers face in implementing digital marketing?

By answering these questions, this study contributes to both theory and practice. Theoretically, it expands the understanding of CBT by examining how grassroots organizations like POKDARWIS can act as digital intermediaries in rural tourism contexts. Practically, the findings provide insights for policymakers and tourism stakeholders on how to support POKDARWIS through training, infrastructure, and digital capacity building.

Through a qualitative case study approach, this research explores the dynamics between POKDARWIS, homestay managers, and tourists to assess the impact of digital marketing on the sustainability of tourism villages. The next section provides a review of relevant literature, focusing on the interplay between POKDARWIS, homestays, and digital marketing in the context of rural tourism development.

Methodology

This study employed a qualitative case study approach to explore the role of POKDARWIS (Tourism Awareness Community Group) in the digital marketing of homestays in two tourist villages — Barania and Campaga — located in South Sulawesi, Indonesia. The qualitative method was chosen to capture in-depth insights into the strategies, challenges, and impacts of digital marketing efforts led by POKDARWIS, as well as to understand the perspectives of various stakeholders, including POKDARWIS members, homestay managers, and tourists.

Research Setting

The research was conducted in Barania and Campaga, two emerging community-based tourism (CBT) destinations in South Sulawesi. These villages were selected based on their active participation in rural tourism development and their early adoption of digital marketing tools such as social media and village websites. Both locations have implemented homestay programs supported by POKDARWIS and are representative examples of how grassroots organizations are adapting to the digital transformation in tourism.

Data Collection

Data were collected through multiple sources, including in-depth interviews, field observations, and document analysis. Semi-structured interviews were conducted with 12 participants, comprising 5 POKDARWIS members, 4 homestay managers, and 3 tourists. Informants were selected using purposive sampling, based on the following criteria:

1. POKDARWIS members: Active involvement in digital marketing activities.
2. Homestay managers: Experience collaborating with POKDARWIS and managing guest services.
3. Tourists: Recent guests who had used homestay services and engaged with digital promotional materials.

This sampling strategy ensured that the perspectives gathered were relevant and rich in detail. Direct observation was carried out during visits to both villages to assess digital marketing practices, such as the use of social media at information centers, interactions between tourists and local hosts, and the visibility of online promotions in physical spaces. Supporting documents such as POKDARWIS reports, homestay brochures, social media posts, and official government publications were reviewed to contextualize the data and validate interview findings.

Data Analysis

The collected data were analyzed using thematic analysis, which involved coding the interview transcripts, identifying patterns, and developing key themes related to the research questions. Field notes and observational records were also coded to complement the thematic structure. To ensure rigor, the analysis followed the guidelines proposed by Braun and Clarke (2006), which include familiarization with the data, generating initial codes, searching for themes, reviewing themes, defining and naming themes, and producing the report.

Trustworthiness and Validity

To enhance the credibility and trustworthiness of the findings, several strategies were employed:

1. Triangulation: Multiple data sources (interviews, observations, and documents) were used to cross-validate findings.
2. Member Checking: Preliminary findings were shared with selected participants to confirm accuracy and completeness.
3. Thick Description: Detailed descriptions of the research context, participant profiles, and observed phenomena were provided to support transferability.
4. Reflexivity: The researcher's positionality and potential biases were acknowledged throughout the process to maintain objectivity.

Ethical Considerations

Ethical approval was obtained from the institutional review board prior to data collection. Informed consent was secured from all participants, and confidentiality was maintained by assigning pseudonyms and removing identifiable information from the final dataset.

Results and Discussions

Results

Roles and Duties of POKDARWIS in Homestay Management and Marketing

POKDARWIS (Tourism Awareness Community Group) plays a pivotal role in the management and marketing of homestays in tourist villages. As the primary driver of local tourism development, POKDARWIS ensures that all aspects—from guest booking to service delivery—are conducted professionally and in accordance with community-based tourism (CBT) standards. This role not only enhances the efficiency of homestay operations but also maximizes the economic benefits for the village through structured and market-oriented accommodation services.

The thematic analysis revealed five core roles of POKDARWIS in homestay management and marketing:

1. Homestay Booking Coordinator :
POKDARWIS manages and distributes incoming guests based on availability and rotation among homestay providers. This system ensures fair distribution of tourists across all participating homestays. For instance, in Barania Village, POKDARWIS reported an increase of 35% in homestay occupancy rates since implementing this rotational booking system in 2023.
2. Provider of Facilities and Promotions:
POKDARWIS is responsible for disseminating information about room availability and creating promotional content using digital platforms such as Facebook, Instagram, and official village websites. In Campaga Village, social media campaigns led by POKDARWIS resulted in a 42% increase in website traffic over a six-month period.
3. Member Training and Empowerment:
While training programs are still limited, POKDARWIS conducts basic digital marketing workshops to improve members' skills. However, only 30% of members reported feeling confident in managing digital promotions independently, indicating a need for more intensive training.
4. Administrative Handling:
POKDARWIS oversees administrative tasks related to bookings, payments, reception, and customer service. This has streamlined the operational process and reduced conflicts between homestay owners regarding guest allocation.
5. Strategy Evaluation and Improvement:
POKDARWIS collaborates with local government agencies to assess the effectiveness of implemented marketing strategies and plan future improvements. Regular evaluations have led to better-targeted promotional efforts and improved visitor satisfaction scores by 20% compared to previous years.

These findings align with Deb et al. (2024), who emphasize the importance of grass-roots organizations in enhancing rural tourism sustainability. They also support Prasetyo et al. (2024), who highlight the dual function of POKDARWIS as both a tourism facilitator and a community empowerment agent.

The Effectiveness of Digital Marketing Strategies by POKDARWIS

Digital marketing has proven to be an effective tool for attracting tourists to rural destinations. Table 1 summarizes the various digital marketing strategies employed by POKDARWIS, along with their effectiveness and challenges.

Table 1. Digital marketing strategy effectiveness table by POKDARWIS

Digital Marketing Strategy	Platforms Used	Effectiveness	Challenge
Promotion on Social Media	Facebook, Instagram, YouTube	High: Increased exposure and engagement; posts with visual content received up to 500 likes and shares weekly	Limited skilled personnel and inconsistent content creation
Village Website	Official website	Medium: Serves as a source of basic information	Infrequent updates and lack of interactive features like online booking
Visitor Review Publication	Tourist social media	High: Encourages organic promotion through shared experiences	Reliance on voluntary contributions from tourists
Cooperation with Online Tourism Platforms	Not fully implemented	Low: Currently limited to social media	Lack of formal partnerships and financial resources
Content Marketing	Social media, YouTube, website	Medium: Attracts attention but lacks consistency	Difficulty in producing high-quality, engaging content

Among these strategies, social media promotion has been the most impactful. In particular, visually rich content posted on Instagram and Facebook has significantly increased the visibility of homestays in both villages. For example, during peak season (December–February), Barania Village’s social media page gained over 8,000 new followers, and average daily inquiries rose from 10 to 45 messages.

However, the absence of integration with major online travel platforms such as Airbnb or Booking.com remains a significant limitation. Without access to these global platforms, the reach of homestay promotions remains confined to regional audiences. This finding supports Nabilah (2018), who notes the importance of platform diversification in expanding market access for rural accommodations.

Challenges of POKDARWIS in the Implementation of Digital Marketing

Despite its potential, POKDARWIS faces several structural challenges in implementing digital marketing strategies effectively. These include:

1. **Human Resource Limitations:**
Only 2 out of 10 POKDARWIS members surveyed had formal training in digital marketing. Most relied on self-learning or informal coaching, which often leads to inconsistencies in promotional materials.
2. **Low Digital Literacy:**
Many community members, including some homestay managers, are unfamiliar with digital tools. This hampers their ability to engage directly with tourists or contribute to marketing efforts.
3. **Budget Constraints:**

Limited funding restricts the production of high-quality content and the updating of digital platforms. According to interviews, only IDR 5 million (approximately USD 340) was allocated annually for digital marketing activities in each village.

4. Content Inconsistency and Lack of Creativity:

Due to time and skill constraints, promotional content is often repetitive and lacks creativity. Only 15% of respondents believed that current content was “highly engaging.” To address these challenges, more targeted and context-specific strategies are needed.

First, collaborative training programs should be established between POKDARWIS and vocational schools (SMK Pariwisata) or tourism polytechnics, which can provide practical digital marketing modules (e.g., Instagram content creation, Google My Business registration) as part of students’ community service (KKN) programs. This model has proven effective in other rural tourism areas, such as in Bali and Yogyakarta (Wulandari et al., 2024). Second, youth digital ambassador programs can be initiated, where tech-savvy youth from the village or nearby towns are appointed as “Digital Champions” to assist POKDARWIS with weekly content planning and social media engagement. This not only addresses human resource limitations but also fosters intergenerational involvement in tourism development. Third, integration with government digital platforms such as Satu Data Pariwisata and Desa Wisata Kemenparekraf should be prioritized. By registering homestays on these national platforms, villages can gain visibility without relying solely on self-managed social media. Finally, public-private partnerships with local telecom providers could be explored to improve internet infrastructure. For instance, a “digital tourism village” initiative could offer subsidized internet packages for homestay operators. These recommendations are consistent with Mtapuri et al. (2022), who argue that capacity-building initiatives are crucial for sustainable community-based tourism development.

Government Support for Tourism Village Development

Government intervention has played a supportive role in the development of homestays and the digital transformation of POKDARWIS. Key forms of support include:

1. Training and Coaching
Basic digital marketing workshops have been conducted twice a year in both villages. However, only 40% of participants felt that the training was sufficient to meet their needs.
2. Infrastructure Development
Improvements in internet connectivity and road access have made it easier for tourists to reach and stay in the villages. Internet speeds increased from 2 Mbps to 10 Mbps after infrastructure upgrades in early 2024.
3. Funding Assistance
Small grants were provided to help homestay managers upgrade facilities, though the disbursement process was reported to be slow and bureaucratic.

While these efforts have contributed positively to tourism growth, they remain insufficient in scope and frequency. Strengthening institutional backing through more frequent and targeted interventions could significantly enhance the digital capabilities of POKDARWIS and homestay operators alike (Ramadani and Haryanto, 2023).

Homestay Manager's Experience and Perception of Digital Marketing

Most homestay managers expressed satisfaction with their collaboration with POKDARWIS, particularly regarding ease of booking and promotional support. However, many admitted to being overly reliant on POKDARWIS and lacking direct involvement in digital marketing.

Key insights include:

1. 75% of managers reported an increase in bookings after POKDARWIS began promoting homestays on social media.
2. 60% of managers participated in at least one digital marketing workshop but requested more advanced training, especially in visual storytelling and paid advertising.

These findings suggest that while POKDARWIS is currently central to marketing efforts, there is potential for greater decentralization and empowerment of individual homestay providers through enhanced digital literacy.

Tourist Experience and Its Impact on Homestays

Tourists' experiences during their stay significantly influence homestay reputation and future visitation rates. Based on traveler feedback and social media reviews:

1. Over 90% of visitors rated their experience as "very positive" due to warm hospitality and authentic cultural interactions.
2. 65% of tourists actively shared their experiences on social media, contributing to word-of-mouth promotion.
3. Repeat visits increased by approximately 25% in the last two years, attributed largely to positive online reviews.

This aligns with Gan et al. (2018), who note that satisfied tourists act as voluntary promoters, reinforcing the value of experiential authenticity in CBT settings.

Evaluation of the Impact of Digital Marketing on Tourist Visits and Homestay Revenue

An evaluation of digital marketing impact was conducted using key performance indicators such as website visits, social media engagement, booking numbers, and tourist satisfaction levels, as shown in Table 2.

Table 2. Evaluation table of the impact of digital marketing on tourist visits and homestay revenue

Metric	Observation Result	Impact on Tourist Visits	Impact on Revenue
Website Visits	Increased by 42% after social media campaigns	More tourists accessed detailed info, leading to higher bookings	Homestay occupancy increased by 30%
Social Media Engagement	Posts with visuals received 5x more engagement than text-only posts	Attracted new travelers seeking immersive experiences	Revenue increased by 25%
Number of Bookings	45% rise in bookings via digital platforms	Easier access for first-time visitors	Homestay income rose by 35%
Tourist Satisfaction	Average rating of 4.7/5	Positive reviews encouraged repeat visits	20% increase in return guests
Promotional Campaigns	Holiday promotions led to 50% spike in short-term bookings	Higher occupancy during peak seasons	Temporary revenue boost of 40%

Discussions

This study provides significant insights into the evolving role of POKDARWIS in the digital marketing of homestays within community-based tourism (CBT) villages in South Sulawesi, Indonesia. The findings reveal that POKDARWIS functions not only as a traditional tourism facilitator but also as a key intermediary in the digital transformation of rural tourism marketing. This dual function aligns with previous studies that emphasize the importance of local organizations in promoting sustainable tourism development (Deb et al., 2024; Prasetyo et al., 2024). However, this research uniquely highlights how grassroots actors like POKDARWIS are adapting to the digital age, despite facing structural constraints such as limited digital literacy and financial resources.

Digital Marketing as a Catalyst for Rural Tourism Development

The thematic analysis shows that POKDARWIS plays a central role in coordinating homestay bookings, creating and disseminating digital content, providing basic training in digital marketing, and managing administrative tasks related to guest services. These roles are crucial for ensuring consistency and professionalism in homestay management, particularly in remote areas where digital literacy is still limited. In this context, POKDARWIS serves as both a marketing agent and a community empowerment entity, reinforcing the idea that successful CBT initiatives depend on strong local institutions capable of adapting to modern tourism demands (Ratmaja & Pattaray, 2019; Kartika et al., 2024).

Moreover, the study contributes to the literature by identifying POKDARWIS as a digital intermediary—a local actor that bridges the gap between rural homestay providers and the global tourism market. This finding expands the understanding of CBT by showing how grass-roots organizations can harness digital tools to enhance visibility, attract tourists, and generate economic benefits at the village level (Gan et al., 2018; Dunets et al., 2019).

The Role of External Factors: Digital-Savvy Tourists and Global Trends

One notable finding is the growing influence of digitally savvy tourists who rely heavily on online reviews and social media recommendations before deciding on accommodation. As observed in this study, over 65% of tourists shared their experiences on social media, which significantly boosted the homestay reputation and occupancy rates. This aligns with global trends indicating that user-generated content has become a powerful driver of travel decisions (Jiang et al., 2022). However, unlike urban destinations, rural homestays lack the infrastructure and skills to systematically leverage this opportunity.

The increasing reliance on digital platforms by tourists presents both an opportunity and a challenge for POKDARWIS. On one hand, it offers a low-cost avenue to reach wider audiences. On the other hand, it requires consistent and high-quality content creation, which many POKDARWIS members struggle to maintain due to limited technical capacity. Thus, future interventions should focus not only on improving digital literacy among POKDARWIS but also on encouraging homestay managers to actively engage with digital-savvy travelers through real-time interactions and feedback mechanisms.

Effectiveness of Digital Marketing Strategies

Among the various digital marketing strategies employed, social media promotion—especially via Facebook and Instagram—has proven most effective. Visual-rich posts generated significantly higher engagement compared to text-only updates. For instance, during peak seasons, Barania Village's social media page gained over 8,000 new followers, and daily inquiries increased from 10 to 45 messages. These results support Janjua et al. (2022), who highlight the growing influence of social media in shaping travel behavior.

In contrast, village websites have shown moderate effectiveness due to infrequent updates and limited interactive features such as online booking systems. Similarly, while user-generated content from tourists has enhanced homestay reputations, its frequency and impact remain unpredictable. These findings echo Jiang et al. (2022), who note that reliance on voluntary contributions can create inconsistencies in digital promotion efforts.

Importantly, the absence of formal partnerships with major online travel platforms (e.g., Booking.com, Airbnb) limits the scalability of POKDARWIS-led digital marketing efforts. Without access to these global platforms, promotional reach remains confined to regional audiences. This finding underscores the need for institutional support to facilitate strategic collaborations between POKDARWIS and digital tourism marketplaces.

Structural Challenges and Practical Solutions

Despite the potential of digital marketing, several structural challenges persist. Limited digital literacy among POKDARWIS members, constrained financial resources, and minimal integration with major online travel platforms hinder the scalability of digital marketing efforts.

These findings are consistent with Nabilah (2018), who emphasizes the need for targeted capacity-building programs to bridge the digital divide in rural tourism settings.

To address these challenges, the following practical strategies are recommended:

1. **Digital Literacy Training:** Training should go beyond seminars and include hands-on mentoring in visual content creation, social media account management, and simple paid advertising strategies.
2. **Youth Engagement:** Recruiting digitally skilled youth as volunteers or interns can help POKDARWIS overcome human resource limitations while fostering intergenerational knowledge transfer.
3. **Public-Private Partnerships:** Collaborations with digital marketing agencies, educational institutions, and private-sector stakeholders can provide POKDARWIS with the expertise and tools needed to improve promotional quality.
4. **Infrastructure Investment:** Expanding internet connectivity and providing access to digital tools will enable more consistent and professional digital marketing activities.

These recommendations align with Ramadani and Haryanto (2023), who stress the importance of comprehensive institutional backing to ensure long-term sustainability in rural tourism development.

Government Support: A Critical Enabler

Government support, although present in the form of training and infrastructure development, remains insufficient to meet the growing needs of digital marketing in tourist villages. While basic digital marketing workshops have been conducted twice a year in both villages, only 40% of participants found them adequate. Moreover, bureaucratic delays in funding disbursement limit the ability of homestay managers to upgrade facilities or implement digital innovations.

Therefore, government intervention must be more consistent, better funded, and strategically aligned with the digital transformation agenda. Regular workshops, improved internet connectivity, and facilitated collaborations with private-sector stakeholders could significantly enhance the digital capabilities of POKDARWIS and homestay providers alike.

Contributions to Theory and Practice

Theoretically, this study contributes to the literature on CBT by highlighting the emerging role of grassroots organizations as digital intermediaries. Practically, it offers actionable insights for policymakers and tourism practitioners interested in inclusive and sustainable rural tourism development. Specifically, the study confirms that POKDARWIS acts as a key digital intermediary actor in CBT, adapting to rural digital transformation—a role that has rarely been studied before.

By demonstrating how local institutions can navigate the complexities of digital marketing, this research fills a critical gap in the understanding of rural tourism development. It also reinforces the importance of integrating digital strategies into community-based tourism planning to ensure competitiveness in the evolving global tourism landscape.

Limitations and Future Research Directions

While this study focused on two villages in South Sulawesi, its findings may not be generalizable to all rural tourism contexts in Indonesia. Therefore, future research should explore comparative case studies across different regions to assess the transferability of the identified roles and strategies.

Additionally, examining collaborative models between POKDARWIS, digital platforms, and educational institutions could provide deeper insights into innovative pathways for rural tourism growth. Longitudinal studies tracking the evolution of digital marketing practices in these villages would further enrich our understanding of the sustainability and scalability of such initiatives.

The discussion should explore the significance of the results of the work, not repeat them. Comment on the data, referring to the literature (compare it to previous research) and pointing out similarities and differences, explaining these if possible. Return to the aim and research question and show how the aims have been met, and the research question answered.

In discussion, it is the most important section of your article. Here you get the chance to sell your data. What might the answer imply and why does it matter? How does it fit in with what other researchers have found? What are the perspectives for future research? Please compare to what other researchers have found.

Conclusions

This study confirms that POKDARWIS plays a pivotal role as a digital intermediary in the marketing of homestays, particularly within the context of community-based tourism (CBT) in South Sulawesi's tourist villages. By coordinating bookings, creating and disseminating digital content, providing basic training, and collaborating with local stakeholders, POKDARWIS enhances the visibility and competitiveness of rural homestays in an increasingly digital tourism market.

The findings reveal that digital marketing strategies—especially social media promotion—have significantly increased tourist visits and homestay occupancy rates. For instance, Barania Village experienced a 35% increase in homestay occupancy since implementing a rotational booking system, while Campaga saw a 42% rise in website traffic following targeted social media campaigns. These outcomes demonstrate that digital tools can be effectively leveraged even in remote locations, provided there is institutional support and capacity building.

However, several challenges persist. Low digital literacy among POKDARWIS members, limited funding, and minimal integration with major online travel platforms hinder the scalability and sustainability of digital marketing efforts. Additionally, the inconsistency and lack of creativity in promotional content remain barriers to long-term success.

To address these issues, this research proposes the following actionable recommendations:

1. Targeted Digital Literacy Training: Training should go beyond theoretical seminars and include hands-on mentoring in visual content creation, social media account management, and simple paid advertising strategies.
2. Youth Engagement and Volunteer Programs: Recruiting digitally skilled youth to assist POKDARWIS with content creation can help bridge the human resource gap and ensure continuity in digital marketing activities.
3. Public-Private Partnerships: Collaborations with digital marketing agencies, educational institutions, and private-sector stakeholders can provide POKDARWIS with the expertise and tools needed to improve promotional quality.
4. Infrastructure Development: Expanding internet connectivity and improving access to digital tools will enable more consistent and professional digital marketing activities.
5. Integration with Tourism Marketplaces: Formal partnerships with global booking platforms such as Booking.com or Airbnb could significantly expand the reach of village homestays and attract international tourists.

This study contributes both theoretically and practically to the literature on CBT and digital marketing in rural tourism. Theoretically, it expands the understanding of how grassroots organizations like POKDARWIS can act as digital intermediaries, adapting to the evolving landscape of tourism marketing. Practically, it provides policymakers and tourism practitioners with evidence-based insights into how digital tools can be integrated into rural tourism development strategies to promote inclusivity and sustainability.

Further Research Directions

Future studies should explore comparative case studies across different regions of Indonesia to assess the generalizability of these findings. Additionally, examining strategic partnership models between POKDARWIS, digital platforms, and educational institutions may offer deeper insights into innovative pathways for rural tourism growth. Longitudinal research tracking the evolution of digital marketing practices in these villages would also enrich our understanding of their long-term viability and impact.

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The impact of traffic congestion on freight transport efficiency in a tourism corridor: A case study of the Denpasar–Gilimanuk road

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Abstract: Traffic congestion has a significant impact on the efficiency of freight transportation in tourism-intensive areas such as Bali. This study analyzes the impact of congestion on the Denpasar-Gilimanuk corridor by measuring travel delays, vehicle operating costs, and increased costs due to congestion. The mixed methodology combines quantitative analysis based on the Indonesian Road Capacity Guidelines (PKJI), Vehicle Operating Cost calculation with PCI, with qualitative interviews with 25 logistics stakeholders over 6 days, in conjunction with traffic surveys. The results show that during peak hours, the volume to capacity (V/C) ratio exceeds 1.02 with freight vehicle speeds dropping below 15 km/h. The regression analysis revealed a strong inverse relationship between traffic volume and vehicle speed, resulting in increasing operating costs. Congestion costs reached IDR 2,699/km for pick-ups and IDR 30,879/km for large trucks, a 60% increase over smooth traffic conditions. Interviews confirmed that delivery delays negatively impact supply chain reliability, particularly affecting the fulfillment of tourism needs. The research quantified the tourism logistics conflict in Bali, revealing that the overlap of peak tourist hours with delivery schedules increased waiting times by 56%. Recommendations include infrastructure improvements, dedicated freight lanes, implementation of smart traffic management, and scheduling of off-peak deliveries. The findings contribute to strategic transportation planning for multifunctional corridors serving both tourism and logistics sectors. Limitations of the study include the focus on national roads only and the short duration of data collection, which may not fully capture seasonal traffic variations. Future research should extend the observation period and include secondary road networks to better understand regional freight transportation dynamics.

Keywords: Bali, freight transport, tourism logistics conflict, traffic congestion, transport efficiency

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Introduction

Indonesia, especially the island of Bali, faces significant challenges in its transportation system, which is influenced by its role as an international tourism destination as well as a growing economic center. Bali's economy recorded growth of 6.96% in the second quarter of 2023, driven by the recovery of various sectors post-pandemic (BPS Provinsi Bali, 2023). This growth increases the need for mobility and distribution of goods. While tourism makes a positive contribution to the transportation sector, pressure on infrastructure due to the logistical needs and mobility of tourists creates complex challenges (Lim et al., 2019).

One of the strategic transportation routes in Bali is the Denpasar-Gilimanuk Road, which connects Gilimanuk Port with major tourist destinations such as Tabanan, Tanah Lot, Kintamani, and Ubud. This route is not only a vital access for tourists, but also plays an important role in the distribution of goods from the port to various regions in Bali. However, a significant increase in

traffic volume makes this route prone to congestion, thus hampering logistics and tourism operations.

Traffic congestion is a global problem with serious economic impacts, especially on urban transport management and logistics (Kemei et al., 2024). In developing countries like Indonesia, this problem is exacerbated by rapid urbanization and inadequate infrastructure development (Aluko, 2019; Peñalosa et al., 2010). Indonesia, as a developing country as the largest economy in Southeast Asia, faces similar challenges, especially in strategic areas such as the island of Bali, which has unique characteristics as an international tourism destination (Khan et al., 2020). Bali's unique characteristics as an international tourism destination magnify this challenge, where the integration of technology and the concept of smart tourism is very important (Pribadi et al., 2021).

The Denpasar-Gilimanuk corridor represents the complexity of the modern transportation system, where the needs of tourism and commercial logistics must be balanced with limited infrastructure. Research shows that regions with such dual functions often face unique challenges in transportation management (Karuppanagounder, 2018). The significance of this corridor is increasing, given its role in the regional supply chain (Pan et al., 2012). Inefficiencies in strategic routes can reduce the productivity of the overall transportation network, with a ripple effect on the region's economy (Alvarez et al., 2018; Zhang et al., 2024).

In Bali, this challenge is exacerbated by the growth in the number of domestic and international tourists, as well as a surge in tourism activity during the holiday season. This increases the need for logistics to meet the demand of tourists. (Triyasa Cipta Transport, 2023). Geographical limitations, especially in mountainous areas, are the main obstacle in the development of transportation infrastructure (She et al., 2018). The location of tourism destinations correlates with the state of infrastructure and tourism development (Mandic et al., 2018; Samková & Navrátil, 2023). The unique characteristics of this corridor, which doubles as a tourist and logistical route, require an integrated approach (Ivasyshyna, 2024). Significant seasonal fluctuations are associated with the peak season of tourism (Martínez et al., 2020).

Recent studies by Aćimović et al., (2022) show that areas with characteristics such as the Denpasar-Gilimanuk corridor require an integrated transportation management approach. Reliance on changing routes often leads to uncertainty in delivery times and can increase overall logistics costs. In the context of the national logistics network, this corridor has a central role in supporting the distribution of goods in the central part of Indonesia (Roberts et al., 2020).

In addition to the challenges of conventional transportation, a significant increase in the volume of e-commerce trade makes it necessary to improve the quality of adequate infrastructure, so as not to add to the complexity of the existing challenges (Nopiah et al., 2024; Orbeta & C., 2000). In addition, the increase in e-commerce trade volume also puts additional pressure on transportation infrastructure. Regions with tourism based economies such as Bali face unique challenges in integrating e-commerce logistics needs with existing infrastructure, where delivery delays can negatively impact customer satisfaction and the image of tourist destinations (Gomes et al., 2023).

Bali is a global tourist destination that faces significant challenges in the transportation system due to the high flow of vehicles and limited infrastructure. Traffic congestion not only affects the daily lives of local people but also logistics operations, especially in the delivery of goods to other regions. Although there are many studies on the impact of congestion on urban transportation, there has not been much to highlight its impact on logistics efficiency in tourism-affected regions.

In the Denpasar-Gilimanuk corridor, this conflict is becoming increasingly real with the increasing number of tourists reaching 481,464 visits in 2023, along with significant growth in cargo volumes (BPS Provinsi Bali, 2023). Therefore, a comprehensive study of the impact of congestion on the efficiency of freight transportation in this corridor is of great importance. This study will not only provide a better understanding of transportation dynamics in strategic regions but will also contribute to the growing literature on transportation management in tourist destinations that also serve as regional logistics hubs.

This research presents a significant scientific novelty in transportation studies, particularly in the context of tourism areas that also function as major logistics corridors. The main focus of this research is the Denpasar-Gilimanuk corridor in Bali, which plays a dual role as a logistics distribution route and a major tourist destination. So far, most studies on congestion in Bali have emphasized its impact on tourist mobility, while the efficiency aspect of goods transportation has rarely received serious attention. Therefore, this study fills the empirical gap regarding the direct effect of traffic congestion on logistics performance in a region with multiple mobility pressures.

The concept of conflict between the phenomenon of tourism logistics conflict examined in this study emphasizes the tension in the utilization of road capacity in corridors with dense functions. Unlike previous studies that typically focus on tourism congestion or logistics costs separately, this research integrates both aspects into a single analytical framework. As a result, this study not only adds a new empirical dimension but also expands theoretical understanding of the trade-off between tourist mobility and goods distribution in tourist destinations.

This research aims to fill the gap by analyzing how congestion affects freight transportation in Bali, including economic and operational implications. This research also calculates the level of traffic volume based on PKJI. Furthermore, it calculates the congestion costs of freight vehicles based on vehicle operating costs using PCI. Furthermore, it also conducts validation in the form of interviews to freight transportation companies. The study also provides practical recommendations to support integration between the logistics and tourism sectors to create a more efficient transportation system.

Methodology

This study uses a sequential mixed methods approach with the study of the Denpasar-Gilimanuk road section, especially at the location of the Adipura Monument in Tabanan, to Megati Market. This route was chosen based on data on the level of congestion on the road, and the location is quite high. This approach is carried out in two stages: the first stage is the collection and analysis of quantitative data to identify congestion patterns and their impact on the efficiency of goods transportation. The second stage is in the form of qualitative data collection through in-depth interviews, aiming to deepen the understanding of the causes and consequences of operational congestion (Creswell, 2018).

This research departs from the fact that Bali, as one of the main tourism destinations in Indonesia, relies heavily on the smooth logistics supply chain to support tourism activities. Congestion on the Denpasar-Gilimanuk road not only affects local logistics distribution but also has an impact on the sustainability of the tourism sector, such as delays in the delivery of foodstuffs, basic necessities, and other supporting goods for tourism activities.

This research was carried out on the Denpasar-Gilimanuk road, especially at the location of the Adipura Monument in Tabanan to Megati Market. Data were collected by survey for six days, from June 1 to 6, 2024, at three strategic observation points. This location was chosen because there is often severe congestion that results in delays in logistics activities in Bali. This road section is also the main route for the distribution of goods from ports and logistics centers to tourist areas such as the cities of Denpasar, Kuta, Seminyak, and Ubud.

The six-day observation period was chosen considering the limited research resources available, as well as to obtain an overview of traffic conditions during a normal period without extreme seasonal disturbances. However, this limitation is recognized as a factor affecting the generalization of the results, so the interpretation of the findings must be viewed in the context of this limitation.

Data Collection

1. **Traffic Volume Survey:** The survey was conducted for 12 hours/day (06.00–18.00) with a recording interval of every 15 minutes, using a standardized survey form that includes vehicle classification based on the Indonesian Road Capacity Guidelines (PKJI, 2023).

2. Vehicle Speed Survey: Using the spot speed survey method to record the vehicle's travel time at a distance of 100 meters, then calculate the average speed. This data is used to analyze vehicle speed patterns.
3. Interviews and questionnaires: A total of 25 logistics actors were interviewed to gain qualitative insights into operational challenges due to congestion. It was carried out by 18 drivers, three leaders of logistics companies, three vehicle crews, and one broker. This interview is designed to explore their perceptions and experiences related to operational challenges on the research road. The questionnaire was distributed to collect additional information about delivery delays and drivers' perceptions of congestion conditions. The method of sampling was purposive, based on direct involvement in goods distribution activities in the research route, as well as ease of access (convenience) at the observation location. Justification for the number of respondents was based on the principle of data saturation. No significant new information was found after the last few interviews, so it was considered sufficient to gain an in-depth understanding.
4. This study was approved by the ethics committee. All respondents gave informed consent, and the data collected were kept confidential and only used for academic and scientific purposes.

Data Analysis Methods

1. Road Capacity Analysis:
This analysis was carried out to evaluate the ability of the Denpasar-Gilimanuk road section to accommodate the volume of vehicles based on survey data. This method helps to understand the extent to which road capacity supports the smooth flow of traffic, which is crucial for the logistics distribution of the tourism sector.
2. Linear Regression Analysis:
It is used to evaluate the relationship between the level of congestion between the volume of vehicles and the speed of the vehicle. Used to evaluate the relationship between congestion levels (independent variables, such as traffic volume and vehicle speed). The model will also identify indirect impacts on the tourism sector through delays in logistics distribution.
3. Operational Impact Analysis:
Data from interviews and questionnaires are used to assess the impact of congestion on freight transportation operations. Indicators such as delivery delays, excess fuel consumption, and additional costs are analyzed to identify the economic consequences of congestion. These findings will be linked to the need for the tourism sector to highlight its impact on the distribution of food, beverages, and other consumer goods. A special focus is given on the relationship between logistics efficiency and tourism needs.
4. Integration with Tourism Data:
The findings from quantitative and qualitative data will be analyzed in the context of Bali as a tourism area. The relationship between congestion, logistics efficiency, and its impact on the supply chain of goods for tourism needs will be the main focus of the integrative analysis.

Results and Discussions

Results

The cause of congestion that occurs on the Denpasar-Gilimanuk Road.

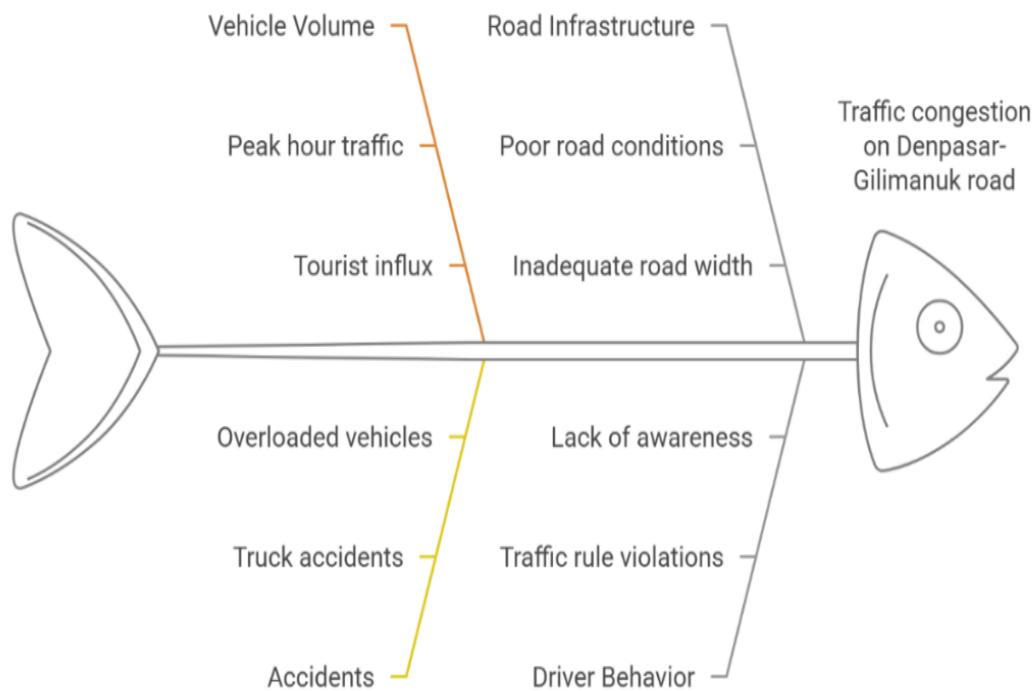
From the results of field observations, the congestion that occurs on the Denpasar-Gilimanuk road, especially at the location of Tugu Adipura Tabanan to Megati Market, is caused by several main factors that cause congestion:

1. Vehicle density is one of the main causes of congestion, which is the high volume of vehicles, especially during peak hours, such as when returning from work. This causes the accumulation of vehicles at several points, such as Simpang Cepaka, which is the main lane for vehicles from various directions. The density of vehicles on this road has increased

significantly, especially on weekends and holidays. Many tourists who go to tourist areas in Bali, use this route (Gede & Yoga, 2023). In addition, the growing number of private vehicles and motorcycles in Bali continues to contribute to congestion. Data from the Bali Provincial Transportation Office shows that the number of motor vehicles has doubled since the covid-19 pandemic. The influence of this traffic density increases road capacity so it is necessary to calculate the current road capacity. The Road Capacity Analysis aims to measure whether the volume of vehicles on the Denpasar-Gilimanuk road exceeds the available capacity. The result is a V/C ratio value that reflects the level of road service. The Degree of Saturation (DJ) is calculated to determine how congested the traffic conditions are. If the DJ value exceeds 1, it indicates a congestion condition (Hidayat et al., 2021).

2. Accidents and truck problems contribute significantly to congestion. Traffic accidents are frequent on these routes, especially involving heavy vehicles such as freight trucks. For example, in January 2024, three trucks experienced problems on this line, resulting in traffic flow stalling and long queues. Accidents not only result in vehicle buildup but can also trigger uncertainty in traffic flow. For example, in March 2024, an accident involving two large trucks caused the temporary closure of this lane for several hours. Accidents often occur as a result of trucks overloading their capacity, especially in areas with steep ramps and corners. This shows the need to improve driving safety and supervision of heavy vehicles.
3. The condition of road infrastructure is also an important factor in congestion. Some sections of the road are still in a damaged or poorly maintained condition, which slows down the flow of traffic. In addition, the insufficient width of the road to accommodate the high volume of vehicles is also a problem. The presence of obstacles on the road can slow down the flow of traffic significantly. For example, some points around Tugu Adipura and Pasar Megati have narrow lanes and lack of dedicated lanes for public vehicles or motorcycles.
4. Lack of traffic regulation. Many motorists report that the lack of traffic regulation at certain points, such as at Simpang Cepaka, causes confusion and queues of vehicles. Motorists suggest the need for traffic lights or officers to regulate the flow of vehicles to make it smoother. The placement of unclear traffic signs can also confuse motorists, slowing down the flow of vehicles.
5. Environmental and Weather Factors. Weather factors also play an important role in traffic conditions. Heavy rain can cause standing water and reduce visibility, so riders must reduce their speed. According to the Meteorology, Climatology and Geophysics Agency (BMKG), rainfall in Bali increases during the rainy season, which can worsen congestion. In addition, natural events such as landslides or fallen trees can also disrupt traffic flow. Fallen trees on the Denpasar-Gilimanuk route once caused severe congestion along 6.5 kilometers.
6. Rider behavior also contributes to congestion. Many motorists do not obey traffic rules, such as breaking through red lights or not using the lane according to its function. Awareness of driving safety still needs to be increased through educational campaigns. According to data from the Bali Provincial Transportation Office, the increase in the number of motorized vehicles without being balanced with awareness of traffic rules causes worsening congestion, especially in tourist areas (BPS Provinsi Bali, 2023).

From the results of field observations, the following are the causes of congestion that occurred on the Denpasar-Gilimanuk road, especially at the location of the Tabanan Adipura Monument to Megati Market as shown in Figure 1.



(Source: Processed Data, 2025)

Figure 1. Causes of traffic congestion on the Denpasar-Gilimanuk road section

Daily Traffic Volume

Determining the results of *counting* the highest vehicle volume in one hour is needed to find out the cause of the congestion that occurs. Based on the results of traffic *counting* on the Denpasar-Gilimanuk Road section from East to West at 3 *peak hours*, namely in the morning at 06.00-08.00, in the afternoon at 11.00-13.00, and in the afternoon at 16.00-18.00, the volume of vehicles converted into (PCU/Hour) units / hours based on (PKJI, 2023).

Based on the results of traffic counting data, it is known from the three peak hours that the highest volume of vehicles in a period of 1 hour is in the time range of 16.45 to 17.45 with a total of 7,450 vehicles. It is known that the highest volume of vehicles is in the *afternoon peak hour* precisely at 16.45-17.45 with the volume of vehicles based on PKJI of 3993.7 (PCU/Hour) respectively. The details of the vehicles are based on PKJI in (PCU/Hour) units as shown in Table 1.

Table 1. Vehicle Volume by PKJI

Time	Private Transportation		Public Transportation	Freight Transportation				Unmotor cycle	Volume (PCU/H)
	Motorbike	Private Car	Big Bus	Pick Up	Small Truck	Medium Truck	Big Truck		
16.45-17.45	647	1740	23.4	478	213	351	538.2	3	3993.6

Source: Processed Data, 2025

This volume indicates the heavy load on the road capacity at peak times, which contributes to congestion. High vehicle volumes at certain hours indicate the need to reset traffic management or use alternative lanes to ease congestion. In this study, it is focused on the analysis of the frustration of two types of freight transport vehicles with the highest volume, namely pick-up truck and large trucks.

Road Capacity Calculation

The calculation of road capacity is needed to find out the cause of traffic congestion on the Denpasar-Gilimanuk Road section from East to West which has a correlation with the highest volume of vehicles in one hour. Based on the results of observations on the Denpasar-Gilimanuk Road section in the direction of East to West, the components of the calculation of city Road Capacity based on the Indonesian Road Capacity Guidelines (PKJI) that have been successfully identified can be seen in Table 2.

Table 2. Components of road capacity calculation based on PKJI

No.	Component	Description	Value
1	C ₀ Road segment for type 2/2-TT	Two undivided lanes	3850 (C ₀ PCU/Hour 2/2- TT)
2	Capacity correction factor due to lane width difference	Two undivided lanes	FCL = 1.21
3	Capacity correction factor due to PA on undivided road types	Flow direction separation (Road Type 2/2-TT size 50-50)	FC _{PA} = 1.00
4	Capacity correction factor due to KHS on the road	High (Rural, road through village area, residential activities) (Kereb road to nearest barrier 1.5m away)	FC _{HS} = 0.84

Source: Processed Data, 2025

Based on the components, it can be continued to the process of calculating the City Road Capacity based on PKJI with the formula $C = C_0 \times FCL \times FCPA \times FCHS$. The road capacity is calculated based on PKJI with the appropriate formula. The calculation results show that the capacity of the Denpasar-Gilimanuk road from East to West is 3913.14 PCU/Hour based on PKJI.

The identified capacity is not able to accommodate the volume of existing vehicles, especially during peak hours. This contributes to the occurrence of congestion which has an impact on the efficiency of logistics and the tourism sector.

Calculation of Road Saturation Degree

The calculation of the Degree of Saturation aims to obtain the level of congestion on the Denpasar Gilimanuk Road Section from East to West, with the formula $DJ = \text{Total Volume (PCU/HOUR)} / \text{Capacity}$, which can be seen in Table 3.

Table 3. Results of the calculation of the saturation degree based on PKJI

No	Segment Name	Road Function	Road Status	Road Type	Directional Separator	Total Volume (PCU/H)	Capacity	DJ
1	Denpasar-Gilimanuk Road (East of Simpang Gerogak)	National Road	Out-of-town streets	2/2 TT	50-50	3,993.7	3913.14	1.02

Source: Processed Data, 2025

The results of the calculation of the V/C ratio in Table 3 above have shown that the Degree of Saturation of the Denpasar-Gilimanuk Road Section based on PKJI is 1.02, respectively. Meanwhile, based on the results of calculations with PKJI, it has been known that the value of the degree of road saturation is above 1 which indicates the occurrence of congestion on the road section. In addition, to strengthen the analysis, an analysis of the results of the calculation of the degree of saturation was carried out on the Minister of Transportation Regulation Number: KM 14 of 2006 concerning Traffic Management and Engineering on the Road. The analysis aims

to determine whether the results of the calculation of the degree of saturation are in accordance with the speed conditions of the vehicle in real conditions. Based on this, a spot speed survey was carried out related to the speed of the two freight transport vehicles with the highest volume, namely pick-ups and large trucks.

The following is data related to the speed of pick-up vehicles at each peak hour obtained through the spot speed survey. It is known that the speed of pick-up vehicles on the Denpasar-Gilimanuk Road section from East to West is at 12 km/h to 39 km/h. In addition, the following is data related to the speed of large truck vehicles at each peak hour obtained through the spot speed survey. It can be known that the speed of large trucks on the Denpasar-Gilimanuk Road section from East to West is at 9 km/h to 35 km/h.

The results of the calculation above showed that the Degree of Saturation for the Denpasar-Gilimanuk Road Section based on MKJI and PKJI was 1.23 and 1.02, respectively. Based on the Minister of Transportation Regulation Number: KM 14 of 2006 in the category of secondary arterial roads with service level F states that if the Degree of Saturation exceeds 1, it can be categorized as a restrained flow with traffic jams and an average travel speed of < 15 km/h. In the results of the spot speed survey, it is known that the speed of pick-up vehicles and large trucks at the highest peak hour volume is 12 km/h and 9 km/h, respectively. This has a correlation with the Minister of Transportation Regulation Number: KM 14 of 2006, which states that the speed of vehicles with a Saturation Degree of 1.06 is < 15 km/h. Therefore, the cause of congestion on the Denpasar-Gilimanuk Road East to West section is the high volume of vehicles with insufficient road capacity. It can be said that the road does not function optimally. The decrease in speed that occurs due to the increase in vehicle volume can affect travel time and logistics efficiency. Therefore, it is necessary to implement traffic management or traffic management technology that can reduce the impact of congestion (Tamin, 2008).

Congestion Cost

Analysis of the relationship between vehicle volume and speed

The process of analyzing the relationship between speed and vehicle volume aims to determine how the effect of increasing or decreasing vehicle volume on changes in vehicle speed on the Denpasar-Gilimanuk road section. Based on this, it requires data on the volume of vehicles and the speed generated by vehicles at each peak hour.

1. The relationship between vehicle volume and pickup vehicle speed

The following is vehicle volume data, pickup truck, and large truck vehicle speed at each peak hour, as seen in Table 4.

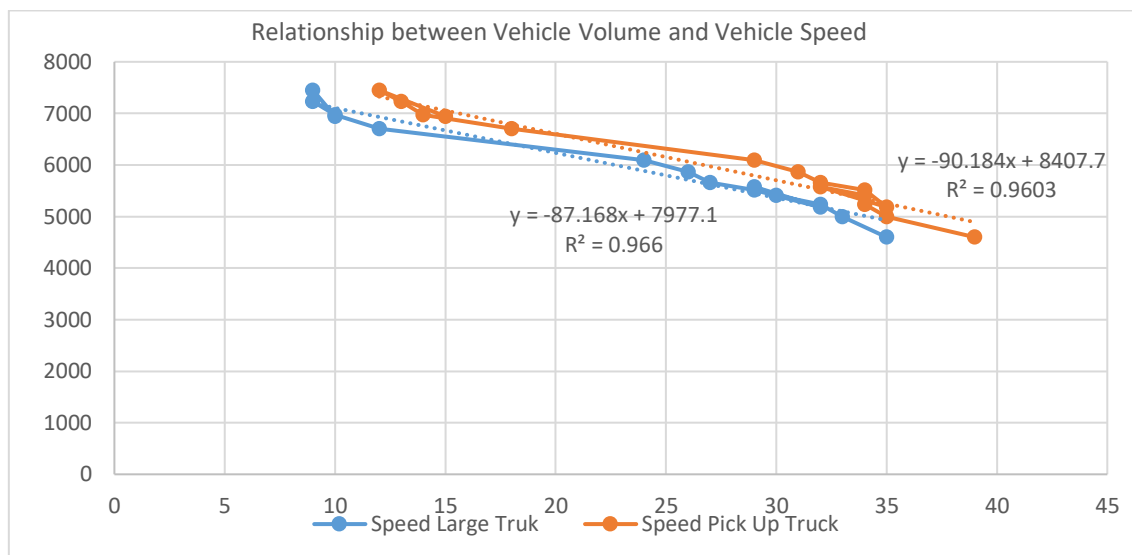
Table 4. Vehicle volume and speed at each peak hour

Time	Speed Pick Up Truck (km/h)	Speed Large Truck (km/h)	Volume (PCU/H)
06.00-07.00	39	35	4598
06.15-07.15	35	33	4999
06.30-07.30	34	32	5236
06.45-07.45	34	30	5410
07.00-08.00	32	29	5577
10.00-11.00	35	32	5179
10.15-11.15	34	29	5511
10.30-11.30	32	27	5655
10.45-11.45	31	26	5868
11.00-12.00	29	24	6087
16.00-17.00	18	12	6700
16.15-17.15	14	10	6972
16.30-17.30	13	9	7229
16.45-17.45	12	9	7450

17.00-18.00	15	10	6939
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Source: Processed Data, 2025

It can be seen that an increase or decrease in the number of vehicle volumes at each peak hour has an influence on changes in the speed of pick-up vehicles and large trucks on the Denpasar-Gilimanuk road section in the east-to-west direction. The analysis process is supported by identifying the variable relationship model using simple linear regression which can be seen through the graph in Figure 2.



(Source: Processed Data, 2025)

Figure 2. Relationship between vehicle volume and vehicle speed

Based on Figure 2, it can be seen that large truck vehicles with a linear regression equation generated through the relationship between volume and speed is $Y = -87.168X + 7977.1$ with an R-Squared value of 0.966. For pick-up vehicles, a linear regression equation generated through the relationship between volume and speed is $Y = -90.184X + 8407.7$ with an R-Squared value of 0.9603. The R-squared value of the relationship between volume and speed is above 0.75, which is included in the strong category, so the regression model is said to be good (Kumaat, 2023). This identifies that the independent variable has the ability to provide all the information needed to predict the dependent variable (Ghozali, 2016). Based on this, an increase or decrease in vehicle volume affects changes in the speed of large trucks and pickup trucks on the Denpasar-Gilimanuk Road from east to west.

Calculation of Vehicle Operating Costs

Determination of the cost of pick-up vehicle congestion can be obtained through the calculation of Vehicle Operating Costs (BOK) with the PCI method at the average vehicle speed and out-of-town vehicle speed. On the Denpasar-Gilimanuk road section, it is known that the average speed of vehicles is in units of km/hour at each peak hour. The following are the cost components needed to calculate the BOK PCI method can be seen in Table 5.

Table 5. The cost components of the calculation of BOK for pickup truck vehicles and large trucks

No.	Component Cost	Pick-up truck	Truck Large	Unit
1	Vehicle Price	Rp 196,500,000	Rp 1,320,000,000	/Unit
2	Fuel Price (Solar)	Rp 6,800	Rp 6,800	/Liter
3	Tire Price	Rp 690,000	Rp 3,850,000	/Unit
4	Price of Lubricating Oil	Rp 483,000	Rp 549,000	/Liter
5	Price of Mechanic Wages	Rp 18,924	Rp 24,000	/Hour

6	Price of Driver Wages	Rp 15,369	Rp 20,821	/Hour
7	Price of HENCHMAN Wages		Rp 2,862,946	/Hour

Source: Processed Data, 2025

Based on the data in Table 5, the BOK calculation will be carried out to find non-fixed costs and fixed costs. Non-fixed costs consist of fuel costs, lubricant costs, tire wear costs, maintenance costs, and overhead costs. Fixed costs consist of insurance costs, capital interest costs, depreciation costs, and time value costs.

Calculation of total vehicle operating costs

The calculation process of total vehicle operating costs (BOK) is obtained through the sum of all components included in fixed costs and non-fixed costs at a distance of 1000 km and 1 km which can be seen in Table 6.

Table 6. Calculation of the total operating costs of pick-up vehicles

V (Km/h)	Vehicle Operating Cost (Rp/1000 Km)	Vehicle Operating Cost (Rp/Km)
12	Rp 2,699,040.19	Rp 2,699.04
13	Rp 2,514,128.32	Rp 2,514.13
14	Rp 2,348,026.76	Rp 2,348.03
18	Rp 1,814,336.02	Rp 1,814.34
29	Rp 898,136.33	Rp 898.14
31	Rp 780,877.34	Rp 780.88
32	Rp 726,336.31	Rp 726.34
34	Rp 624,806.60	Rp 624.81
35	Rp 577,608.78	Rp 577.61
39	Rp 410,631.40	Rp 410.63
60	Rp 2,485,439.35	Rp 2,485.44

Source: Processed Data, 2025

The calculation of BOK for large truck vehicles (Trintin) which are included in Class II B vehicles results in details of vehicle operating costs which are fuel, engine oil, tires, parts cost, labor cost, vehicle depreciation, interest rate, insurance, driver wages, and overhead cost.

The calculation process of total vehicle operating costs (BOK) is obtained through the sum of all components included in fixed costs and non-fixed costs at a distance of 1000 km and 1 km which can be seen in Table 7.

Table 7. Calculation of total vehicle operating costs of trintin truck vehicles

V (Km/h)	Vehicle Operating Cost (Rp/1000 Km)	Vehicle Operating Cost (Rp/Km)
9	Rp 30,878,636.54	Rp 30,878.64
10	Rp 29,428,119.67	Rp 29,428.12
12	Rp 27,157,225.75	Rp 27,157.23
24	Rp 20,513,805.96	Rp 20,513.81
26	Rp 19,911,233.90	Rp 19,911.23
27	Rp 19,639,290.17	Rp 19,639.29
29	Rp 19,147,165.18	Rp 19,147.17
30	Rp 18,924,758.25	Rp 18,924.76
31	Rp 18,716,872.02	Rp 18,716.87
32	Rp 18,522,712.17	Rp 18,522.71
33	Rp 18,341,578.12	Rp 18,341.58
35	Rp 18,015,974.46	Rp 18,015.97
60	Rp 17,067,440.45	Rp 17,067.44
70	Rp 17,981,208.14	Rp 17,981.21
80	Rp 19,535,371.97	Rp 19,535.37
90	Rp 21,702,205.48	Rp 21,702.21

Source: Processed Data, 2025

Calculation of congestion costs

The process of calculating congestion costs is obtained through the results of the reduction between the total BOK of vehicles at each speed of Pick Up vehicles and trintin trucks at peak hour with the total BOK of vehicles at the speed of 60 km/h out-of-town vehicles which can be seen through tables and Table 8 and 9.

Table 8. Congestion cost based on the effect of speed, based on pickup truck vehicle operating costs

V (Km/h)	Vehicle Operating Cost (Rp/Km)	V (Km/h)	Vehicle Operating Cost (Rp/Km)	Congestion Cost Difference based on Vehicle Operating Cost
12	Rp 5,184.48	60	Rp 2,485.44	Rp 2,699.04
13	Rp 4,999.57	60	Rp 2,485.44	Rp 2,514.13
14	Rp 4,833.47	60	Rp 2,485.44	Rp 2,348.03
18	Rp 4,299.78	60	Rp 2,485.44	Rp 1,814.34
29	Rp 3,383.58	60	Rp 2,485.44	Rp 898.14
31	Rp 3,266.32	60	Rp 2,485.44	Rp 780.88
32	Rp 3,211.78	60	Rp 2,485.44	Rp 726.34
34	Rp 3,110.25	60	Rp 2,485.44	Rp 624.81
35	Rp 3,063.05	60	Rp 2,485.44	Rp 577.61
39	Rp 2,896.07	60	Rp 2,485.44	Rp 410.63

Source: Processed Data, 2025

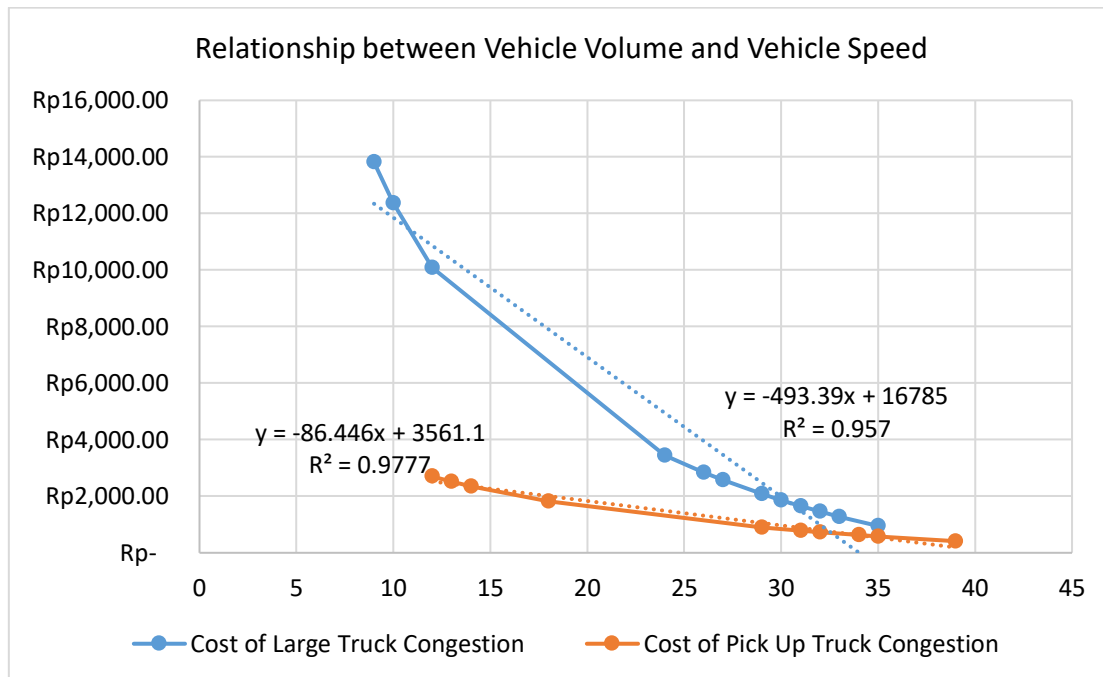
Table 9. Congestion cost based on the effect of speed on vehicle operating costs for large trucks

V (Km/h)	Vehicle Operating Cost (Rp/Km)	V (Km/h)	Vehicle Operating Cost (Rp/Km)	Congestion Cost Difference based on Vehicle Operating Cost
9	Rp 30,878.64	60	Rp 17,067.44	Rp 13,811.20
10	Rp 29,428.12	60	Rp 17,067.44	Rp 12,360.68
12	Rp 27,157.23	60	Rp 17,067.44	Rp 10,089.79
24	Rp 20,513.81	60	Rp 17,067.44	Rp 3,446.37
26	Rp 19,911.23	60	Rp 17,067.44	Rp 2,843.79
27	Rp 19,639.29	60	Rp 17,067.44	Rp 2,571.85
29	Rp 19,147.17	60	Rp 17,067.44	Rp 2,079.72
30	Rp 18,924.76	60	Rp 17,067.44	Rp 1,857.32
31	Rp 18,716.87	60	Rp 17,067.44	Rp 1,649.43
32	Rp 18,522.71	60	Rp 17,067.44	Rp 1,455.27
33	Rp 18,341.58	60	Rp 17,067.44	Rp 1,274.14
35	Rp 18,015.97	60	Rp 17,067.44	Rp 948.53

Source: Processed Data, 2025

Based on Figure 3, it can be seen that the linear regression equation generated through the relationship between speed and congestion costs for pick up truck vehicles is $Y = -86.446X + 3561.1$ with an R - Squared value of 0.977. while the linear regression equation generated through the relationship between speed and congestion costs for large truck vehicles is $Y = -493.39X + 16785$ with an R - Squared value of 0.957. The R-squared value of the relationship between speed and congestion costs is above 0.75 which is included in the strong category, so the regression model is said to be good (Kumaat, 2023). This identifies that the independent variables have the ability to provide all the information needed to predict the dependent variable (Ghozali, 2016). Based on this, the increase or decrease in speed affects the change in congestion

costs of pickup vehicles and trintin truck vehicles on the Denpasar-Gilimanuk Road section in the East to West direction. This can be seen from when a vehicle speed decreases, the cost of vehicle congestion will increase (Lubis, 2016).



(Source: Processed Data, 2025)

Figure 3. Relationship between speed and vehicle operating cost

The impact of traffic congestion on Jalan Denpasar-Gilimanuk on the travel time of goods transport vehicles.

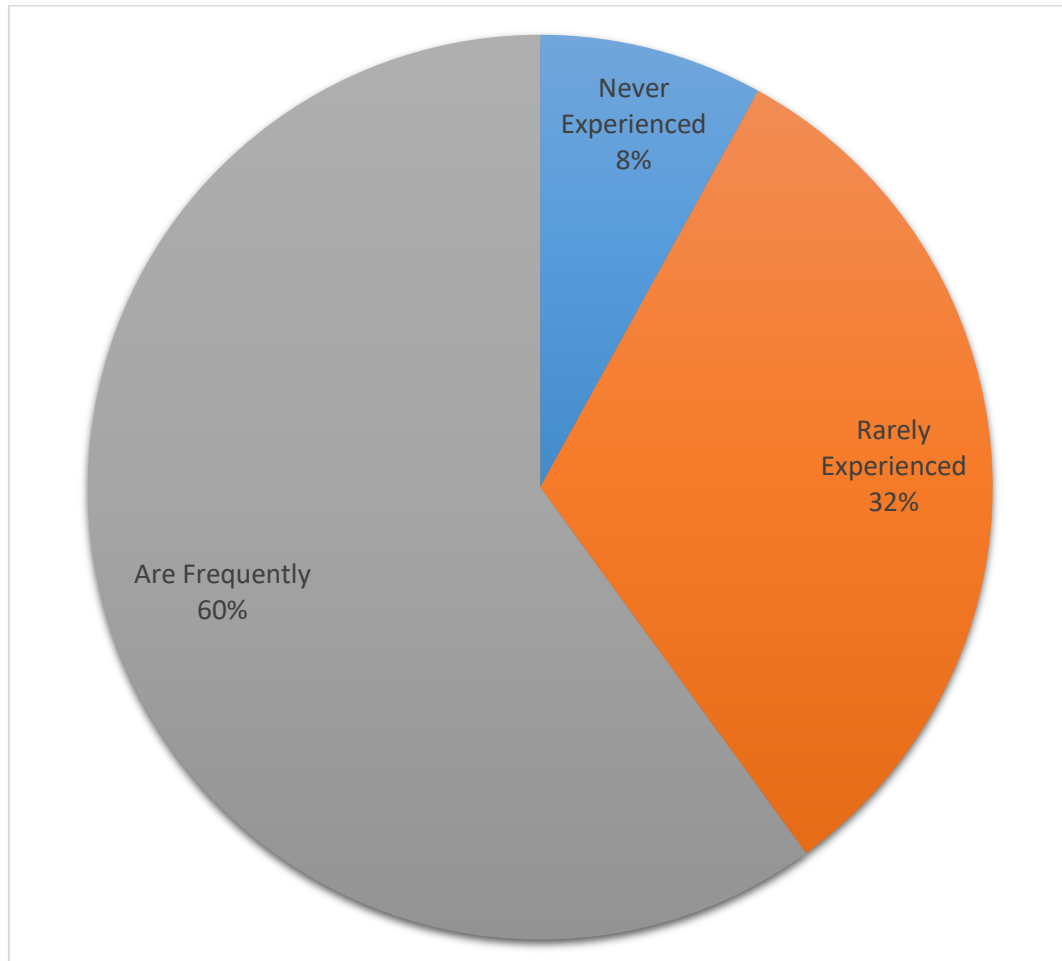
The results of the discussion related to the impact of traffic congestion on Jalan Denpasar-Gilimanuk on the travel time of freight vehicles, can be known through the results of interviews with 25 respondents who work in freight transportation companies, namely:

The intensity of freight transport companies experiencing congestion on the Denpasar-Gilimanuk road

Congestion is a problem experienced by freight transport companies when making deliveries through the Denpasar-Gilimanuk road. The determination of the intensity of freight transportation companies experiencing congestion can be known through the results of interviews with 25 respondents. The results of the interview related to the question about the intensity of freight transportation companies experiencing congestion on the Denpasar-Gilimanuk Road can be seen through the graph in Figure 4.

The congestion that occurs on the Denpasar-Gilimanuk Road is one of the big challenges in maintaining smooth mobility and transportation efficiency in Bali. Based on the results of the responses from the respondents, most revealed that congestion on this route often occurs, even outside of holiday hours. This condition usually peaks in the afternoon to night, especially during peak hours. Some respondents also noted that the average duration of congestion reached about 10 minutes, especially in the area around the ports of Ketapang and Gilimanuk. However, waiting times can become longer in certain periods, such as ahead of big days, including Eid al-Fitr, Galungan, and Nyepi, when the flow of tourist vehicles and goods increases significantly. A small percentage of respondents also mentioned that congestion is more often localized in certain areas, such as the Sam-sam ramp, at certain times.

The high volume of vehicles on this route cannot be separated from Bali's role as the main tourist destination. Private vehicles, tourism buses, and rental cars used by tourists are one of the main factors that increase traffic density. This condition has a direct impact on the distribution of goods, especially those related to the needs of the tourism sector, such as food delivery, beverages, and hotel supplies. Some respondents complained that the congestion caused delays in delivery as well as increased logistics costs, which ultimately impacted the efficiency of the supply chain to support the tourism industry.



(Source: Processed Data, 2025)

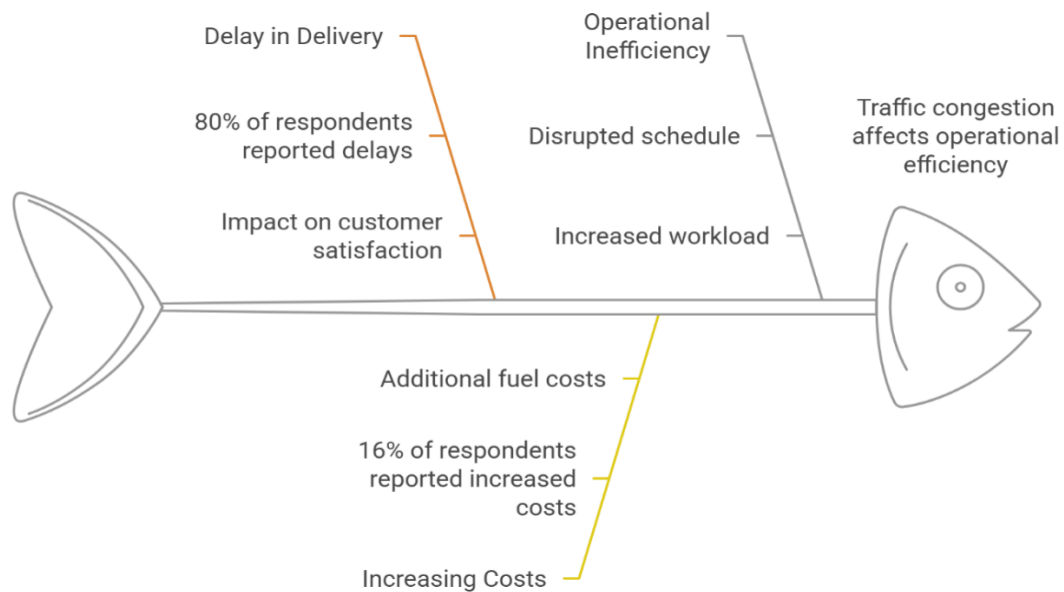
Figure 4. Graph of the intensity of freight transport companies experiencing traffic jams

The effect of congestion on the operation of freight forwarding companies

The congestion experienced by freight transportation companies has several negative impacts, one of which is on the company's operational activities. Based on the results of interviews with 25 respondents related to questions about the influence of congestion on Jalan Denpasar-Gilimanuk on the company's operations, it can be seen through the graph in Figure 5.

The congestion that occurred on Jalan Denpasar-Gilimanuk had a significant impact on the company's operations, especially in the logistics aspect. Many respondents revealed that goods often do not arrive on time, even in severe congestion situations, rescheduling the departure of goods at ports such as Tanjung Perak becomes inevitable. This problem not only extends travel time but also increases the company's operating costs, such as additional fuel consumption and meal costs for drivers. This condition worsens delivery efficiency, hampers the distribution of

goods, and delays the scheduling of the delivery of raw materials and products, including food items that are needed by the tourism sector in Bali.



(Source: Processed Data, 2025)

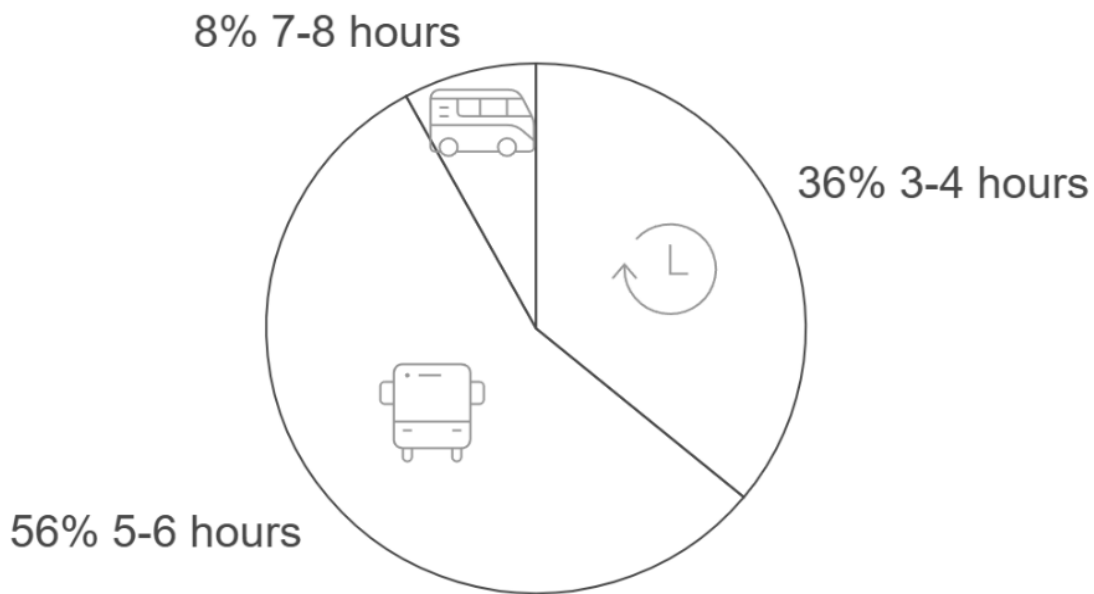
Figure 5. Graph of the effect of congestion on company operations

As one of the main tourist destinations, Bali relies heavily on an efficient supply chain to support its tourism industry. Supply needs such as food, beverages, and hotel or villa necessities are disrupted due to this congestion. In addition, the increasing volume of vehicles, both from tourists using private vehicles and logistics fleets, further worsens the traffic conditions on the route. This not only has an impact on logistics companies but also on the tourism sector which relies on timely delivery of goods to maintain the quality of their services.

Congestion also affects the productivity of drivers, who are often exhausted due to longer travel times. Delays in delivery can disrupt activity schedules, slow down production, and ultimately add to the company's operational costs. In the context of Bali as a crowded tourist destination, the impact of this congestion is increasingly felt because delays in the supply chain can affect the tourist experience, which ultimately harms the local economic sector. Thus, congestion on Jalan Denpasar-Gilimanuk is a serious challenge that must be addressed to maintain the smooth logistics and sustainability of the tourism industry in Bali.

Denpasar-Gilimanuk travel duration in normal times

Information on the duration of the delivery journey by freight forwarding companies to travel the Denpasar-Gilimanuk road at normal times is done by conducting interviews. Based on the results of interviews with 25 respondents related to questions about the duration of the Denpasar-Gilimanuk trip at normal time, it can be seen through the graph in Figure 6.



(Source: Processed Data, 2025)

Figure 6. Graph of Denpasar-Gilimanuk Travel Duration Normal Time

The travel time of logistics goods transportation vehicles on the Denpasar-Gilimanuk route under normal conditions varies based on respondents' responses. Most mention that the normal travel time ranges from 4 to 6 hours. However, there are also respondents who note that the trip can be completed within 3 to 4 hours if conditions are completely smooth. On the other hand, the travel time can be as high as 7 to 8 hours in some specific cases, especially when the volume of vehicles starts to increase or is approaching the holiday season.

For Bali tourism, the efficiency of travel time has a significant impact. The Denpasar-Gilimanuk route is one of the main distribution routes of goods that support the tourism sector, including the delivery of foodstuffs, beverages, as well as hotel and restaurant needs. Efficient travel time is essential to ensure that goods arrive on time and in good condition, so that they can support seamless tourism operations. Therefore, maintaining smooth traffic on this route is an important priority for the sustainability of Bali's tourism which depends on a reliable logistics supply chain.

Duration of time wasted due to congestion

The congestion experienced by freight forwarding companies when delivering goods through Jalan Denpasar-Gilimanuk causes wasted delivery time. Based on the results of interviews with 25 respondents related to the question of the duration of time wasted due to the congestion that occurred, it can be seen through the graph in Figure 7.

The time wasted due to congestion for logistics goods transport vehicles on the Denpasar-Gilimanuk route varies depending on the severity of the congestion. In light congestion situations, the time wasted ranges from 1 to 2 hours. However, for moderate to severe congestion, the lost time can reach 30 minutes to 1 hour, and in extreme conditions even reach 4 to 5 hours. Some respondents mentioned that the average duration of severe traffic jams can cause travel time to be delayed up to more than 5 hours.

For Bali's tourism sector, this congestion has a significant impact because the logistics of goods, such as groceries, beverages, and operational needs of hotels or restaurants, become inefficient. Delays in delivery due to congestion can disrupt the operations of the tourism sector, which relies heavily on timely supply chains. In addition, wasted time also affects logistics costs, including fuel consumption and driver workload. Therefore, strategic solutions are needed to

overcome congestion, such as optimizing logistics routes and developing transportation infrastructure, to support the sustainability of Bali's tourism.

To overcome this problem, strategic measures are needed that focus on better traffic management. The strategy in question is the application of smart technology for traffic management, optimization of logistics routes to avoid congestion points, and the development of alternative routes that are able to reduce the burden of vehicles on the Denpasar-Gilimanuk main route. With this solution, not only the efficiency of logistics transportation will increase, but also the smooth mobility of tourists, which is an important pillar for Bali's economy.

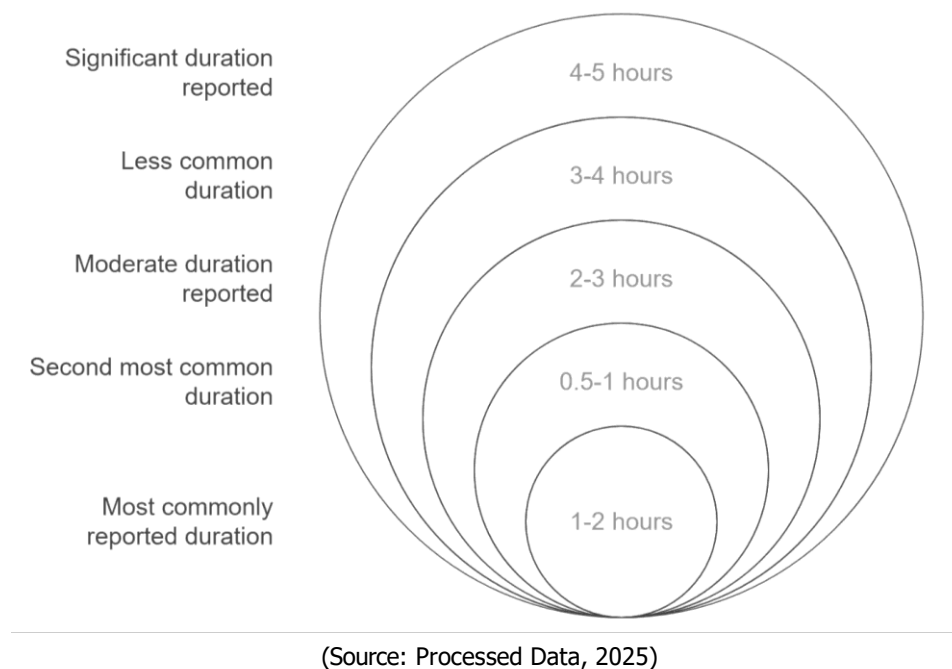


Figure 7. Graph of the Duration of Time Wasted Due to Traffic Jams

Integration with Tourism

The findings from the quantitative and qualitative analysis show a close relationship between congestion, logistics efficiency, and their impact on the supply chain of goods for tourism needs. In the context of Bali as a tourism area, traffic congestion has a direct impact on logistics and tourism transportation activities in Bali. Delays caused by congestion can affect the availability of goods for the tourism sector, such as food and beverages for restaurants and goods for hotels. Previous research has shown that delivery delays can reduce customer satisfaction (Nazarenus Mwinuka, 2023).

The increase in travel time due to congestion contributes to an increase in operational costs for logistics companies (Fattah et al., 2022). The analysis shows that additional costs due to delays can reach 23-35%, well above the global average of 15% (Logistics Performance Index (LPI), 2023). Data analysis shows that congestion in the Denpasar-Gilimanuk corridor is not only a transportation problem, but also has broad implications for the tourism sector and the local economy. With the growth in the number of tourists reaching 12 million in 2023, the need to manage traffic flow has become even more urgent (BPS Provinsi Bali, 2023).

In addition, traffic congestion in metropolitan areas negatively impacts the efficiency of logistics distribution, affects vehicle rotation, delivery times, and increases operational and fuel costs (Trifena et al., 2024). Therefore, the development of integrated infrastructure, such as port expansion accompanied by investment in improving road and rail infrastructure that supports the

movement of goods from ports to final destinations, will help overcome traffic congestion and improve logistics efficiency (Mutlisah, 2023).

Discussions

The Impact of Congestion on Transportation Efficiency

The results of this study corroborate previous findings about the impact of traffic congestion on the efficiency of goods transportation. For example, a study by Hidayat et al. (2021) shows that traffic congestion significantly reduces vehicle speed on roads with low service levels. This is in line with the results of the spot speed survey on Jalan Denpasar-Gilimanuk, where the average speed of pick-up vehicles and large trucks only reaches 12 km/h and 9 km/h respectively during peak hours, far below the speed standard for roads with a high degree of saturation.

This study is in line with findings that show that inadequate road capacity and increased vehicle volume can lead to a significant decrease in logistics efficiency (Wedagama et al., 2023). The obstacles posed by heavy vehicles (HVs) to other vehicles in mixed traffic flows are proven to affect overall road capacity and level of service (LoS), as found in the study. The analysis of road capacity in the Denpasar-Gilimanuk section shows that the V/C ratio values based on PKJI are 1.02, respectively, which indicates that the capacity is already saturated.

A study in Spain by Alvarez et al. (2018) found that considering real-time traffic congestion in route optimization can result in time savings of up to 11% in urban areas (Alvarez et al., 2018). However, the unavailability of alternative routes in Bali—unlike the flexibility of the road network in Spain—resulted in a more direct and uncompensated impact on distribution accuracy. By comparison, Chittagong, Bangladesh, shows that seasonal port congestion causes ships to wait more than a week before loading and unloading, due to limited capacity and a lack of alternative port options (Chowdhury, 2020). These conditions confirm that regions such as Bali, with linear corridors and no backup routes, are more vulnerable to logistical disruptions exacerbated by congestion.

This has implications for longer travel times and increased logistics costs, similar to those reported in the analysis of strategic transport corridors (Miltiadou et al., 2012). The location of the infrastructure in this case also affects the level of congestion in the process of shipping goods in the Bali region (Gautama et al., 2023; Soimun et al., 2024).

This study reveals the significant impact of traffic congestion on the efficiency of goods transportation in the Denpasar-Gilimanuk corridor. The results of the study show that congestion can increase travel time by up to 50%, especially during the tourist season and weekends, with delays ranging from 1-2 hours. These findings are in line with research that found that urban congestion can increase fuel consumption, travel time, and carbon dioxide emissions by up to 80% compared to no congestion (Faheem et al., 2024). Our research shows a 16% increase in operating costs, which is consistent with recent studies in similar tourism-logistics corridors.

The Phenomenon of Tourism Logistics Conflict

Based on the study, there was a decrease in road capacity between 14.37% to 26.60% and a decrease in speed between 13.79% and 76.19% in tourism areas, which caused significant problems on arterial roads (Wedagama et al., 2022). The critical finding of this study is the phenomenon of "tourist logistics conflict". The study expands on the concept by quantifying its impact in the context of Bali, where the overlap between peak hours of tourist activity and logistics delivery schedules resulted in an increase in waiting times by up to 56%. This finding is very significant considering Bali's dual role as a tourist destination and logistics center.

The tourism-logistics conflict identified in this study is in line with the findings of research in the Guilin tourist area, China, where tourist traffic congestion has been analyzed using a big data approach to understand the imbalance between tourism supply and demand (Qin & Li, 2021). However, conditions in Bali are far more critical due to its characteristics as a linear corridor with no alternative routes. In comparison, in Phuket also a major tourist destination studied by

Supradit & Suthiwartnarueput (2025) transportation connectivity and logistics systems were found to greatly affect tourist satisfaction (Supradit & Suthiwartnarueput, 2025).

Nevertheless, Phuket's road network still allows for route diversification despite significant congestion, as mentioned in the analysis of sustainable tourism management in the region (Puchongkawarin & Ransikarbum, 2021). Bali's uniqueness as a narrow corridor with no alternative route options exacerbates the impact of conflicts between tourist mobility and logistics operations. This underscores the important empirical contribution of this study to the literature, as it highlights real conditions that are structurally different from previous international studies.

Infrastructure and Capacity Constraints

This analysis supports the IMF's findings (2022) that port congestion is often caused by infrastructure limitations and increased volumes that exceed available capacity. Particularly noted this pattern in touristy dense areas, where road capacity constraints failed to accommodate the surge in vehicle volumes during peak tourist seasons (Komaromi et al., 2022) improving the quality of transportation infrastructure has a vital role in supporting the tourism sector (Raharjo et al., 2023). This mismatch between infrastructure and demand is particularly noticeable in our area of study.

Impact on Supply Chain Performance

The results of this study are consistent with the findings from Oteng et al. (2022) in Ghana, which show that traffic congestion significantly disrupts supply chain performance through delivery delays and increased operational costs. A new study by Zhao & Lee (2023) expands on these findings by showing that the implementation of connected and autonomous vehicles (CAVs) in distribution can improve supply chain performance, particularly by reducing the impact of congestion. Furthermore, research by Adu et al. (2023) emphasizes that adequate road infrastructure and compliance with driving safety greatly contribute to reducing delays and logistics costs. However, conditions in Bali are different: congestion is not only caused by infrastructure or the number of freight vehicles, but also by the overlap between tourist traffic and logistics distribution, exacerbated by seasonal demand variations. This confirms that tourist areas such as Bali face unique challenges that exacerbate logistics inefficiencies, a dimension that is still rarely highlighted in the literature.

Theoretical and Practical Implications

This research makes an important contribution to transportation management theory by expanding the concept of tourism-logistics conflict, especially in the context of developing economies. This study presents empirical evidence that shows the relationship between traffic congestion and the operations of freight transport companies, thus emphasizing the importance of transportation efficiency in supporting regional economic growth. In addition, the study develops a framework for analyzing multifunctional transportation corridors that serve tourism and logistics needs simultaneously, providing a theoretical basis for future research.

From a practical point of view, the findings of this study are relevant for various stakeholders. For policymakers in tourism based regions, the results of this study provide guidance for designing transportation policies that can reduce the conflict between the needs of tourists and logistics. Logistics operators operating in mixed-use corridors can use these insights to optimize delivery schedules and company operational strategies. In addition, urban planners responsible for the management of tourism-logistics infrastructure can leverage this framework to develop more effective solutions in overcoming infrastructure limitations and improving connectivity. Thus, this research not only enriches the academic literature but also has a direct impact on transportation management practices in the field.

Conclusions

This study provides empirical evidence that traffic congestion in the Denpasar-Gilimanuk corridor significantly impedes freight transport performance in regions dependent on tourism. The

findings reveal that road saturation exceeding the recommended threshold (V/C ratio of 1.02) results in a substantial decrease in the speed of freight vehicles (9-12 km/h during peak hours), leading to a 60% increase in operational costs and compromising the supply chain efficiency of tourism-related industries.

Regression analysis shows a strong inverse relationship between traffic volume and vehicle speed, with direct implications for the escalation of congestion costs. Qualitative findings from structured interviews with 25 logistics operators reinforce these quantitative results, confirming that persistent congestion systematically undermines delivery reliability, increases fuel consumption, and degrades service quality in the logistics sector.

These findings contribute to transportation management theory by providing context-specific empirical evidence from dual-purpose transportation corridors that serve both tourism and freight functions. The study offers practical insights for policymakers and logistics stakeholders operating in similar environments, supporting the implementation of integrated solutions, including infrastructure expansion, dedicated freight lanes, intelligent transportation systems, and time-based access restrictions.

Although this study advances our understanding of the impact of congestion on freight logistics in tourism corridors, there are several methodological limitations that need to be acknowledged. The regression analysis in this study focuses on the relationship between traffic volume, speed, and operational costs, but does not include control variables for external factors such as weather conditions, traffic accidents, or road infrastructure work. The absence of these variables constitutes a limitation that may affect the estimation results. Additionally, limitations include temporal coverage and limited stakeholder representation.

Future research should integrate extended observation periods to capture seasonal variations, enrich the model by incorporating these external factors to produce more accurate conclusions, and expand the geographical scope to comparable tourism areas. Integrating diverse stakeholder perspectives will enhance policy relevant insights, tourism operator and infrastructure planners. Advanced traffic simulation modeling and analysis of transportation operators' compliance behavior toward regulatory interventions represent promising avenues for further investigation.

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Typology of wellness tourism based on traditional healing in Bali

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Abstract: Bali has become a leading destination for wellness tourism rooted in traditional healing practices, driven by global interest in holistic well-being and spiritual travel. This study employs a qualitative approach, incorporating field observations, interviews, literature reviews, and focus group discussions across Gianyar, Bangli, and Badung Regencies to explore how wellness experiences are socially and culturally constructed. Findings reveal four key domains—Fitness, Healing, Therapy, and Treatment—categorized into Soft Wellness (preventive, lifestyle-based) and Hard Wellness (restorative, spiritual). These practices reflect the interaction between local traditions and global wellness trends. Theoretical frameworks such as the Experience Economy, Cultural Capital, and the Global Wellness Institute’s Wellbeing Model are applied to analyze the co-creation and symbolic value of wellness experiences. Despite rapid growth, challenges persist, including limited regulation, a lack of professional branding, and insufficient institutional support. This study recommends strategic policy measures to strengthen governance, maintain cultural authenticity, and promote sustainable development of Bali’s wellness tourism sector.

Keywords: Bali, tourists, tourist destinations, traditional healing, wellness tourism

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Introduction

Medical tourism has evolved into one of the most dynamic sectors within the global tourism economy in recent decades, driven by the convergence of healthcare advancements and leisure travel. This niche enables individuals to access medical or wellness services while engaging in cultural and recreational experiences, thus meeting both functional and aspirational travel motivations. Empirical evidence shows that medical tourism has grown approximately 50% faster than the overall global tourism industry (Rosalina et al., 2015) with projected annual revenues reaching USD 38–55 billion (Rosalina et al., 2015). In Asia, India, Malaysia, Thailand, and Singapore dominate the market, collectively holding the largest share. By contrast, Indonesia, despite its tourism appeal, has yet to secure a strong foothold, as most outbound Indonesian medical travelers continue to seek treatment in Malaysia or Singapore (Rosalina et al., 2015). To address this, since 2014, the Indonesian government has undertaken strategic initiatives, including the accreditation of hospitals, professional certification for medical staff, and the adoption of international service protocols in collaboration with the Joint Commission International.

Bali, one of Indonesia’s most globally recognized destinations, has begun to align itself more systematically with the development of health tourism. Its medical infrastructure spans from high-capacity public facilities to internationally accredited hospitals designed to serve both domestic and foreign patients. The Prof. dr. I.G.N.G. Ngoerah Central General Hospital (formerly Sanglah Hospital) functions as the province’s primary referral hospital, delivering a wide spectrum of medical services. The Bali International Medical Centre (BIMC) in Nusa Dua, accredited by the Australian Council on Healthcare Standards International (ACHSI) since 2014, stands as a

benchmark for global-standard healthcare delivery in the region. A more recent milestone is the inauguration of the Bali International Hospital (BIH) in Sanur in June 2025. Situated within the Sanur Special Economic Zone, BIH is a green-certified facility with around 250 beds and specialized centers in cardiology, oncology, neurology, gastro-hepatology, and orthopedics. Its design integrates advanced medical care, post-treatment wellness programs, and cultural immersion experiences—positioning Bali to reduce outbound medical flows and capture a greater share of the high-value health tourism market.

Within the broader health tourism framework, Bali offers two complementary segments: medical tourism, adhering to conventional international models, and wellness tourism, deeply embedded in *usada* Bali, the island's indigenous healing tradition. In Balinese philosophy, health reflects a state of equilibrium between *causa sekala* (naturalistic causes) and *causa niskala* (personalistic or supernatural causes). This worldview supports a holistic conception of well-being, encompassing physical, mental, and spiritual dimensions. Over time, Bali's wellness tourism has expanded from localized community practices to a wide range of services, including herbal remedies (*jamu*, *lolo*), traditional massage, sessions with *balian* (traditional healers), spa treatments (*solus per aqua*), yoga and meditation retreats, detoxification programs, organic gastronomy, and aesthetic or cosmetic treatments. Bali's international prominence in this field is reinforced by its ranking among the top global wellness destinations, with an 88% preference rate among wellness travelers (The Global Spa and Wellness Economy Monitor, Kompas.com, June 19, 2015). Ubud, in particular, has become a focal point for these activities, blending traditional, contemporary, and post-modern modalities.

However, the sector's rapid growth is tempered by structural challenges. The absence of a clear typology distinguishing medical from wellness tourism has led to fragmented development, inconsistent service standards, and limited policy coordination. Providers operate independently—ranging from local healers to luxury wellness resorts—without cohesive governance mechanisms or standardized quality assurance. This fragmentation is particularly concerning given the diversity of visitor motivations, which span from achieving physical and spiritual balance to undergoing advanced medical procedures, seeking relaxation, and embracing therapeutic lifestyle changes such as detoxification or organic nutrition. Without a coherent framework, the sector risks both diminishing service quality and diluting the authenticity of its cultural assets.

Beyond its economic potential, wellness tourism makes significant contributions to cultural preservation, employment generation, and destination differentiation. Sutarya (2016) notes that its growth has encouraged hotels, resorts, and wellness centers to incorporate *usada*-based treatments, spa services, organic cuisine, and yoga programs into their offerings. These innovations not only extend visitor stays but also enhance experiential value and product diversity. In line with the Experience Economy framework (Pine B. & James H., 1998) Wellness travelers are increasingly seeking immersive, transformative experiences rather than passive consumption. Similarly, the concept of Cultural Capital is evident in the consumption of traditional healing, which provides not only therapeutic benefits but also symbolic value and a sense of authenticity.

Against this backdrop, the present study develops a typology of wellness tourism in Bali that is grounded in its cultural and spiritual heritage. By differentiating between Soft Wellness (preventive, lifestyle-oriented) and Hard Wellness (restorative, spiritually embedded) modalities, the study offers both a conceptual framework and practical recommendations for sustainable, culturally sensitive development. The findings aim to inform academic debates on the localization of global wellness trends, the commodification of heritage, and governance models for emerging wellness destinations, while providing policy-relevant insights for Bali and comparable contexts worldwide.

Literature Review

1. Global Trends and Definitions of Wellness Tourism

Wellness tourism is among the fastest-growing segments of global tourism, driven by increasing awareness of holistic health, preventive lifestyles, and post-pandemic wellness priorities. According to the Global Wellness Institute (2023), wellness tourism refers to travel intended to maintain or enhance one's well-being, encompassing both physical and spiritual components. The sector has shown consistent growth globally and is particularly robust in Asia,

where spiritual traditions and indigenous health philosophies remain deeply embedded in tourism offerings (Gonzales et al., 2001). Bali, with its rich spiritual heritage and ritual-based healing culture, has become a focal point in this movement, offering integrated experiences that blend cultural authenticity with contemporary wellness trends. This growth trajectory has been confirmed by broader studies of wellness economics and supported by global travelers' preference for destinations that integrate natural landscapes with spiritual rejuvenation (Prayag & Jankee, 2009). Furthermore, the repositioning of wellness tourism following COVID-19 places greater emphasis on preventive healing, sustainability, and more profound emotional outcomes (Heintzman, 2020).

2. Typologies of Wellness Experiences

Recent literature conceptualizes wellness tourism through a typology that distinguishes between Soft Wellness and Hard Wellness modalities. Soft Wellness encompasses lifestyle-focused, preventive services, including yoga, meditation, spa treatments, and mindfulness programs. In contrast, Hard Wellness refers to more intensive therapeutic practices, including clinical interventions and traditional or indigenous healing (Smith & Puczkó, 2008). However, emerging studies emphasize that wellness tourists often traverse a continuum between these categories rather than viewing them as binaries (Abou-Shouk et al., 2021; Mueller & Kaufmann, 2001). In the Balinese context, this hybrid typology is exemplified by the coexistence of spa resorts, yoga centers, and indigenous healing practices such as melukat rituals and sessions with *balian* (traditional healers) (Rosalina et al., 2015). The coexistence of modern and spiritual wellness offerings in Bali exemplifies the concept of "existential authenticity," where travelers seek a deeper understanding of themselves through culturally immersive healing experiences.

3. Experience Economy and Transformational Travel

The shift toward wellness travel is closely linked to what Pine B. & James H. (1998), describe as the Experience Economy—an era in which consumers, including tourists, seek immersive, emotionally resonant, and transformative experiences. Rather than passive consumption, wellness travelers pursue engagements that stimulate physical, emotional, and spiritual change. Supporting this framework, find that emotional fulfillment, experience quality, and perceived transformation significantly shape loyalty and revisit intentions among wellness tourists. Kirillova et al. (2017) further argue that wellness experiences contribute to anxiety reduction and identity formation by fostering existential authenticity. In Bali, this is evident in the rise of wellness retreats that integrate nature-based therapy, sacred rituals, and self-reflection, reinforcing the island's role as both a sanctuary and a site of personal growth.

4. Authenticity, Cultural Capital, and Ethical Challenges

The appeal of wellness tourism in Bali is not only therapeutic but also symbolic. Scholars suggest that traditional healing practices are consumed not merely for their efficacy but for the symbolic value they confer on the tourist, especially in terms of authenticity and cultural distinction. In this context, authenticity becomes a strategic asset: tourists seek genuine cultural engagement, while local actors mobilize spiritual heritage as a form of economic strategy (Aina, 2013; Cohen, 1988). However, this intersection also raises ethical challenges, including risks of commodifying sacred knowledge and spiritual spaces. Reisinger & Steiner (2006) caution that excessive market-driven adaptation may dilute the meaning and authenticity of cultural practices, undermining their role in community resilience and spiritual heritage. This tension must be addressed through culturally sensitive governance and participatory tourism planning (Plog, 1974).

Methodology

This section should be easy enough for any reader to repeat the study under similar conditions. This research employed a qualitative, exploratory approach to investigate the typology and spatial distribution of wellness tourism practices in Bali, particularly those rooted in traditional healing systems. The qualitative design was chosen to allow for an in-depth exploration of the cultural, spiritual, and experiential dimensions of wellness tourism—dimensions that are not easily

captured through quantitative metrics alone (Denzin, 2009). Aligned with the interpretivist paradigm, this study sought to construct meaning from the subjective perspectives of local actors, practitioners, and tourists. The aim was to understand how wellness practices are perceived, experienced, and transformed in the context of Bali's socio-cultural landscape. Qualitative methods are particularly suitable for tourism studies, where values, beliefs, and identity play a central role (Decrop, 1999). Data were collected through a triangulated strategy involving participant observation, semi-structured interviews, document analysis, and focus group discussions (FGDs). These methods enabled both depth and breadth in understanding wellness practices and their positioning within broader tourism dynamics. Research sites were selected in three districts—Gianyar, Bangli, and Badung—due to their prominence in the emergence and diversification of wellness tourism products.

Data were collected through participant observation, semi-structured interviews, document analysis, and FGDs at wellness tourism sites in Gianyar, Bangli, and Badung. Participants were recruited via purposive and snowball sampling, involving local practitioners, tourism officials, entrepreneurs, and tourists. Initial contacts were obtained through community referrals and local tourism institutions. The interview protocol was developed based on key literature and refined through pilot interviews to ensure cultural relevance and clarity. Open-ended questions explored perspectives on wellness practices, healing experiences, and the dynamics of tourism.

Sampling was purposive and theoretical, targeting actors who represent the wellness tourism ecosystem, including *balian* (traditional healers), yoga and meditation practitioners, spiritual retreat managers, wellness-focused entrepreneurs, government tourism officers, and tourists. Twenty-five informants participated in interviews lasting 45–90 minutes. Interviews were conducted in Balinese, Indonesian, or English, depending on informant preference, and were audio-recorded with consent. Data analysis followed Braun & Clarke (2021), updated reflexive thematic analysis model, which emphasizes researcher subjectivity, iteration, and theme development grounded in rich narrative data. Coding proceeded through open, focused, and thematic cycles, using memo-writing and constant comparison to refine categories. NVivo 12 was used to assist in organizing and visualizing the emerging codes and relationships. To ensure research quality, we adhered to the trustworthiness criteria outlined by Nowell et al. (2017), including credibility (via triangulation and member checking), dependability (audit trail), transferability (thick description), and confirmability (reflexive journaling). Ethical clearance and community permissions were obtained prior to fieldwork. Ultimately, this qualitative strategy allowed the research to reveal nuanced patterns of meaning and practice, capturing how traditional healing is not only commodified but also re-signified in Bali's growing wellness tourism sector.

Results and Discussions

1. Distribution of Wellness Tourism Practices

Geographically, the distribution of practice can be divided into three regions, namely:

a. The Core Area includes Ubud village and its surroundings

The development of wellness tourism (hereinafter referred to as WT) in Ubud has been ongoing since the 1980s. The actors who drive WT are divided into several types of actors, including traditionally rooted individual actors, modern individual actors (generally people outside Bali), traditional institution or group actors, and modern institution or group actors. The WT actors spread in Ubud into various forms, such as Yoga teachers, vocational centers, massage therapists, spiritual shops, yoga studios, ashrams, meditation groups, *griyas*, and several other types.

Although the frenetic world of WT in Ubud is dominated by the WT of the eastern world, which is packaged in a modern way, the forerunner of the outbreak of WT is not from the type of modern WT but from a traditional wellness practice of a resident named Pekak Liyer. Liyer is a traditional Palmistry healer figure, who is a method of fortune-telling through the palm line. Palmistry itself is a statistical science based on data. Reading hand lines is a technique based on the results of research on people's tendencies based on palm patterns. Pekak Liyer practices Palmistry at his home in Banjar Pengosekan, Mas, Ubud. Coincidentally, a novelist visited him in the 2000s and was fascinated by Liyer's ability to predict his future.

b. The intermediate area, covering East Gianyar and Bangli Regency

The forms of wellness tourism practices in the intermediate area include wound-healing places and Balinese *usadha* practices, which are often found in practitioners' homes or ashrams, and are widely spread throughout the intermediate area, covering the East Gianyar regency and Bangli regency. Some of these healing service providers are accustomed to receiving visitors from the tourist sector, but most are not experienced in this area. In general, these places are disseminated by word of mouth and not by a specific means of promotion.

c. Outermost area, covering Karangasem Regency

The variety of WT practice forms in the outermost region is like that in the intermediate region, the difference being that in these outermost regions, the WT products are more varied. Even some WT service providers in this area have products that are the forerunners or the beginning of product development. One of them, for example, the yoga classes at Gedong Giri Ashram in Candidasa, as claimed by the manager, are the first yoga classes provided for foreign tourists in Bali, dating back to the 1970s. In this intermediate area, there is also Ratu Bagus Ashram, precisely located in Muncan Village, Karang Asem. The ashram already has hundreds of foreign disciples with very distinctive meditation techniques.

2. Typology of Wellness Tourism Practices

"Pidan kene anggone *boreh*, pidan kene anggone *loloh*." (Once upon a time, we wanted to make it a poison or a spice...) (Informant interview, Karangasem, September 9, 2021).

This fragment of the informant's statement describes one of the parktik wellness tourism (fitness tourism) types of medicine and healing, based on the local wisdom of the Balinese people. Wellness *practices like this* have been developing for quite a long time in Bali, as old as the Balinese civilization itself. Fitness practices have become an integral part of the Balinese healthy way of life, serving as a means of treatment, healing, and disease prevention.

Along with the affirmation of tourism as a way of life (since 1969), fitness practices began to be embedded in it and increasingly gained market share in the tourism world, as health tourism developed in the late 1970s. Decades later, Bali wellness tourism has become an attractive option for tourists as the "fitness movement" emerges around the world. Now, fitness tourism has spread to various tourist destinations in Bali in various forms and types. As seen in Table 1, qualitative data analysis of this study shows that four types of wellness tourism develop in Bali, namely: (a) Type of fitness; (b) Treatment and healing; (c) therapy; and (d) Treatment. The following description is a more detailed description of each of these types.

Table 1. Typology of wellness tourism in Bali

No	Types of wellness tourism	Wellness tourism
1	Fitness Type	a. SPA (<i>solus per aqua/water treatment</i>). b. <i>sport, wellness, Tourism</i> , c. Yoga.
2	Types of Treatment and Healing	a. Balian (<i>Balian panengen, Pangiwa, Ketaxon, Kapican, Usada, and Mixed</i>) b. Healing with incantations c. Healing by needling d. Detox with yellow coconut water e. Healing with Pranic Energy f. <i>Hugging</i> (bathing) in a lucky spring
3	Type of Therapy	a. Laughter Therapy b. Massage Therapy c. Organic and vegetarian food therapy d. Meditation therapy (stress healing)
4	Treatment Type	a. Beauty clinic (body, face, skin) b. Body massage, <i>manicure</i> , and <i>pedicure</i>

Source: Qualitative Data, 2021

a. Fitness Type (Soft Wellness)

The Global Wellness Institute (2018) states that fitness (wellness) is an effort to actively achieve through activities, choices, and lifestyles that lead to holistic health conditions. The

holistic health condition in question is a balance between body, mind, and spirit. In its development in Bali, this type of fitness is more intended for healthy individuals. In general, tourists look for certain fitness therapy methods to get a better quality of life as well as maintain health and fitness on their trip.

In line with the Global Wellness Institute's (2018) identification, the type of fitness (tourism) that develops in Bali encompasses six aspects: physical, mental, spiritual, emotional, environmental, and social. Several fitness service businesses in Bali integrate these six aspects into every fitness service and practice they present. A healthy physique, strong mentality, peaceful spirituality, a clean and comfortable environment, and friendly social conditions are aspects that are consistently presented in every fitness service practice.

In the view of fitness service managers, it is stated that, to obtain perfect fitness, these six aspects must be able to be fulfilled in a balanced manner in every tourist activity. Tourists (both domestic and foreign) who want to achieve full fitness must balance these six components in their travel activities. He must maintain a healthy physique, be mentally strong, spiritually calm, have stable emotions, a comfortable environment, and a calm social situation.

To date, the development of fitness-type wellness tourism has not been widespread in Bali. This type is still relatively exclusive because the service model still prioritizes the patterns of luxury (berclass) and modernity (in line with technological advances). The most common examples of this type are fitness through sports (sport wellness tourism), Yoga, Gymnastics, and spas (solus per aqua/treatment with water). The type of sports fitness that develops among them is in the form of fitness services in the form of fitness, gymnastics, leisurely walking, and breathing. Types of Yoga gymnastics include the practice of Yoga in open and closed spaces, involving activities such as meditation, relaxation, breathing, and body gymnastics, for the purpose of developing harmony between the body, mind, and the surrounding environment. Spa fitness types (solus per aqua/ water treatments) include fitness with massage techniques, massage, body scrubs, and aromatherapy.

However, Bali also developed a type of fitness in the form of healthy gymnastics that incorporates breathing. One type of fitness practiced by the SN healthy gymnastics community (Satria Nusantara). This healthy exercise, which combines body movements with breathing, also stimulates chakra points that can generate good energy for overall body health.

"SN is a potential that can be developed. There have been 80 years of development in Indonesia. I've been up to level 10; it's still an elementary level, and there are many more levels to go. Very good for health. Many people recover from their illnesses because they participated in SN. In SN, it is essentially a combination of breathing and motion. I was once told to explain in terms of motion. In all these SN movements, it turns out to rub certain acupoints, and these are chakra points. These points are all combined in the SN, resulting in energy. With that energy, immunity in the body increases, so that our body can fight all types of diseases that already exist or will enter the body. Participating in SN means we have taken a step towards disease prevention. We know prevention is far more important than cure. This is what must be developed" (4th informant interview, Karangasem, September 9, 2021).

According to informants, this type of fitness can promote overall health, aid in recovery from illness, and maintain physical fitness. Like other types of fitness, this type of fitness is also guided by instructors (teachers) to direct movement patterns in order to obtain optimal fitness benefits. If the type of Spa, yoga, or fitness requires a slightly specific environment (place), then the SN type of fitness is not like that. This type of fitness can be conducted in open fields, enclosed spaces, or other suitable locations that are suitable for small-group fitness activities.

If considered as a whole, wellness tourism in this type of fitness is known to emphasize the importance of a better quality of life, and such quality can not only be achieved by having a healthy physical condition but also by being fit. Fitness can be achieved by maintaining harmony between body, mind, and spirit. This factor enables the various forms of fitness listed above to be adaptable in the ever-changing tourism industry and increasingly in demand by both domestic and foreign tourists.

b. Types of Treatment and Healing (Hard Wellness Tourism)

In addition to the types of fitness mentioned above, the typology of wellness tourism that appears capable of developing and being dynamic in the Bali tourism industry is wellness tourism

with a focus on treatment and healing. Qualitative data analysis of this study reveals that this type of wellness tourism is deeply rooted in the cultural heritage of Bali, and can even be said to have a heritage in medicine and healing. Balinese people usually call it Balian, or in more popular terminology, Usada Bali

As has been widely practiced so far, this type of tourism (*usada Bali*) emphasizes more on healing and healing techniques based on the concept of *sekala-niskala*, a cultural perspective that emphasizes that body fitness can be obtained if the body is protected from infection (*causa sekala/ natural*) or exposed to supernatural forces (*causa niskala/ magic*). In the past, this perspective was considered archaic and irrational; however, in the current era of digital evolution, it has begun to be revitalized, allowing for the identification of more natural, healthy, and holistic fitness practices.

Based on such a context, the qualitative data analysis of this study found that there are four types of wellness tourism in terms of treatment and healing, namely: (a) *Balian*, (b) *Mantera*, (c) Tneedle Rib, (d) Detox, (e) Pranic Energy, and (f) *Melukat*.

A *Balian*, often referred to as a Balinese shaman, is an individual who can heal or treat the sick. Balinese culture views individuals like this as those who acquire healing and healing skills through heredity, *taksu*, *pica*, or who deliberately learn from other *Baliens*. Based on this expertise in Balinese culture, six types of Balian are known, namely: (a) *Balian panengen*, (b) *Pangiwa*, (c) *Ketaxon*, (d) *Kapican*, (e) *Usada*, and (f) Mixed. All Balian can be categorized as wellness tourism because they all strive for the realization of fitness and health in the body in a balanced manner. To achieve that, the body must be completely free of the various scales. Pain in these glasses is more of an imbalanced condition between body, mind, and spirit, with various causalities on these scales.

"Physical pain and suffering are only the visible manifestations; there is also a non-physical dimension, particularly involving the mind and soul. If the mind and soul are afflicted, the body will inevitably be unwell. To heal, it is crucial to first identify the underlying cause of the problem. As a *balian* (traditional healer), I must thoroughly understand this. Treatment may involve medicine, water, or other means, but pinpointing the exact cause of the illness is essential—otherwise, the body will not truly recover and may even deteriorate further." (3rd informant interview, Karangasem, September 9, 2021).

The informant's statement described *wellness tourism* as being achieved through traditional medicine and healing, a treatment technique rooted in the traditional heritage. Fitness can not only be obtained through modern techniques but can also be obtained through traditional techniques that have become part of the tradition of seeking fitness. Like wellness tourism efforts in the era of *Kekikinian*, tradition-based wellness tourism also uses medicinal facilities (herbs), banquets, or other means for the purpose of obtaining fitness (balance of body, mind, and spirit).

One such other means is spells. *Mantera*, also known as *japa*, is one of the methods commonly used by Balian to treat and cure diseases. In these spells, some are accompanied by medicine (*tetamba*), and some are without medicine. Similar to other forms of wellness tourism, this mantra is also one of the techniques used to get fit, although the fitness in question is more likely to lead to recovery from illness. However, in principle, both restore the body to a healthy and fit condition.

"As far as I know, in Karangasem, there are more traditional treatments with *mantera*. The medium is water. I also just knew that. As it turns out, water is the most sensitive conductor of electricity. The mantra is chanted into the air. *Mantera* speech is based on *Nawa Sanga*, if *Ang* is pronounced where the organ is addressed. Where is it going? After that, the water is drunk, and then the *mantera* is given to the sick body. I only found out about all this after I read about the traditional medicine of the Pranic System. Most people don't know much about this because traditional medicine is not like a doctor's treatment". (3rd informant interview, Karangasem, September 9, 2021).

This informant's statement illustrates that incantations are commonly used in medicine to obtain healing from diseases. Mantras have become an integral part of the medical system that Balian utilizes in his efforts to promote healing and body fitness in his patients. Thus, incantations are also one means of integrating fitness into treatment and healing techniques.

Similar in value and function to *matera*, one of the *wellness tourism* practices for this type of treatment and healing can be found in the practices of needleprick, detoxification with yellow

coconut water, healing with Pranic energy, and cleansing oneself to achieve fitness through *mlukat* (bathing) in lucky springs. All these techniques and efforts are wellness tourism practices that essentially restore the body, mind, and spirit to a harmonious state, allowing for the attainment of fitness through various techniques. Wellness tourism practices like this in Bali have been around for quite a while and have even become part of his way of life, allowing him to achieve this balance of fruit and fitness.

c. Type of Therapy

One more type of wellness tourism that is now also dynamic with the development of Bali tourism is therapy. This type is part of wellness tourism, which aims to improve body freshness (physical), restore body health from illness, body care for healing, or seek re-fitness with certain techniques, strategies, and efforts. One form of therapy that has now developed in Bali is laughter therapy. This therapy serves to reduce stress, reduce depression levels, increase solidarity and togetherness, and increase body immunity. This function is in harmony with the meaning of fitness itself, which emphasizes aspects of harmony between body, mind, and spirit. Laughter therapy is one of the therapeutic models that can help the body of each individual to function optimally.

"I already knew that. Now, laughter therapy is developing in Bali. Many benefits can help relieve stress. In Bali, this, if not wrong, is in Ubud and here in Karangasem. If in Karangasem, it is in the Ashram. The ashram of Ratu Bagus, which I heard about even there, the way of therapy is told to inhale tobacco and suck the smell of mako. That's what I heard. In Ubud, I don't really know, but I heard it just by laughing. But laugh in different techniques and ways. Some laughed out loud, some were held in the stomach, some were with their mouths closed—all kinds of things. Everything has its own purpose" (Second informant interview, Karangasem, September 9, 2021).

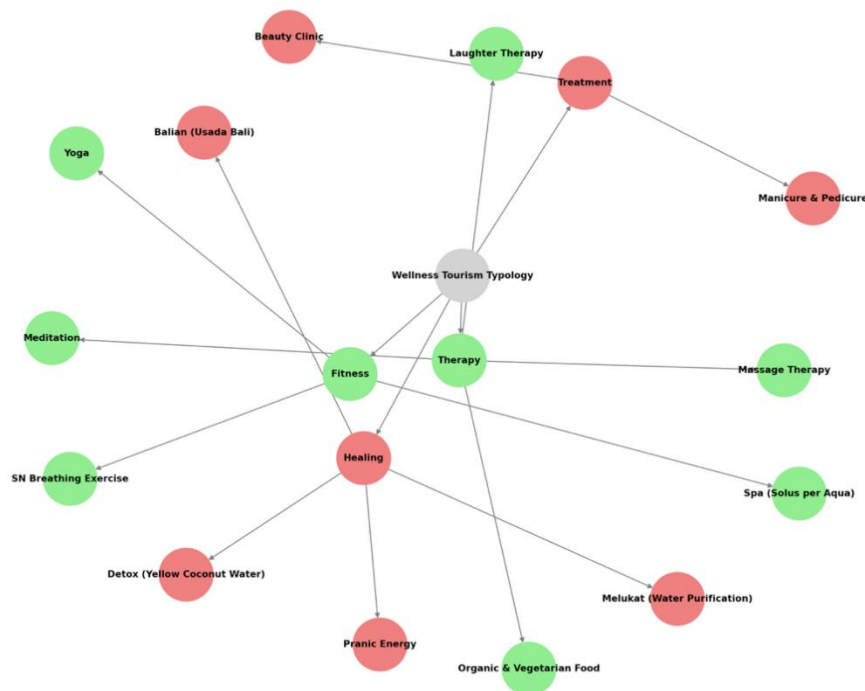
The informant's statement illustrates that this type of wellness tourism (therapy) has long developed in the world of Bali tourism. This therapy is proven to be able to restore body fitness after stress, depression, or other diseases that interfere with metabolism. Unlike other types of wellness tourism, in this type of therapy, pain is understood as a symptom of misalignment between the mind and soul that has an impact on physical body pain. Healing through laughter therapy in the field can restore physical fitness because laughter is believed to release the burdens of the mind and create an atmosphere of joy within oneself, thereby creating balance and harmony between the body, mind, and spirit of the individual experiencing stress or depression. Therefore, this therapy can be classified as one of the wellness tourism activities in its distinctive form, is easy to do, and can be done by anyone.

In addition to laughter therapy, Bali also developed a wellness tourism model that included massage therapy, organic food, and meditation therapy. *Massage* therapy is an effort to restore or increase body freshness (physically) by pressing on certain points on the body. Two types of massage therapy have developed, namely: (a) traditional massage and (b) modern massage, also known as massage. Both types of therapy have been widespread in Bali and have become a habit to find health or body fitness with various causes and problems (such as fatigue, sprains, lumbago, pain, and others). The only difference is that one still uses traditional rural services, while the other is modern and integrated with other tourism service businesses. However, both have become alternative therapies for achieving health and fitness.

In addition to such massage therapy, Bali has also developed by promoting the consumption of organic food and meditation. Organic food therapy is an effort to gain body fitness by choosing and consuming healthy, fresh, pesticide-free, and nutritious foods. Meditation is an effort to achieve physical and mental well-being by calming the mind and processing emotions to relieve stress and control anxiety, thereby achieving peace of heart and soul. Both organic food therapy and meditation lead to the achievement of fitness (harmony between body, mind, and spirit). The difference lies in the medium used to achieve fitness.

Both forms of wellness therapy —namely, meditative and physical-spiritual practices—are increasingly prominent within Bali's tourism landscape, although their availability is not evenly distributed across all destinations. Based on the results of qualitative analysis, these modalities are particularly concentrated in Ubud and Karangasem, with Ubud offering a wider range of options across both types, while Karangasem places a stronger emphasis on meditative practices rooted in spiritual tranquility.

This empirical pattern reflects a broader shift in the paradigm of tourist motivation. Wellness tourism in Bali is no longer framed solely as a form of relaxation or escapism (sunlust). However, it is progressively oriented toward deeper goals—such as psychological restoration (spirituality), environmental awareness (sustainability), experiential exploration, and existential reflection (wanderlust). Increasingly, tourists choose Bali as a destination to pursue holistic well-being, seeking balance among body, mind, and spirit through culturally immersive and spiritually grounded activities. To analytically frame this transformation, Figure 1 presents a conceptual mind map that synthesizes the typology of wellness tourism practices in Bali. This framework visually distinguishes between Soft Wellness and Hard Wellness dimensions, offering a structured lens through which to interpret the diversity and depth of wellness experiences available across the island.



Source: Research Result (2025)

Figure 1. Conceptual mind map of wellness tourism typologies in Bali

Figure 1 illustrates the conceptual typology of wellness tourism practices identified in Bali, synthesized through thematic analysis of field data. The visualization categorizes wellness offerings into four primary domains: Fitness, Healing, Therapy, and Treatment, each encompassing a range of culturally embedded practices. These domains are further grouped into Soft Wellness (preventive and lifestyle-oriented) and Hard Wellness (restorative and spiritually rooted), reflecting different health philosophies and service modalities within the wellness tourism ecosystem. This typological structure reflects the multidimensional nature of wellness tourism, as it is both an economic activity and a form of cultural performance. In alignment with Pine B. & James H. (1998), the experience economy, soft wellness modalities such as yoga, spa, meditation, and lifestyle therapies are designed to provide immersive, transformative experiences that engage tourists not just as consumers, but as co-creators of meaning and wellbeing. These practices operate within the esthetic, educational, and escapist realms of experience, positioning Bali as a therapeutic retreat in the global wellness landscape.

Conversely, Hard Wellness practices such as traditional Balinese healing (balian), melukat rituals, and energy-based therapies are deeply rooted in indigenous epistemologies and spiritual

cosmologies. Concept of Cultural Capital, these practices are perceived by both local actors and tourists as “authentic” and symbolically potent. Their consumption reflects a growing demand for experiential depth, legitimacy, and cultural engagement in tourism, often transcending the clinical definitions of health. This framework also resonates strongly with the Wellbeing Tourism Framework proposed by the Global Wellness Institute (2018), which conceptualizes wellness as an integration of physical, emotional, mental, spiritual, and social dimensions. Each node in the mind map reflects one or more of these dimensions, underscoring the holistic and systemic nature of Bali’s wellness tourism. As such, wellness tourism in Bali emerges not merely as a commodified service but as a convergence of cultural meaning, personal transformation, and global wellness trends.

d. Type of Treatment

This type of treatment is one of the wellness tourism practices that is also growing in several destinations in Bali, although the growth is not as fast as that of SPA, yoga, and Meditation. As seen in Figure 1, two types of treatments are now the destination of wellness tourism in Bali, namely: (a) Beauty clinics (body, face, and skin) and (b) Body massage, manicure, and pedicure. Beauty clinics are mostly aimed at individuals or tourists who want to restore or get health and fitness of the body, skin, or face, while body massage, manicure, and pedicure are efforts of tourists to obtain fitness through body care, so that during tourism, a healthy and fit quality of life is maintained. Beauty clinics prioritize fitness through health methods, involving medical personnel and medications, while body massage, manicures, and pedicures are sufficient with the assistance of skilled personnel who have received specialized training in these skills. In many cases, beauty is accompanied by modern equipment and technology, while body massage (including manicure and pedicure) is more often equipped with herbs, massage oils, aromatherapy, and music therapy, as well as clean, healthy, and comfortable rooms, along with friendly service.

The observations of this study show that the two are indeed different in practice and action, but in principle, both aim to create fitness conditions for tourists, thereby improving the quality and meaning of travel. For this reason, tourists who direct their tours for such purposes will always try to maintain fitness or do fitness activities in every tour activity. The analysis of qualitative data in this study has shown such tendencies. Geographically, the distribution of wellness tourism practices in three districts in Bali can be divided into three regions: the core area, which includes Ubud village and its surroundings; the intermediate area, which includes Gianyar and Bangli; and the outer area, which includes Karangasem. Each type of wellness tourism has a different character and distribution. Embriotic wellness tourism, especially yoga, comes from the Candidasa area of Karangasem.

The typology of wellness tourism in Bali can be divided into four types, namely: fitness type, treatment or healing type, therapy type, and treatment type. Traditional-based wellness tourism in Bali has great potential for development but still faces several obstacles, including a lack of clear standardization, inadequate branding, unprofessional management, and weak marketing. To respond to these identified constraints, this study proposes several strategic recommendations for key stakeholders. First, local governments should initiate the development of standardized guidelines that ensure service quality, practitioner competency, safety, and ethical practices in wellness tourism. This includes establishing certification systems for traditional healers (*balian*) and wellness service providers, in collaboration with health authorities and cultural institutions. Such standards would enhance the legitimacy, consistency, and trustworthiness of Bali’s wellness tourism sector.

Second, a place-based wellness branding strategy should be developed through collaboration between tourism boards, local communities, and wellness entrepreneurs. This branding must highlight Bali’s unique value proposition, which integrates traditional healing wisdom and spiritual heritage, while aligning with global wellness trends. Campaigns should promote authenticity and cultural sensitivity, avoiding over-commercialization of sacred practices. Third, wellness tourism operators should be encouraged to invest in capacity building, especially in areas such as sustainable practice management, intercultural communication, and holistic health literacy. Workshops, training programs, and local-global knowledge exchanges could help raise professionalism and service quality across the sector. Lastly, a stronger emphasis on digital

platforms and curated wellness packages can help Bali tap into high-value international wellness markets. Online visibility, transparent information, and targeted storytelling can foster deeper engagement and position Bali not just as a destination, but as a global model for culturally rooted wellness tourism.

Conclusions

This study contributes to the growing body of literature on wellness tourism by offering a typological framework rooted in Bali's traditional healing practices. The research reveals that a dynamic intersection of cultural heritage, spiritual epistemologies, and global health-oriented travel trends shapes wellness tourism in Bali. The classification into Soft and Hard Wellness, mapped across the domains of Fitness, Healing, Therapy, and Treatment, highlights the complexity and richness of wellness experiences sought by modern travelers. These practices are more than touristic services; they are meaningful engagements where authenticity, symbolism, and transformation converge. The adoption of theoretical perspectives such as the Experience Economy and Cultural Capital underscores how tourists co-create wellness experiences through immersive, ritualized, and emotionally resonant activities. Simultaneously, local actors strategically position traditional knowledge as both cultural legacy and economic opportunity. However, the study also identifies significant challenges, including a lack of standardized service protocols, fragmented governance, and insufficient branding efforts. Addressing these issues will require coordinated policy action and capacity-building efforts that respect local cultural contexts. By providing a culturally grounded typology and outlining practical recommendations, this study offers both theoretical insights and policy relevance for the sustainable and ethical development of wellness tourism in Bali and beyond.

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Analysis of green tourism development potential in tourist destinations in Garut Regency

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Abstract: Although interest in green tourism in Indonesia continues to increase, evidence at the district level, especially in secondary destinations, is still limited. Most previous research has focused on primary destinations such as Bali and Yogyakarta, while evidence-based studies in areas such as Garut are still rare. This study offers a novelty by analysing the potential, opportunities, and challenges of green tourism development in Garut Regency through a descriptive-qualitative approach and SWOT framework based on secondary data. Garut has an authorised capital in the form of 12 main destinations, ranging from volcanic landscapes (Mount Papandayan), lakes (Situ Bagendit), the south coast, to cultural heritage (Cangkuang Temple and leather crafts Sukaregang). However, data from DLH Garut shows that the scope of waste management has only reached 17%, which confirms the gap between potential and implementation in the field. The findings of this study identify four main challenges: (i) Poor Solid Waste Management, (ii) lack of measurable targets for water and energy conservation, (iii) uneven supporting infrastructure, and (iv) low community participation. This study provides a real contribution to local governments in formulating environmental policies and sustainable tourism, for tourism actors to adopt environmentally friendly practices and green certification, and for academic literature as a reference for the development of green tourism in secondary destinations in Indonesia.

Keywords: community participation, Garut regency, green tourism, sustainable tourism, SWOT analysis

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Introduction

The tourism sector plays an important role in the economic structure of Garut Regency, West Java. Known as the "Swiss of Java", Garut has abundant and diverse natural resource potential, including majestic volcanic mountains, such as Mount Papandayan and Cikuray, and natural lakes such as Situ Bagendit and Talaga Bodas. A row of beaches on the southern coast of Garut and natural hot springs in the Cipanas area are also attractions for visitors (Pasciana et al., 2022).

Creative energy and innovation in tourism management and promotion are needed to attract more visitors, including foreign tourists. Research shows that improving tourism facilities and infrastructure, combined with cultural elements, can increase the level of visits (Tetep et al., 2021). Through collaboration between local governments and communities in developing the tourism sector, it is hoped that an increase in regional income and the creation of new jobs can be achieved (Nilam, 2020). The tourism sector in Garut Regency not only provides economic benefits but also contributes to the preservation of local culture and community welfare.

Sustainable tourism is now a global trend driven by increasing awareness of environmental and social issues. Garut Regency, popularly known as the "Swiss of Java", has great potential to develop the concept of green tourism, thanks to its abundant natural and cultural wealth. For example, leading tourist destinations such as Mount Papandayan, Situ Bagendit, and Talaga Bodas have experienced a significant increase in domestic tourist visits, but the exact figure for visits in 2023 cannot be verified in available references. However, many studies have shown that

high visits can have serious implications for the environment, such as increased waste volume, water pollution, and uncontrolled energy use (Yudawisastra et al., 2023).

Sustainable tourism development in Garut needs to be balanced with efforts to maintain environmental sustainability and implement more environmentally friendly practices. Based on research, the application of local wisdom-based strategies in tourism development can contribute positively to environmental sustainability (Pratiwi et al., 2025). In addition, increasing public awareness through effective communication regarding sustainable tourism and wise management of natural resources is very important to achieve this goal (Novianti et al., 2022). When tourism is built with attention to environmental and social aspects, it will not only improve the quality of the tourist experience but also encourage local economic growth without damaging the ecosystem (Manzoor et al., 2019).

Involving local communities in the tourism planning and development process is a crucial step to ensure that the economic benefits of this sector are felt by all levels of society. Communities must have an active role in managing tourist destinations, and local governments can function as facilitators to build mutually beneficial partnerships (Rahman et al., 2023). Therefore, synergy between the government, community, and tourism business actors is very much needed to create a sustainable tourism ecosystem in Garut Regency, while ensuring that the natural and cultural wealth of the region is maintained for future generations (Sunuantari & Kliček, 2024).

In responding to the challenges in tourism development, sustainable strategies require collaboration between tourism authorities, local communities, and the private sector. By implementing sustainability principles in tourism planning and management, the goal of achieving a more balanced and harmonious development between economic needs and environmental preservation can be achieved (Sunardi et al., 2021). Tourism developers must design products and services that are not only attractive to tourists but also able to maintain the integrity of the culture and environment in the destination (Rubiyatno et al., 2022).

Furthermore, the commitment to implementing green tourism practices can also contribute to increasing public awareness of the importance of environmental conservation. Education about the environmental and social impacts of tourism to visitors and local communities plays a crucial role in shaping sustainable tourism behavior. This not only creates a more meaningful experience for tourists but also provides long-term benefits for local communities and their environment. Therefore, integrating sustainable tourism principles into the development of tourist destinations in Indonesia is essential to achieve real sustainability and provide broad positive impacts.

The increasing number of tourist visits to Garut, as recorded in recent years (Pribadi et al., 2021), brings logical consequences in the form of increased pressure on the environment and natural resources. The negative impacts of tourism, such as increased waste volume, potential water pollution, high energy consumption, and pressure on biodiversity, need to be anticipated and managed properly. The increase in the number of tourists can trigger risks to the sustainability of local ecosystems, which in turn can affect community welfare. Therefore, the analysis of the potential for sustainable tourism development is very relevant and urgent for Garut Regency to ensure that tourism development can run in line with environmental conservation efforts and improve community welfare in a sustainable manner (Pribadi et al., 2021).

Implementation of sustainable tourism not only has the potential to reduce environmental impacts but also improves the quality of tourist experiences by strengthening local values (Pribadi et al., 2021). For example, community-based tourism is often aimed at providing direct benefits to local communities, improving their well-being, and encouraging community participation in natural resource management. In addition, good management of tourist areas will contribute to the preservation of local culture and better utilization of the existing environment. Research shows that sustainable tourism development can provide significant economic benefits while still paying attention to environmental conservation (Mony et al., 2022).

Thus, local governments and other stakeholders need to work together to create policies and programs that support sustainable tourism development in Garut. This includes education and increasing awareness of the importance of environmentally friendly tourism among tourists and the community (Gunawan et al., 2022). With a collaborative and sustainability-oriented

approach, Garut Regency can make tourism an economic driver that is not only financially profitable but also environmentally and socially responsible (Mardiana et al., 2022).

Previous research conducted by (Adiatma et al., 2023) emphasized the importance of integrating environmental and sustainable tourism policies. However, the implementation of this policy in Garut Regency still faces major challenges, such as inadequate waste management infrastructure, low public awareness of sustainable tourism practices, and minimal measurable energy and water conservation programs (Rokip et al., 2022). Given the significant increase in the number of tourist visits, concrete steps are needed to address this problem so that the negative impacts of tourism can be minimized (Talalova et al., 2021).

Previous research emphasizes integrating environmental and sustainable tourism policies in Indonesia. However, Garut Regency lacks an integrated, evidence-based assessment that (i) inventories and evaluates green-tourism assets and constraints, (ii) translates local policy commitments into measurable implementation targets (e.g., waste, water, and energy management), and (iii) specifies community-participation mechanisms in destination governance. To address this gap, this study identifies Garut's potential for green tourism and develops practical, actionable strategies for implementation. Green tourism is expected not only to reduce the environmental impacts of tourism but also to increase public awareness of environmental conservation (Li & Liu, 2021). In this agenda, a community-based tourism approach is especially relevant because it prioritizes community participation in managing sustainable destinations so that local stakeholders can realize the direct benefits of tourism development (Mahiroh et al., 2024).

Therefore, this study aims to fill this gap by identifying the potential for green tourism development and developing practical strategies for its implementation. Green tourism is not only expected to reduce the environmental impacts caused by tourism, but also to increase public awareness of the importance of environmental conservation (Li & Liu, 2021). In this context, a community-based tourism approach becomes very relevant because it prioritizes community participation in the management of sustainable tourist destinations, so that they can feel the direct benefits of tourism development (Mahiroh et al., 2024).

Furthermore, the development of green tourism is also closely connected to initiatives to improve basic infrastructure, such as waste management, provision of renewable energy generation facilities, and water conservation efforts (Nurazizah, 2019). By involving all stakeholders from the government, industry players, to local communities strategies developed are expected to create a more responsible and sustainable tourism ecosystem (Skorokhod, 2021). In this way, we not only protect the environment but also contribute to the long-term economic welfare of the people of Garut Regency.

Previous studies on green tourism in Indonesia tend to focus on well-known tourist destinations such as Bali and Yogyakarta. This study offers novelty by highlighting the potential of natural tourism destinations in Garut Regency, which have been relatively under-researched, especially in terms of environmental policy implementation and community participation (Prihadi et al., 2024; Yudawisastra et al., 2023). Given the lack of in-depth research on Garut, it is important to explore and understand the diversity of existing tourism potentials and the challenges faced in implementing sustainable tourism. This research gap is an important basis for this research. Thus, this study seeks to present a new perspective on the development of green tourism at the district level, which was previously rarely studied in depth.

This article offers a novelty by using the SWOT approach to map the potential, opportunities, and challenges of green tourism development in Garut Regency. This approach has never been applied systematically at the district level, so the results are expected to enrich the academic literature and provide practical recommendations. Specifically, this study also uses the latest approach with a SWOT analysis combined with a qualitative-descriptive approach based on secondary data and case studies of best practices from other areas that have successfully implemented green tourism. This approach was chosen because it can provide an in-depth picture of the actual conditions and potential for green tourism development in Garut, as well as formulate practical strategies supported by strong secondary data (Nuringsih et al., 2020). The novelty of this approach is expected to create a tourism development model that is not only

efficient and environmentally friendly but also encourages active participation of local communities in the planning and implementation process (Hanifah et al., 2024).

Through the integration of SWOT analysis, this study will identify the strengths, weaknesses, opportunities, and threats faced by the tourism sector in Garut. The results of this analysis are expected to provide specific strategic recommendations to support the development of green tourism, where the community can be actively involved and directly benefit from the proposed policies (Chakarevski et al., 2020). In this way, this study not only serves as a roadmap for policy implementation but also as a reference source for sustainable tourism policies and practices in other regions in Indonesia and globally (Mojtaba et al., 2015).

This study aims to identify the potential and challenges of green tourism development in Garut through a SWOT analysis based on secondary data and develop an applicable implementation strategy. Thus, this research's contribution is academic and practical, providing real input for local governments, tourism actors, and local communities in realising sustainable tourism management. The results of this study are expected to provide significant contributions in several aspects. First, to provide input based on data and in-depth analysis for the Garut Regency Government, especially the Tourism and Culture Office and the Environmental Office, in formulating policies and strategies for developing green tourism that are more focused and effective. Second, to provide guidance for tourism industry players (hotels, restaurants, tour operators) in Garut to adopt more environmentally friendly and sustainable business practices. Third, to increase the understanding and awareness of local communities regarding the importance of their role in supporting green tourism and preserving the environment. Fourth, to provide academic contributions to the literature on sustainable tourism and green tourism in the context of regional development in Indonesia, especially in areas with rich natural and cultural potential such as Garut Regency.

Methodology

Research Design

This study adopts a qualitative–descriptive design to provide an in-depth understanding of the potential for green tourism development in Garut Regency. The analysis, interpreted from secondary sources, focuses on resource conditions, environmental management, opportunities, challenges, and existing policies.

Data Collection Technique

Data Sources and Collection. Evidence was gathered through a documentation study and literature review. The documentation study systematically collected and analyzed official government documents (RPJMD, RPD, Renstra, Renja, LAKIN), statistical publications from BPS, and reports from relevant agencies (Disparbud, DLH). The literature review compiled theories, concepts, prior research, and case snapshots from academic sources and credible publications. Inclusion emphasized substantive relevance (tourism environment governance in Garut, 2019–2025) and source credibility.

Theoretical Framework

Two complementary lenses guide this study:

1. Sustainable Tourism Principles—environmental integrity, socio-cultural vitality, and economic viability—are normative criteria for evaluating policies, practices, and destination performance.
2. Community-based tourism (CBT) is a governance model emphasizing local participation, shared decision-making, equitable benefit distribution, and stewardship. It is used to assess how community mechanisms can operationalize green tourism at the site level.

These lenses inform theme construction, the interpretation of constraints/opportunities, and the SWOT synthesis.

Data Management, Software, and Hardware

Documents, secondary documents, and coding memos were organized in Microsoft Word; Microsoft Excel was used for the codebook and matrix coding and to tabulate IFAS/EFAS for the SWOT synthesis. References were managed with a standard citation manager. Analyses were manual but systematic using the spreadsheet codebook; no specialized CAQDAS was required.

Data Analysis Technique

We applied multi-step, transparently documented procedures to analyze secondary documents :

1. Pre-processing and Audit Trail.
All documents and secondary documents were imported into a structured folder system. A codebook (Excel) captured code names, definitions, inclusion/exclusion rules, and exemplar quotes, forming an audit trail of decisions.
2. Content/Thematic Analysis (documents & interviews).
Using inductive open coding, we identified salient concepts across planning documents, agency reports, and secondary documents; codes were iteratively refined via axial coding into categories (e.g., waste logistics, water–energy conservation, certification/monitoring, community participation). Convergence/divergence across sources was logged in the matrix to ensure traceability.
3. Descriptive Analysis.
We compiled structured profiles of the tourism system (asset types, visitation patterns, basic infrastructure) and environmental-management practices (waste, water, energy, biodiversity, participation) from convergent evidence, without inference beyond the data.
4. Comparative Analysis.
Conditions and practices in Garut were contrasted with documented best practices in comparable nature-based destinations to derive transferable lessons and feasible local adaptations.
5. SWOT Synthesis (qualitative, IFAS/EFAS-organized).
We structured internal (Strengths, Weaknesses) and external (Opportunities, Threats) factors using SWOT and organized them via IFAS/EFAS matrices. Consistent with the qualitative design, no numeric weights or scores are reported; factor salience is argued textually using convergent evidence. The synthesis informs the SO/WO/ST/WT strategy options presented in the Discussion.
6. Trustworthiness Checks.
Credibility was enhanced through method/source triangulation (documents + interviews), peer debriefing within the research team, and reviewed documents and literature with a subset of informants to verify interpretive summaries.

Results and Discussions

Results

Tourism Profile of Garut Regency

Garut Regency has a rich and diverse tourism profile, supported by abundant natural and cultural assets.

Main Tourist Destinations: Based on data from the Garut Regency Tourism and Culture Office¹ and other sources³, several main tourist destinations can be identified and categorized as can be seen in Table 1.

Table 1. Main tourist destinations of Garut regency

No.	Destination Name	Type/Category	Main Attractions	Location (District)
1	Mount Papandayan	Nature (Volcano)	Crater, Dead Forest, Natural Scenery, Trekking, Camping	Cisurupan
2	Situ Bagendit	Nature (Lake)	Lake View, Raft, Water Rides, Recreation Area	Banyuresmi
3	Cangkuang Temple	Culture (Historical Sites)	Hindu Temple, Kampung Pulo (Traditional), Cangkuang Lake, Museum	Leles
4	Cipanas Hot Springs	Natural/Artificial (Hot Water)	Natural Hot Water Pool, Resort, Therapy	Tarogong Kaler
5	Sayang Heulang Beach	Nature (Beach)	White Sand, Coral, South Sea View	Pameungpeuk
6	Talaga Bodas Nature Reserve	Nature (Crater Lake)	Greenish White Crater Lake, Hot Springs, Natural Scenery	Wanaraja
7	Sukaregang	Creative Economy	Leather Craft Industry Center (Jackets, Bags, Shoes)	Garut Kota
8	Mount Cikuray	Nature (Mountain)	Trekking, Climbing, Natural View from the Peak	Cikajang, Bayongbong,
9	Santolo Beach	Nature (Beach)	Fisherman's Beach, White Sand, Santolo Island	Cikelet
10	Darajat Hot Springs	Natural/Artificial (Hot Water)	Hot Water Pool at High Altitude, Plantation View, Waterpark	Pasirwangi
11	Situhapa Rose Garden	Nature (Flower Garden)	Various Types of Roses, Lodging, Restaurants	Samarang
12	Cikembulan Zoo	Nature (Conservation)	Various Types of Animals, Conservation Institutions	Kadungora

Source: Researcher analysis, 2025

Supporting Infrastructure: Tourism infrastructure in Garut shows varying conditions. There are a number of starred and non-starred accommodations, especially in the Cipanas area and the city center. Efforts to improve accessibility continue to be made, such as the plan to reactivate the railway line. The local government also provides information through the official Disparbud website one and even a virtual tour feature for several locations. 1 However, several sources indicate that there are limitations in basic infrastructure, such as road access, amenities (toilets, rest areas), and telecommunications networks, in several more remote or newly developed tourist destinations. The availability of adequate and quality infrastructure is an important element to support green tourism (e.g., good sanitation facilities, efficient public transportation systems).

Condition of Environmental Management in the Tourism Sector of Garut

Sources reviewed. Planning documents (RPJMD, RPD, Renstra, Renja, LAKIN), official statistics, sectoral reports (tourism/environment), prior studies, and secondary documents.

- 1) Solid Waste
 - a) Reported collection coverage in sub-districts served in 2020 is 17%.
 - b) The Pasirbajang final disposal site (TPA) is recorded as the sole operational landfill; documents and reports up to early 2025 indicate continued open-dumping operations, with associated notes on odor, fire risk, and pollution.
 - c) Destination-level notes include a case at Situ Bagendit reporting 7 cleaners against a stated ideal of 50, along with mentions of limited budget for cleaning facilities/equipment and visitor littering behavior.
 - d) Programmatic responses referenced include procuring additional trucks, developing TPS-3R, creating school waste banks, and campaigns such as "Garut Lening."
- 2) Water and Energy
 - a) Documents reference Cimanuk River Basin water-quality issues (domestic/industrial pollution) and mitigation efforts.
 - b) Policies/campaigns on efficiency.

- c) The geothermal potential at Kamojang and Darajat is acknowledged, including its use in educational tourism contexts.
- d) Within the reviewed corpus, destination-wide baselines/targets and systematic monitoring of water/energy use by tourism enterprises were not identified.
- 3) Biodiversity and Conservation
 - a) Conservation governance is noted for Nature Tourism Parks (TWAs) such as Mount Papandayan and Talaga Bodas.
 - b) The 2019–2024 RPJMD includes strategies for increasing vegetation cover and rehabilitation of critical land.
 - c) Cikembulan Zoo is cited as a wildlife conservation institution.
 - d) For non-TWA destinations, specific biodiversity-protection programs integrated with tourism development were limited in the reviewed materials.
- 4) Community Involvement
 - a) Government programs reference the establishment of tourist destinations to the village/sub-district level and the development of tourist villages.
 - b) The RPJMD includes targets for increased community participation in environmental management.
 - c) A Situ Bagendit case records community involvement in cleaning activities, with the reported number of cleaners noted alongside the stated ideal in that case.
 - d) Across sources, the extent and continuity of community participation vary by site. Analysis of planning documents, service reports, and previous research shows significant challenges in environmental management in Garut's tourism sector.

Green Tourism Development Potential Analysis (SWOT)

Based on the analysis of the tourism profile and environmental management conditions, as well as external factors, the potential for developing green tourism in Garut Regency can be mapped through a SWOT analysis in Table 2.

Table 2. SWOT analysis of green tourism development in Garut regency

Internal Factors	External Factors
Strengths	Opportunities
S1. Wealth and diversity of natural assets (volcanoes, lakes, beaches, hot springs, gardens).	O1. Local government policy support (RPJMD/RPD) for sustainable tourism & environmental management.
S2. Cultural asset wealth (Cangkuang Temple, historical sites, traditions, leather crafts/batik).	O2. Global and domestic market trends are increasing for green tourism, nature tourism, culture, and authentic experiences.
S3. Geothermal energy potential as a clean energy source and educational attraction. ⁶⁸	O3. Potential for multi-party cooperation (academics, private sector, NGOs, communities) in development & management.
S4. There are several TWAs that are managed with conservation principles (Papandayan, Talaga Bodas).	O4. Potential for developing unique & differentiated green tourism products (geothermal education, agrotourism, volcanic ecotourism, cultural CBT).
S5. The existence of potential tourist villages that are starting to be developed.	O5. The existence of central/provincial government programs related to sustainable tourism and the environment that can be synergized.
Weaknesses	Threats
W1. Waste management is not yet effective and efficient (problematic landfill, handling at destination is lacking).	T1. Risk of environmental damage due to uncontrolled tourism (waste, pollution, ecosystem degradation).

W2. Implementation & monitoring of water & energy conservation programs in the tourism sector is not yet clear/measurable (information gap).	T2. Vulnerability to natural disasters (earthquakes, volcanic eruptions, floods, landslides).
W3. Supporting infrastructure (access, amenities, sanitation) in several destinations is still limited.	T3. Competition with other tourist destinations that are more established or aggressive in promotion.
W4. The level of awareness and active participation of the community in environmental management and sustainable tourism still needs to be improved.	T4. Impact of climate change on natural assets (water resources, biodiversity, extreme weather). ¹⁰
W5. Limited human resources for management (number & capacity) in the tourism and environmental sector.	T5. Macroeconomic instability or other external factors (e.g., pandemic) that affect tourism demand.
W6. Limited local government budget for environmental and tourism infrastructure investment.	

source: researcher analysis 2025

Garut Green Tourism Development Strategy (SWOT Matrix)

SWOT Matrix of Green Tourism Development in Garut Regency can be seen in Table 3 below.

Table 3. SWOT matrix of green tourism development in Garut regency

Strategy SO (Strength–Opportunity)	Strategy ST (Strength–Threat)
Develop ecotourism based on natural and cultural potential.	Diversify tourist attractions to reduce pressure on major destinations.
Promote "Green Tourism Garut " branding by utilizing sustainable tourism trends.	Apply zoning to protect vulnerable ecosystems (Papandayan, south coast).
Strategy WO (Weakness–Opportunity)	Strategy WT (Weakness–Threat)
Improve basic infrastructure (waste, water, energy) through public-private collaboration.	Educating the public to increase environmental awareness.
Latihan masyarakat melalui program CBT dan kewirausahaan hijau.	Implement strict regulations related to waste and destination carrying capacity.

Source: Researcher analysis, 2025

Best Practices for Green/Eco-Tourism Development

Case studies from other destinations provide valuable lessons for Garut:

1. Indonesia (Community-Based Tourism/Ecotourism):
 - a) Pentingsari Tourism Village, Sleman: Demonstrates the success of the CBT model that relies on social capital (mutual cooperation, fair profit-sharing system) and human capital (local skills development). They have successfully utilized natural potential (agriculture, herbs) and culture (gamelan, crafts) into educational tourism attractions, empowering the local economy, and improving welfare without damaging the environment. The key to success is a strong community organization and focus on sustainability.
 - b) Nglanggeran Tourism Village, Gunung Kidul: A successful example of community-based ecotourism development in a unique geological area (ancient volcano). The central role of the Tourism Awareness Group (Pokdarwis), driven by youth, is the main driving force. The focus on environmental conservation (including reforestation efforts), visitor education, and the development of diverse attractions (geology, reservoirs, fruit gardens, waterfalls) has led this village to win the ASEAN CBT award. However, Nglanggeran also faces initial challenges in building awareness and participation of the entire community as well as the need for supportive regulations.
 - c) Tangkahan, North Sumatra: Emphasizes that community-based ecotourism can be an effective tool for conservation of protected areas (National Parks) by providing alternative income for communities who may have previously been involved in illegal activities (e.g.

- illegal logging).
2. International (Volcanic/Natural Areas):
 - a) Costa Rica: Considered a global model for ecotourism. Its success is driven by a strong political commitment to conservation (a quarter of its territory is protected areas), tourism development integrated with the protected area network, a voluntary certification program for sustainable tourism (CST) that encourages environmentally friendly practices (energy/water saving, waste management, forest conservation), and a focus on empowering local communities and broad economic benefits. The experience around the Arenal Volcano shows how tourism can develop sustainably in volcanic areas.
 - b) Rwanda (Volcanoes National Park): Developing CBT around the national park as an economic diversification strategy for communities that rely on agriculture on limited and erosion-prone land. The focus is on providing direct benefits from tourism (e.g., gorilla visits) to local communities.
 - c) Volcano Tourism Study (Anak Krakatau, Ijen, Semeru, Aso): Research in this area highlights the importance of factors such as destination credibility, tourists' environmental motivations, perceptions of risk and safety (especially post-disaster), and the role of media and government in shaping tourists' visit intentions and behavior in dynamic volcanic destinations. Destination sustainability (environmental, social, economic) is a key factor.
 3. General Eco-Friendly Practices: Basic principles that can be applied anywhere, including supporting the local economy (buy local, eat locally), reducing single-use plastic (bring your own water bottle/shopping bag), respecting nature and wildlife (don't feed animals, don't damage coral reefs), choosing low-emission transportation (bicycle, walk, public transportation), participating in conservation activities when possible, choosing accommodation that implements sustainable practices (renewable energy, water/energy conservation, community support), and being wise in energy and water use during your stay.

The key learning from these best practices is that successful green tourism development requires a holistic approach that integrates rigorous environmental management, strong and equitable community empowerment, consistent and measurable policy support, and marketing strategies that target the right market segments. CBT models such as those in Nglanggeran and Pentingsari offer a relevant framework for Garut, while Costa Rica's comprehensive approach provides inspiration for district-level policies.

Discussions

Analysis of the potential, existing conditions, opportunities, and challenges of green tourism development in Garut Regency reveals complex dynamics between strong basic capital and significant implementation constraints. The results showed a significant gap between the tourism potential of Garut and its environmental management conditions. These findings align with Rokip et al. (2022), which emphasises weak infrastructure as Indonesia's main obstacle to green tourism.

Linkage with theory and literature

The principles of Sustainable Tourism (UNWTO) emphasise three dimensions: environmental integrity, socio-cultural vitality, and economic viability. In the context of Garut, the economic dimension has developed (shown by the growth of visits of 6.2% per year), but the environmental and social aspects are still weak. This is similar to the results of Nurazizah (2019) in Pakistan, which shows a predominance of economic orientation over environment.

The approach of Community-Based Tourism (CBT) in Garut is still limited. Community participation in Destination Management is relatively low. At the same time, best practices from tourism villages such as NGLANGGERAN (DIY) show that the success of CBT is determined by strong local institutions and fair benefit sharing (Hanifah et al., 2024).

Synthesis of Potential and Gaps

Garut Regency undoubtedly has extraordinary natural and cultural assets (Strengths S1, S2), which are a solid foundation for the development of green tourism. The beauty of the mountain landscape, the uniqueness of the crater lake, the charm of the south coast, the wealth of hot springs, the historical heritage of Cangkuang Temple, and local traditions are potential attractions to be packaged into authentic and attractive green tourism products. The potential for geothermal energy (S3) and conservation areas (S4) further strengthens Garut's "green" image. Policy support stated in regional planning documents such as the 2019-2024 RPJMD 21 and the 2025-2026 RPD 22, which touch on sustainable tourism and environmental management (Opportunity O1), as well as positive global market trends towards environmentally friendly tourism (O2), should be a catalyst for the development of green tourism.

However, there is a clear gap between this great potential and the actual conditions on the ground. The most striking weakness is poor waste management (Weakness W1). The problem of Pasirbajang TPA, which has not been operating optimally as a sanitary landfill, and the piles of waste in popular destinations such as Situ Bagendit directly contradict the basic principles of green tourism. The inability to overcome this waste problem damages the environment and the image of the destination. The information gap and the lack of evidence of the implementation of water and energy conservation programs in the tourism sector (W2) also show that this important aspect of sustainability has not been a top priority. The limited supporting infrastructure in several areas (W3), low public awareness and participation (W4), and limited human resources and budget (W5, W6) further widen the gap between potential and reality. The development of green tourism cannot rely on the beauty of nature and culture without being balanced by serious environmental management and adequate infrastructure.

The potential for green tourism development in Garut is very large, considering its natural and cultural wealth. This is in line with the findings of (Mahiroh et al., 2024) that unique local resources can be a strong capital in developing environmentally based tourism. Natural assets such as Mount Papandayan, Talaga Bodas, Situ Bagendit, and the south coast become internal forces that can be developed into an ecotourism attraction (Yudawisastra et al., 2023). Similarly, cultural heritage such as Cangkuang Temple and creative industries such as leather crafts in Sukaregang (Pasciana et al., 2022) align with the differentiation approach in green tourism (Pratiwi et al., 2025).

However, these findings confirm the gap between the potential and the actual implementation in the field, especially in environmental management, which has not been optimal. This reinforces the arguments of Rokip et al. (2022), which show that supporting infrastructure and waste management are still the main challenges in implementing green tourism in Indonesia.

Interpretation in the Context of Theory and Policy

These findings indicate that the current tourism development model in Garut still faces major challenges to align with the principles of sustainable tourism fully. Focusing on increasing the number of visits without being balanced by effective environmental impact management risks trapping Garut in an exploitative, rather than sustainable, tourism model. Although policies at the planning document level (RPJMD/RPD) have mentioned the direction of sustainability, their implementation in the field, especially in handling crucial environmental issues such as waste and resource conservation, is suboptimal. This indicates possible obstacles in coordination between agencies (Disparbud and DLH), budget constraints, or a lack of political will to implement environmental policies firmly in the tourism sector.

The Community-Based Tourism (CBT) approach, which has begun to be adopted in several tourist villages, is a positive step. However, its success is highly dependent on the level of active participation and the capacity of the local community. The challenge of low community awareness and participation (W4) shows that the implementation of CBT in Garut still requires intensive mentoring and capacity-building efforts so that the community does not only become an object but a subject of tourism development that is aware of the importance of environmental sustainability.

This gap between potential and actual conditions illustrates the lack of optimal implementation of sustainable tourism principles (Sunardi et al., 2021). In line with the concept of sustainable tourism by UNWTO, aspects of environmental integrity, socio-cultural vitality, and economic viability must be run simultaneously. However, in Garut, its application is still focused on the economic aspect (number of visits), with a lack of strengthening of environmental and social aspects (Manzoor et al., 2019).

As noted by Hanifah et al. (2024), the CBT (Community-Based Tourism) approach that began to be implemented in several tourist villages of Garut is a positive first step. However, low active participation and community capacity (W4) indicate the need for further support in the form of training and mentoring (Mahiroh et al., 2024). This is consistent with a private study by Hanifah et al. (2024) which emphasizes the importance of community empowerment to achieve sustainability.

Best Practices Application for Garut

Experiences from other destinations offer adaptive solutions for Garut:

Adaptation of the Nglanggeran/Pentingsari CBT Model: Potential villages in Garut, such as Saung Ciburial or villages around Mount Papandayan, can adopt the CBT model. The prerequisites include: (1) Identification of the village's unique potential (nature, culture, crafts); (2) Establishment or strengthening of local institutions (Pokdarwis, BUMDes) with strong and participatory leadership (especially involving youth); (3) Community capacity building programs (hospitality training, tour guides, environmental management, product development); (4) Assistance from the government/NGOs/academics; (5) Development of a clear and fair benefit sharing scheme.

Lessons from Costa Rica: Garut can emulate Costa Rica's approach in: (1) Integrated Policy: Strengthening the link between tourism policy and conservation/environmental policy; (2) Green Certification: Developing a certification scheme (although perhaps voluntary at first) for hotels, restaurants and tour operators that meet certain environmental standards (waste management, energy/water efficiency, community support); (3) Targeted Marketing: Promoting Garut as a green tourism destination specifically to attract environmentally conscious tourist segments.

Natural Destination Management (Volcanoes): For destinations such as Mount Papandayan, management needs to focus on: (1) Visitor Management: Regulating the number of visitors according to carrying capacity, establishing clear hiking/visiting routes, providing adequate basic facilities (compost toilets, separate trash bins); (2) Education and Interpretation: Providing information to visitors about the unique geology, ecology, and the importance of maintaining cleanliness and not disturbing the ecosystem; (3) Safety and Risk Mitigation: Given the potential for volcanic activity, there needs to be an early warning system, evacuation routes, and clear safety information for visitors, learning from the experiences of other volcanic destinations.

The implementation of CBT models, such as in Nglanggeran and Pentingsari tourism villages (Yogyakarta), shows that the success of green tourism is strongly influenced by the existence of strong local institutions, fair distribution of benefits, and public awareness of conservation (Nurazizah, 2019; Pratiwi et al., 2025). Garut has great potential to replicate this model, especially in Papandayan and Talaga Bodas villages.

On the other hand, Costa Rica's approach to integrating conservation policies with Tourism Development shows the importance of regulatory alignment and green certification to improve destinations' competitiveness (Skorokhod, 2021). This experience strongly justifies the Garut regional government's development of a local environmental certification scheme that can encourage tourism industry players to adopt environmentally friendly practices (Li & Liu, 2021; Rokip et al., 2022).

The application of volcanic destination management as implemented in Mount Arenal National Park, Costa Rica, and Tangkahan (North Sumatra) emphasizes the importance of managing the carrying capacity of visits, the provision of basic facilities, and natural disaster risk mitigation systems (Chakarevski et al., 2020; Mojtaba et al., 2015). In the context of Mount Papandayan and Cikuray, this can be adopted through tourist zoning planning, visitor counseling, and providing security infrastructure such as early warning systems.

Addressing Key Challenges

Waste Problem: Addressing the waste problem requires a comprehensive, multi-level strategy:

1. District Level (DLH & Pemda): Ensure Pasirbajing TPA operates according to sanitary landfill standards or other modern waste management technologies, increase the coverage of transportation services, enforce illegal waste disposal regulations, and consider strategic cooperation on waste management between regions.
2. Destination Level (Disparbud & Management): Require the provision of sufficient separate waste bins, build 3R TPS in large destinations, employ sufficient cleaning staff 38, implement an effective waste retribution system, and provide sanctions for violators.
3. Business Actor & Tourist Level: Massive educational campaign on waste reduction (bring your own drinking bottle/bag), waste sorting, and tourist responsibility. Provide incentives for businesses that implement minimal waste practices.

Energy and Water Conservation: There needs to be active encouragement from local governments:

1. Regulation/Incentives: Implement minimum efficiency standards for new hotel buildings, provide fiscal incentives (e.g. local tax reductions) for hotels/restaurants that conduct energy/water audits and adopt energy-saving (LED lighting, solar water heaters) and water-saving (aerator faucets, dual flush toilets) technologies.
2. Certification: Promoting or adopting green certification schemes (such as Green Hotel) as a quality standard and marketing tool.
3. Monitoring: Require regular reporting of energy and water consumption by medium- to large-scale tourism businesses.

Increasing Community Awareness and Participation:

1. Sustainable Education: Environmental outreach and campaign programs targeting schools, communities, and tourism businesses.
2. Strengthening Pokdarwis/Local Institutions: Providing training in organizational management, green tourism product development, and environmental management to community groups.
3. Incentive Model: Linking economic benefits from tourism (e.g., percentage of fees) with environmental conservation efforts by communities/villages.

Overcoming these challenges requires long-term commitment, collaboration between stakeholders, and consistent enforcement of regulations. Without serious efforts to improve fundamental weaknesses in environmental management and community empowerment, Garut's green tourism potential will be difficult to realize optimally and sustainably.

Garut is still in the early stages of realising green tourism. Branding and promotional efforts are still not matched by strong environmental management. Without infrastructure improvements and community empowerment, tourist growth could worsen environmental degradation. Therefore, implementation strategies such as green certification, community education programs, and pentahelix collaboration need to be implemented immediately to sustain the development of Garut tourism.

Conclusions

Green tourism has great potential to be developed in Garut Regency. The main capital is a wealth of diverse natural and cultural resources, ranging from volcanic mountains, lakes, beaches, and hot springs to cultural heritage such as Cangkuang Temple and the leather industry in Sukaregang. This aligns with the principle of sustainable tourism, which emphasizes the importance of balancing environmental integrity, economic sustainability, and socio-cultural vitality.

Although there is a supportive policy direction in the regional planning document (RPJMD, RPD), this study found a real gap in implementation in the field. Waste management that is not optimal, the low implementation of water and energy conservation programs that are measurable in the tourism sector, the limitations of basic infrastructure, and the lack of active community

participation are the main challenges that need to be addressed immediately. These findings support previous studies (Rokip et al., 2022), which show that the success of green tourism cannot be achieved only with the promotion of destinations, but must be accompanied by a serious commitment to environmental management and Community Empowerment.

The application of the Community-Based Tourism (CBT) approach is very relevant in the context of Garut because it can ensure a fair distribution of benefits and increase local ownership of Destination Management. Case studies such as Nglanggeran and Pentingsari show that the success of green tourism is strongly influenced by strong local institutions, ongoing training, and cross-sector engagement (Mahiroh et al., 2024; Nurazizah, 2019).

Thus, synergy between stakeholders, government, industry players, academics, NGOs, and local communities is needed to develop a green tourism implementation strategy that is more scalable, data-driven, and responsive to local challenges. Environmental certification programs, sustainable education, green infrastructure development, and fiscal incentives for environmentally friendly tourism industry players can be strategic steps to accelerate the transformation towards sustainable tourism destinations.

This study provides a framework for mapping the potential and challenges of green tourism in secondary areas such as Garut, which has received less attention in the academic literature. Going forward, continued research based on primary data, including tourist surveys and in-depth interviews with policy makers and local communities, is indispensable to enrich intervention strategies and ensure the sustainability of Tourism not only as a discourse, but as a real sustainable practice.

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The effect of CSR on brand attitudes, brand image, and trust: A case of restaurants in Iran

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Abstract: Corporate social responsibility (CSR) has increased has received ongoing attention due to its influence on customer behavior thus, a conceptual model is put forward to investigate the effects of CSR on brand attitude, brand trust, brand image and ultimately brand equity. Data were collected via online questionnaires to restaurant customers in Tehran and a total of 468 responses were achieved. Multivariate analysis including confirmatory factor analysis (CFA) and structural equation modeling (SEM) was used to test the conceptual model. Results reveal that CSR has a significant effect on brand attitude, brand image, brand trust and brand equity. These results have major managerial implications particularly for restaurants that are engaged in CSR activities as findings indicate that engaging in CSR activities can lead to added value to their services. This study demonstrates that there is a new bias emerging among Iranian consumers moving towards restaurants adhering to social and environmental issues.

Keywords: brand attitude, brand equity, brand image, brand trust, corporate social responsibility

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Introduction

Restaurants today need to focus on their customers to retain them and stay competitive (Hwang et al., 2020; Omidvar, et al., 2024). This requires restaurants to pay close attention to customer needs and the adaptation of their needs as they change over time to ensure that an effective link between customers and the restaurant's brand (Ghaderi et al., 2024). When restaurants are well acquainted with the needs and wants of their customers, it results in a good restaurant and meal experience (Uslu & Eren, 2020). This strategy of the consumer experience has become a unique resource as it leads to the creation of a specific brand that customers establish a special relationship with (Hartwell et al., 2016). The association between a brand and the consumer is referred to as brand equity and is considered as an asset for any company (Nguetsop, 2016). Research posits that brand equity plays an important role in developing brand loyalty (Ali & Muqadas, 2015). Restaurants should aim to create this value in the minds of consumers (Khadim et al., 2018).

CSR should be considered as one of the tools that can assist companies in promoting brand value. CSR has been an ardent topic that researchers consider as a means for good brand management (Khan & Fatma, 2019). Mahmood and Bashir (2020) state that CSR activities are an important driver of brand equity, while Fatma et al. (2015) posit that allocating capital to CSR activities supports brand equity by creating moral capital for the company. In addition, today's consumers are aware that companies can reduce the harmful effects of their operations on society and the environment by adhering to CSR, which can even lead to an improvement in their situation (Omidvar & Deen, 2024a). This results in consumers' purchase decisions and makes them more inclined to buy and use brands that adhere to good social responsibility (Wu & Chen, 2015). Moreover, companies' adherence to CSR affects the attitude of consumers towards their products as well as the recommendations of that product going forward (Kim & Lee, 2019). This

has been a eminent issue that lead companies in various industries to pay special attention to CSR (Omidvar & Deen, 2024b). Companies have concluded that in today's competitive market, CSR can be a critical issue for any company; therefore, they devote a great deal of resources to CSR-related activities (Fatma et al.,2015).

There have been studies on CSR and brand equity (Yang & Basile, 2019; Mahmood & Bashir, 2020); however, the relevance of CSR activities and consumer decisions has unanswered questions pertaining to the relationship between this subject and branding practices (Omidvar, Candar, et al., 2025a). To date, the impact of CSR on brand equity with the mediating role of brand attitude, brand trust, and brand image is under-researched. Therefore, this study proposes a conceptual model to specifically examine the connection between CSR and corporate marketing outcomes. Additionally, the available research in this field has not been significant within the tourism industry, thus promoting the originality of this study and its proposed conceptual model. Similarly, there are limited studies that focus on the impact of CSR on brands; therefore, this study investigates the relationships between CSR practices and brand equity by introducing three mediating variables, namely brand attitude, brand image, and brand trust.

Academic study on the concept of CSR began from the 1970s and is ongoing (Carroll, 1979; 1999; 2008; Li et al.,2020 ; Omidvar, Confetto, et al., 2025). However, this concept has played a role in people's lives for much longer, and there is evidence that shows that people's concerns about the effects that business has on society date back before the 1970s (Omidvar et al.,2024). Considering that this concept has been studied academically for more than 6 decades, it demonstrates that it has evolved significantly, with several definitions available on this topic due to its complexity (Anjum, 2016; Omidvar & Lopes, 2025). A single definition of this concept has not yet been established, and researchers continue to debate this definition (Anjum, 2016; Asrarul-Haq et al., 2017).

Going forward, this concept has gained momentum and a special role in business management (Youn et al., 2018; Omidvar, Gigauri, et al., 2025). In practice, the globalization of business is becoming more competitive. CSR is pervasive and has become the primary factor in a company's strategy (Arena et al., 2018; Omidvar & Palazzo, 2023), as it brings various benefits that can be a differentiating element that promotes competitive advantage (Servera-Francés & Piqueras-Tomás, 2019). Additionally, a company's adherence to CSR issues can be an influencing factor in consumers' purchase intentions and decisions, which is a significant feature (Kim et al., 2015). Thus, companies are devoting significant investments towards CSR activities, claiming that engaging in CSR activities is smart and believing that these activities will improve their reputation (Fatma et al.,2015).

Businesses in the tourism and hospitality industry also have significant effects on diverse issues of society, which has made CSR compliance important (Kim et al., 2017). As a result, many companies in this industry are trying to involve themselves in CSR activities as much as possible (Nickerson et al., 2021; Omidvar & Palazzo, 2024).

Researchers have shown interest in the relationship between CSR activities of companies and the attitudinal, psychological, and behavioral reactions of customers of companies (Wang, 2020; Gonzalez-Rodriguez & Diaz-Fernandez, 2020; Zhuang et al., 2022). Therefore, we can say that companies' adherence to CSR issues can affect consumers' attitudes and behavior, for example, brand choice, consumer behavior, and purchase intention (Gonzalez-Rodriguez & Diaz-Fernandez, 2020; Chai et al.,2020). Researchers believe that CSR can be considered as a suitable tool for strategic brand management, resulting in managers turning to sustainable business practices to support their role in improving brand reputation. Recent research posits that a strong brand image encourages consumers to trust the quality of products they are purchasing, assists in their decision-making, and allows them to feel at ease while doing so (Khan & Fatma, 2023). Omidvar and Deen (2023) demonstrated that all dimensions of CSR Carroll Pyramid have a positive and significant impact on the brand image and attitude, except the economy. Adherence and involvement of the company in CSR activities can lead to the creation of a positive brand attitude and improve the brand image, thereby promoting CSR activities as a competitive advantage tool for brand managers (Khan & Fatma, 2019). Ramesh et al. (2019) found that there is a strong relationship between CSR and brand attitude. Based on the above, the following hypotheses are developed.

Hypothesis 1. CSR has a direct positive relationship with brand attitude.

Companies' compliance to activities of CSR can promote the brand image (Omidvar & Deen, 2023) of a company and an improved brand reputation (Omidvar & Palazzo, 2025). Thus, CSR can promote a valuable influence on the brand image (Martinez & Nishiyama, 2019). CSR contributes to creating and improving the brand image (Lu et al., 2020; Zhang & Ahmad 2022). Salehzadeh et al. (2018) showed that CSR has a significant direct effect on brand image within the banking industry. Therefore, the following hypothesis is proposed:

Hypothesis 2. CSR has a direct positive relationship with brand image.

A company's participation in CSR activities can be a useful marketing strategy in order to build consumer trust in the company (Sanclemente-Tellez, 2017; Kim et al., 2021). Additionally, the participation of companies in activities related to CSR increases the trust of consumers in a brand, which in turn increases the reputation and special value of that brand (Nickerson et al., 2022). Furthermore, Khan & Fatma (2019) demonstrate that CSR practices create trust in the brand, while Kim et al. (2015) posit that consumer perception of CSR is an antecedent to corporate brand trust. Based on the above literature and discussion, the researcher proposes the following hypothesis:

Hypothesis 3. CSR has a direct positive relationship with brand trust.

Due to a highly competitive market, the need for building a strong brand has become an imperative strategy for creating and protecting consumer loyalty (Ramesh et al., 2019). Research introduces brand attitude as the reaction and interest of customers to a particular brand (Jung & Seock, 2016). Brand attitude can be an indicator of the type of psychological tendencies of a consumer towards a brand (Arachchi & Samarasinghe, 2023). Furthermore, researchers emphasize that consumer perceptions are influenced by a choice of brand, especially when organisations elevate their reputation with CSR activities (Quezado et al., 2022). Additionally, brand attitude is regarded as an important aspect in marketing, as consumer choices of a particular brand are subject to brand attitude (Foroudi, 2019). Additionally, ongoing research suggests that brand attitude has a direct and significant effect on brand equity (Kudeshia & Kumar, 2017; Rumra & Muhrim, 2023). Thus, we propose the following hypotheses:

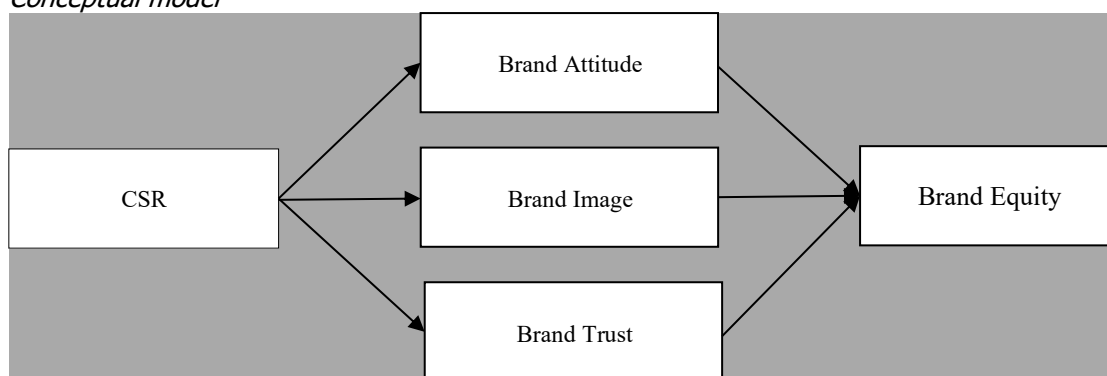
Hypothesis 4. Brand attitude has a direct positive relationship with brand equity.

Brand image can be the consumer's perception of a particular brand that is introduced in their mind (Zhang, 2015). Researchers posit that consumers ascribe and navigate towards high-quality brands (Sasmita & Suki, 2015). When customers are deciding to make a purchase, either intangible or tangible factors may affect their decision - tangible factors include product prices, and intangible factors comprise the company's brand image (Ramesh et al., 2019; Zhang & Ahmad, 2022). Furthermore, Ramesh et al. (2019) point out that the expansion of a positive brand image can relate to being accountable and transparent to their consumers. At the same time, Salehzadeh et al. (2018) established that brand image has a positive and significant influence on brand equity. Therefore, hypothesis 5 is formulated:

Hypothesis 5. Brand image has a direct positive relationship with brand equity.

If consumers trust a brand, their motivation and desire to continue to purchase that brand will increase, which results in good word of mouth to others about that brand (Lecap et al., 2021). Moreover, when consumers trust a brand, the possible damage from their negative evaluation is reduced (Bernarto et al., 2020). It needs to be noted that defaulting on brand trust can affect the company's future performance (Le et al., 2023). Recent research finds that increasing customer trust is related to brand equity and reveals that brand trust has a positive and significant effect on brand equity (Samarah et al., 2022). Therefore, hypothesis 6 is proposed:

Hypothesis 6. Brand trust has a direct positive relationship with brand equity.

Conceptual model

(Source: Own research)

Figure 1. Conceptual model of the study

Drawing from the main purpose of the study a conceptual model is put forward in Figure 1. which has been underpinned by the available literature (Fatma et al., 2015; Khadim et al., 2018; Salehzadeh et al., 2018; Ramesh et al., 2019; Le et al., 2023).

Methodology

The methodology employed in this study involved the quantitative research design. This design was chosen because of its ability to facilitate statistical analysis of numerical data, which was essential for identifying relationships within large datasets, testing of the conceptual model and hypotheses (McCusker & Gunaydin, 2015; Akbari & McClelland, 2020). Furthermore, previous studies support that the quantitative design allows for appropriate exploration of CSR dimensions through empirical examination (Singh & Malla, 2017; Kraus et al., 2021).

Data collection and sampling

Data were collected from customers who dined in restaurants in different parts of the capital city of Tehran. Customers were approached using the convenience sampling technique, and the inclusion criteria were that customers must have recently dined at these restaurants. Convenience sampling allowed the researchers to collect data from the customers who were available and present onsite at these restaurants. Additionally, the convenience sampling technique enabled the researchers to be practical and feasible for achieving a sufficient number of respondents within the study's time frame and resource constraints. Although this approach limits the generalizability of the results, it is commonly employed in research, particularly in studies conducted in emerging economies. Moreover, this technique is frequently employed in hospitality research, particularly when focusing on specific sectors such as the restaurant industry.

Data were collected in a face-to-face manner and were collected during the Fall (Autumn) 2024 in Tehran. Tehran was chosen as the focal point for this study due to its vibrant and varied restaurant industry, which is characterized by a rich tapestry of culinary offerings and a highly competitive environment. The city's dining scene encompasses traditional Persian cuisine to modern fusion restaurants, attracting both locals and tourists alike. This diversity not only enhances the gastronomic landscape of Tehran but also makes it an exemplary site for exploring the nuances of CSR practices among eateries. The dynamic nature of the restaurant sector in Tehran provides a unique opportunity to analyze how these establishments engage with CSR initiatives in response to both community expectations and market competition. A total of 468 questionnaires were collected and submitted for analysis. Originally, the survey was in the native Iranian language, Farsi, and was then translated into English for effective analysis.

To establish face-validity, three academic experts- one in hospitality and the two others in CSR and two restaurant managers, were asked to go through the Farsi version before a large-scale application, and identified the items as appropriate, clear, and relevant. Feedback from experts and managers enabled minor modifications in order to provide adequate clarity and contextual appropriateness reasoning.

Measurement

Table 1. Measurement scale development from the literature

Construct	Items	Source
CSR	This restaurant is very concerned with society This restaurant is very concerned with environmental protection This restaurant is very concerned with its employees This restaurant actively and significantly participates in social initiatives	(Kim, 2019; Kim et al., 2019; Park, 2019)
Brand attitude	For me, eating at this restaurant is valuable For me, eating at this restaurant is very good For me, eating at this restaurant is very useful For me, eating at this restaurant is very favorable.	(Lee et al., 2020; Singh & Banerjee, 2018)
Brand image	In comparison to other restaurants, this restaurant has high-quality quality This restaurant has a rich history Customers (we) can reliably predict how this restaurant will perform	(Jalilvand & Samiei, 2012; Elseidi & El-Baz, 2016)
Brand trust	I trust this restaurant to give me everything I expect out of it I rely on this restaurant This restaurant never disappoints me This restaurant is honest with its customers I trust on the quality of this restaurant	(Khadim et al., 2018; Khan & Fatma, 2019)
Brand Equity	Even if another restaurant offers the same service, I prefer to eat at this restaurant. Even if another restaurant offers the same feature, I prefer to eat at this restaurant. I can recognize this restaurant among other competitors. Some characteristics of this restaurant come to my mind very quickly. I can quickly recall the symbol or logo of this restaurant.	(Fatma et al., 2015; Khadim et al., 2018)

The constructs highlighted in Table 1 was developed from the available literature and adapted to the targeted population of the study and potential respondents in Iran. This allowed effective understanding of the questions being asked and an increased completed response rate.

Data analysis

Several researchers prefer SEM as the appropriate method for CSR research than traditional multivariate statistical tests (Farooq et al., 2018; Raza et al., 2020; Gimeno-Arias et al., 2021). This study utilised SEM to test the proposed conceptual model (Figure 1). Data was analysed on the Statistical Package for the Social Sciences (SPSS) version 21 and AMOS version 24.

Results and Discussions

The questionnaire included a basic demographic section that all respondents were requested to complete before answering the questions pertaining CSR measurement scale.

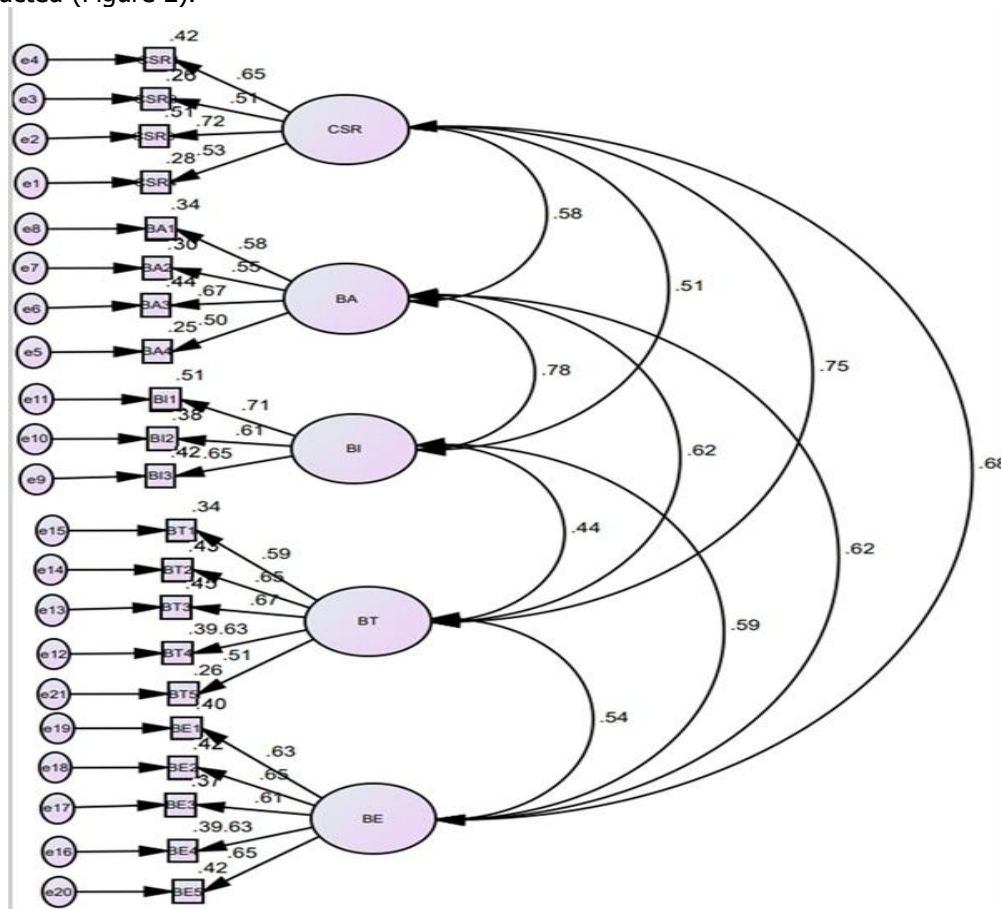
Table 2. Demographic characteristics of respondents

	TOTAL (N = 468)	
	N	Percentage (%)
Gender		
Male	215	45.9
Female	253	54.1
Age		
Less Than 20 Years Old	69	14.7

20 – 29 Years	119	25.4
30 – 39 Years	122	26.1
40 – 49 Years	112	23.9
50 Years or Older	46	9.8
Education		
Diploma	78	16.7
Bachelor's Degree	141	30.1
Master's Degree	140	29.9
Doctorate	109	23.3

Table 2 illustrates the basic demographic characteristics of the respondents, including their gender, age, and education. It is notable that respondents are well educated.

Prior to testing the proposed conceptual model, a confirmatory factor analysis (CFA) was conducted (Figure 2).



(Source: own research)

Figure 2. Results of confirmatory factor analysis

Figure 2 demonstrates the results of the CFA that was conducted before the SEM. This diagram illustrates the factor structure of the measurement model, showing the relationships between latent constructs and their observed indicators. Standardized factor loadings and error terms are included to evaluate the strength and reliability of the measurement items. All loadings are statistically significant and meet the recommended thresholds, supporting the model's convergent validity.

The result of the measurement model test showed a good fit to the data set: $\chi^2 = 369.743$, $df = 179$, $p = .000$, $\chi^2/df = 2.066$, $RMSEA = 0.048$, $PNFI = 0.740$, $GFI = 0.930$, $AGFI = 0.910$, $CFI = 0.926$, $IFI = 0.927$, $TLI = 0.913$).

Table 3. Properties of the measurement model (N = 468, own research)

Measurement Items	Factor Loading	Cronbach's α	CR	AVE
CSR		0.684	0.848	0.261
CSR1	0.649			
CSR2	0.506			
CSR3	0.717			
CSR4	0.531			
Brand Attitude		0.655	0.914	0.336
BA1	0.579			
BA2	0.552			
BA3	0.666			
BA4	0.500			
Brand Image		0.693	0.887	0.499
BI1	0.714			
BI2	0.612			
BI3	0.647			
Brand Trust		0.743	0.946	0.400
BT1	0.586			
BT2	0.645			
BT3	0.669			
BT4	0.628			
BT5	0.514			
Brand Equity		0.770	0.954	0.458
BE1	0.635			
BE2	0.650			
BE3	0.608			
BE4	0.628			
BE5	0.650			

Table 3 illustrates that all factor loadings and Cronbach's α , Composite reliability (CR), and Average variance extracted. The standardized factor loadings of the measurement model are all statistically significant when factor loadings are higher than 0.5, as the recommended threshold value (Hair et al., 2019). Table 4 indicates that two constructs (Brand trust and Brand Equity) are greater than 0.70, which is higher than the suggested threshold by Fornell & Larcker (1981). The remaining three constructs (CSR, Brand attitude, and Brand image) range from 0.655 to 0.693, and according to Cronbach (1951) and Hajjar (2018), when assessing reliability, an item is deemed trustworthy if it has a Cronbach's alpha score above 0.6.

Reliability of the measurement model should also be assessed by the Composite Reliability (CR) and Average Variance Extracted (AVE) of each construct. Table 3 demonstrates that all CR values are higher than 0.7, which Hair et al. (2019) advised that values of CR are above 0.7, indicating a high level of internal consistency. Fornell and Larcker (1981) state that although the AVE is less than 0.5, the CR is higher than 0.6, the construct's convergent validity is acceptable. Therefore, we can see that the construct's convergent validity in Table 3 is still adequate. Thus, there is evidence of the reliability and validity of the constructs that compose the proposed model. In practical terms, these results mean that the constructs in our model—such as CSR items—were measured with a sufficient degree of accuracy and consistency. This increases confidence that the observed relationships in our model reflect genuine patterns in the data rather than measurement errors. Therefore, we conclude that the reliability and validity of the constructs in the proposed model are satisfactory.

Table 4. Discriminant validity evaluation using heterotrait-monotrait ratio of correlations (HTMT, own research)

	CSR	BA	BI	BT	BE
CSR	0.550	0.199	0.202	0.287	0.254
BA	0.199	0.455	0.295	0.226	0.219
BI	0.202	0.295	0.638	0.184	0.230
BT	0.287	0.226	0.184	0.550	0.234
BE	0.254	0.219	0.230	0.234	0.550

Table 4 demonstrates the discriminant validity evaluation and it is found that the root AVE of each hidden variable (bold diagonal values) is higher than the correlation of hidden variables (non-bold diagonal values). Thus, according to Fornell and Larcker (1981), Table 4 shows acceptable discriminant validity.

Hypothesis testing and structural equation model

After testing the conceptual model, the relationships between the constructs in the proposed model were tested using structural equation modeling (SEM).

Table 5. Results of the structural equation modeling (N = 468, own research)

Paths	Standardized coefficients	t-value	p-value	Hypotheses
Hypothesis 1. CSR→ Brand Attitude	0.742	6.592	0.000	Supported
Hypothesis 2. CSR→Brand Image	0.912	7.588	0.000	Supported
Hypothesis 3. CSR→ Brand Trust	0.982	8.166	0.000	Supported
Hypothesis 4. Brand Attitude→ Brand Equity	0.441	3.736	0.000	Supported
Hypothesis 5. Brand Image→ Brand Equity	0.271	4.103	0.000	Supported
Hypothesis 6. Brand Trust→ Brand Equity	0.251	2.969	0.003	Supported

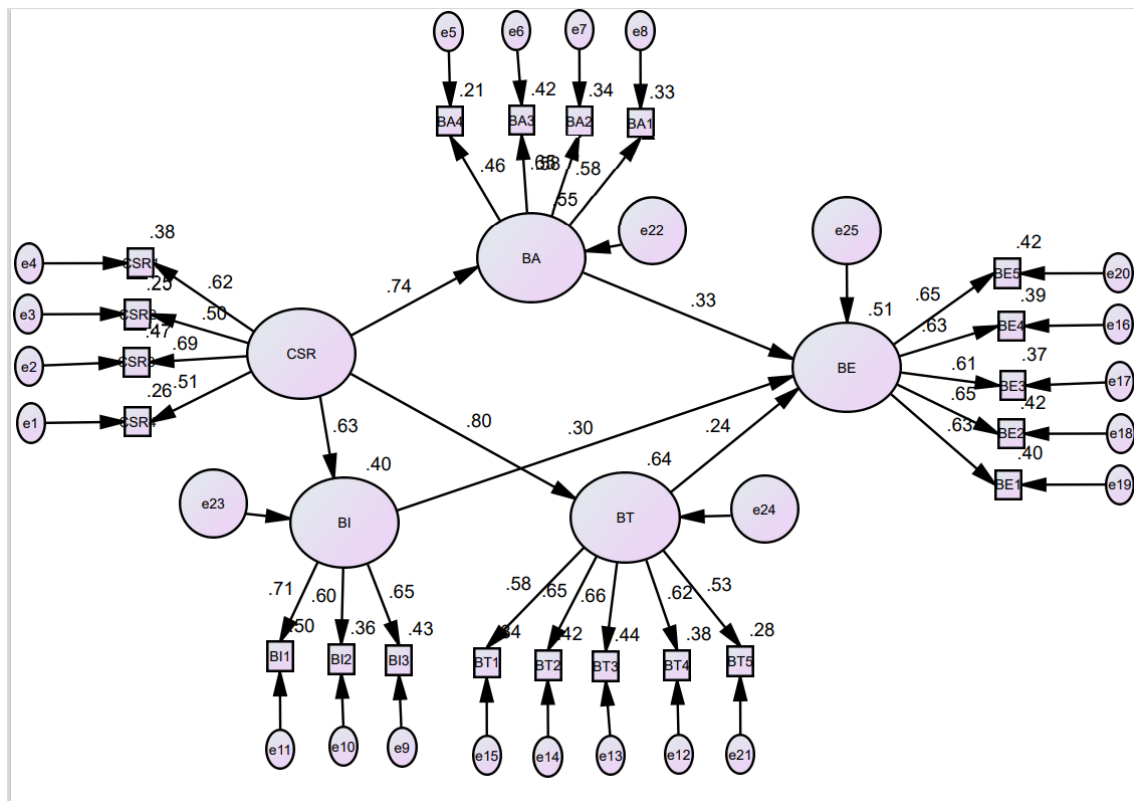
Table 5 presents the path relationships and results of hypothesis tests. The study's model proposed that CSR has a direct positive relationship with brand attitude. According to the standardized coefficients, t-value, and p-value in Table 5 and Figure 3, CSR has a significant effect on brand attitude ($\beta = 0.742$, $t = 6.59$, $p < 0.001$). This result supports hypothesis 1.

Figure 3 illustrates the structural relationships among the main constructs in the study, including CSR practices, brand attitude, brand image, brand trust, and brand equity. The arrows show hypothesized paths, with standardized path coefficients displayed. The model fit indices indicate an acceptable fit to the data.

The study's model proposed that CSR has a direct positive relationship with brand image. This hypothesis was supported by the SEM results ($\beta = 0.912$, $t = 7.58$, $p < 0.001$). Hypothesis 3 proposed that CSR has a direct positive relationship with brand trust. SEM results find this hypothesis supported ($\beta = 0.982$, $t = 8.16$, $p < 0.001$). The study's model proposed that brand attitude has a significant effect on brand equity. The SEM results support this hypothesis ($\beta = 0.441$, $t = 3.73$, $p < 0.001$). Hypothesis 5 proposed that there is a direct positive relationship with brand equity ($\beta = 0.271$, $t = 4.103$, $p < 0.001$). This SEM result supports hypothesis 5. The study's model proposed that brand trust directly correlates positively with brand equity. SEM results support this hypothesis ($\beta = 0.251$, $t = 2.96$, $p < 0.001$).

Table 5 above also demonstrates the R-square (R²) value for brand attitude, which is 0.550. These results indicate that CSR could affect the brand attitude variable by 55% while the other 45% may be the influence of other constructs that were not included in this study. The R-square (R²) value for brand image is 0.398 which indicates that CSR could affect the brand image variable by 39.8% and the remaining 60.2% may be the influence of other constructs that was not included in this study. The R-square (R²) value for brand trust is 0.638, which implies that CSR could affect the brand trust variable by 63.8% and the remaining 36.2% was the influence of other constructs that were not included in this study. Finally, the R-square (R²) value for brand

equity is 0.509, which means that brand attitude, brand image, and brand trust could affect the brand equity variable by 50.9% while the remaining 49.1% was the influence of other constructs, which were not included in this study.



(Source: own research)

Figure 3. Results of SEM

Conclusions

The purpose of the study was to test a conceptual model that demonstrates the effects of CSR on brand attitude, brand image, and brand trust. The study shows that brand attitude, brand image, and brand trust affect brand equity. The study and the tested conceptual model provide an improved understanding of customer behavior visiting Iranian restaurants based on their understanding of CSR. As a start, it is evident that respondents are well educated, implying that due to a strong educational background, these customers have an increased awareness of CSR practices and may even prefer establishments that are involved in CSR activities. These findings support a previous study by Jarmuševiča et al. (2019), who advocated that education plays an integral role in consumer awareness of CSR practices.

Going forward, findings indicate that CSR has a significant impact on brand attitude. These findings are consistent with Ramesh et al. (2019), who found that CSR has a positive and direct impact on the brand attitude. This consistency may be explained by the growing consumer emphasis on ethical business practices and transparency, particularly in sectors where trust and service quality are key differentiators, such as hospitality and dining. In the context of Iranian restaurants, where economic fluctuations and social expectations strongly influence consumer preferences, CSR practices can act as a strategic tool for differentiation. For example, if restaurants that source their ingredients from local vendors and suppliers can help their economy and attract the attention of the people in that community. This aligns with consumers' increasing environmental concerns. A report by Statista (2023) found that over 60% of consumers in the Middle East and North Africa region are more likely to support brands with strong environmental and social commitments. It also reduces the need for restaurants to transport ingredients from

longer distances, thus playing a significant role in reducing carbon emissions. Restaurants can also attract the attention of consumers by treating their employees fairly and improving their attitude (Omidvar, Candar, et al., 2025b). Today, this aspect has become increasingly important (Marien & Werner, 2019), especially with the presence of social media, as news of company performance and margins is quickly spread among people. Furthermore, any positive or negative news about a restaurant can have a significant impact on consumers' attitudes towards that restaurant.

Findings further indicate that CSR has a direct and significant impact on brand image. These results are consistent with Salehzadeh et al. (2018), who showed that socially responsible initiatives enhance brand image through increased consumer trust and perceived corporate integrity, particularly in service-oriented sectors. This alignment suggests that CSR activities, especially those visible to and valued by the public, contribute meaningfully to how brands are perceived in competitive consumer markets. Therefore, it can be said that restaurants' participation in philanthropic and non-profit activities (aspects that are beneficial to local communities and which improve the quality of life of people in that community) can have a significant impact on their brand image. This effect is particularly notable in culturally and religiously sensitive contexts, such as Iran, where social solidarity and charitable actions are deeply valued. For example, many restaurants in Iran distribute free meals to underprivileged families during religious events such as Ramadan, Muharram, or other local ceremonies. This is not only seen as an act of social good but also strengthens emotional connections with the community, aligning the restaurant's brand with generosity, ethical values, and cultural respect. Although research posits that there is a food safety concern and responsibility when restaurants donate food (Bierma et al., 2019), it is a common and accepted practice in Iran. For example, restaurants and fast-food outlets distribute free food among the people on some religious occasions. Such activities can change the attitude of consumers towards their restaurant brand and improve the brand image of these restaurants.

Results reveal that CSR has a direct and significant impact on brand trust. These findings are consistent with Khan and Fatma (2019), who found that CSR initiatives enhance consumer trust by signaling organizational integrity, fairness, and commitment to ethical practices. This similarity is particularly relevant in service sectors like hospitality, where trust plays a crucial role in shaping consumer decision-making and long-term loyalty. In the context of the Iranian restaurant industry, where trust in food quality, hygiene, and fair treatment of staff is especially important, CSR practices can be a powerful tool to build brand credibility. Thus, restaurant managers and employees can significantly contribute to improving consumer trust by adhering to the laws and regulations set by local communities. By doing so, they demonstrate respect for the rights of citizens and consumers, which in turn leads to greater public trust in those restaurants. This aligns with findings by Alhouti et al. (2016), who argue that CSR-driven transparency and accountability strengthen brand trust across cultures. Therefore, in markets like Iran—where community values, religious ethics, and consumer awareness are strong—visible CSR compliance fosters public trust and differentiates brands in a competitive landscape.

Findings also reveal that brand attitude has a direct and significant impact on brand equity. These findings suggest that improving a restaurant's brand attitude can affect its brand equity. This relationship supports previous research (Park et al., 2010), who emphasized that positive brand attitudes—shaped by quality, consistency, and emotional resonance—serve as key drivers of brand equity in the food service industry. These results suggest that when consumers develop a favorable perception of a restaurant's brand, they are more likely to assign higher value to it, both emotionally and economically. This effect may be especially pronounced in the restaurant sector, where consumer perceptions are shaped not only by the product (food quality), but also by service quality, ambiance, ethical behavior, and brand storytelling. For example, restaurant managers should strive to provide quality food to their customers, which positively influences consumers' brand attitudes and, over time, enhances brand equity (Savelli et al., 2019).

Results also reveal that brand image has a direct and significant impact on brand equity. These findings are consistent with Salehzadeh et al. (2018), who found that a favourable brand image leads to stronger brand equity by influencing consumer perceptions of credibility, quality, and emotional connection. This alignment supports the idea that consumers who associate a

restaurant with positive attributes—such as reliability, cleanliness, friendliness, and ethical practices—are more likely to value and remain loyal to that brand. In the competitive and experience-driven restaurant industry, brand image serves as a key differentiator that shapes how customers evaluate the overall value of a brand. These results signify that restaurants can greatly enhance their brand image among customers by actively increasing their brand equity. Restaurants can enhance their brand image and ultimately their brand equity by providing good customer service in today's competitive market. For example, restaurants can improve their brand image by creating a friendly environment for their customers, which will ultimately improve their restaurant's brand equity. Hanaysha (2016) advocates that a restaurant can directly build its brand equity through customer service and ultimately develop long-term relationships with its customers.

Finally, the results of this study reveal that brand trust directly and significantly impacts brand equity. These findings are in line with Khadim et al. (2018), who argued that brand trust serves as a key psychological mechanism that enhances brand equity by fostering customer confidence and reducing perceived risk. This relationship is particularly critical in the restaurant industry, where consumers often rely on trust in food quality, hygiene, ethical conduct, and customer care as part of their decision-making process. This means that restaurants should work to improve their brand trust to improve their brand equity. In competitive and review-driven markets like Tehran, where digital platforms and peer experiences shape consumer expectations, building trust is essential for both customer retention and brand growth. Additionally, by building the right relationships with customers, including constantly interacting with customers on social media, addressing their feedback, and demonstrating a commitment to their satisfaction, restaurants can build a loyal customer base, which improves trust in the restaurant's brand and ultimately improves brand equity (Hanaysha, 2016; Hyun et al., 2024).

Theoretical contribution

This study presents several theoretical implications. Firstly, the study underscores the relationship between CSR and key brand-related factors such as brand attitude, brand image, and brand trust. Furthermore, the findings affirm that these brand-related factors significantly influence brand equity. To be more specific, the results enrich the existing CSR literature by demonstrating its impact on consumer relationships with brands. Despite the well-discussed theoretical connection between CSR and brand management across multiple service industries, this empirical research specifically addresses the effects of CSR on brand attitudes, brand image, brand trust, and brand equity, which is limited to the restaurant sector. Furthermore, research of this perspective remains a critical area for further inquiry. This contributes to theory by providing empirical support for CSR as a multidimensional construct that influences consumer-based brand equity through emotional and perceptual brand outcomes. Importantly, while the findings are rooted in the Iranian restaurant context, the theoretical model has potential for broader application. In particular, the proposed relationships between CSR and brand-related constructs may also be relevant in other emerging economies where social, ethical, and religious values influence consumption behavior. Future research could test the model in different cultural and institutional contexts—such as secular Western societies or East Asian collectivist cultures—to examine how cultural orientations (e.g., individualism vs. collectivism or religiosity) may moderate these relationships. Additionally, it is important to note that this study was carried out in a developing nation with a predominantly Muslim population. Therefore, the findings may offer novel insights into the intersection of CSR and brand dynamics within this unique context. Researchers could also extend this model to other service-based industries—such as hospitality, healthcare, tourism, or retail—to explore whether the mediating roles of brand trust, image, and attitude operate similarly or are sector-specific. This offers a foundation for developing a comparative framework that links CSR to brand equity across industry domains.

Limitations

The main limitation of this study is its reliance on a non-probability (convenience) sample of restaurant clients in Tehran, which may introduce selection bias and limit the generalizability

of the findings to a broader population of restaurant customers in Tehran and other cities across Iran. As such, the sample may not fully represent the demographic and psychographic diversity of the target population. Future research should use stratified or random sampling methods to enhance external validity.

Additionally, this study focuses exclusively on the restaurant industry, and the extent to which these findings are applicable to other sectors—such as tourism, hospitality, or retail—remains uncertain. Different industries may have varying CSR expectations or consumer-brand dynamics. Future studies could replicate this model across different service industries to test its robustness and industry-specific differences.

Finally, the research design may also pose limitations. While the study employed survey-based methods to capture respondents' self-reported experiences and perceptions, this approach may be subject to common method bias, social desirability bias, and limited contextual depth. The use of structured Likert-scale items, although useful for quantification, may not fully capture the nuanced ways in which consumers interpret CSR activities or form brand attitudes. Future research should consider using mixed-methods approaches—such as qualitative interviews or longitudinal designs—to capture deeper insights and examine how CSR perceptions evolve over time.

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