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Research Article

The community's role in the coastal tourism economy of Yogyakarta, Indonesia

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Article information	Abstract
	The development of coastal tourism continues to grow, contributing both directly and indirectly to the local and national economy. The community plays an important role in coastal development. This study aims to assess the role of community in the coastal tourism economy. The research location is in Yogyakarta, covering three coastal tourism sites, namely Cemara Sewu Beach, Slili Beach, and Glagah Beach. As many as 180 respondents were surveyed through semi structured questionnaires, along with in-depth interviews conducted with nine key community leaders. This study focuses on the planning, organizing, implementing, and controlling involved in community management. The method used a combination of qualitative and quantitative approaches, also known as mixed methods. The findings indicate that the coastal community plays an important role in the growth of the tourism economy. The unique role of the coastal tourism community has a different character due to the characteristics and the location of the coast. The results show that awareness and active participation among economic actors, such as local traders and service providers, play a vital role in sustaining community-based tourism activities. Respondents indicated that their direct involvement in daily operations, such as managing services and maintaining facilities, is strongly influenced by how transparent and inclusive community leaders are during planning, implementation, and control processes. Sites with more open leadership structures, such as those integrating regular meetings and shared decision-making, reported higher levels of member participation across activities. The highest-rated community function was organizing, with mean score: 4.2, while planning had the lowest, with mean score 3.6, indicating a gap in strategic preparation. Additionally, external factors, such as government policies and tourist trends, also impact the community's role. Communities were found to be key actors in organizing tourism services, promoting environmental sustainability, and managing visitor experiences. This study offers a novel perspective by highlighting the integrated role of community-led planning and implementation in coastal tourism economies.

1. Introduction

Tourism is one of the largest industries in the world, following oil and gas, and serves as a major source of foreign exchange for many countries, including Indonesia (Hamid et al., 2021).

Tourism comes in various forms, including historical, natural, urban, and artistic tourism (Sianipar et al., 2024). Additionally, coastal tourism allows visitors to enjoy beaches, seafood, and other coastal attractions (Morales-Zamorano et al., 2020). As an archipelago nation with extensive coastal areas, Indonesia has significant potential in coastal tourism (Hanafiah et al., 2021; Partelow, 2021). Coastal regions are also one of the most important abiotic ecosystems and sources of biodiversity in tourism. Therefore, coastal areas hold immense socio-economic importance (Seva et al., 2022; Silalahi et al., 2024). Data on Indonesian tourists' preferences regarding types of tourism shows that coastal tourism ranks the highest, chosen by 48.7 % of tourists (Annur, 2022). Through regulations by the Ministry of Tourism and Creative Economy, the management of coastal tourism is governed to maximize its sustainability and positive impact (Sriyadi et al., 2023)

There are many regions in Indonesia that rely on coastal areas as tourist attractions, one of which is Yogyakarta (Subejo et al., 2019). This area has a long coastline, and there is significant potential in its coastal regions; the large number of beaches undeniably represents a major asset, especially in terms of developing a region-based economy. Yogyakarta has a coastline stretching approximately 113 km, with an estimated water area of 251,130 hectares (Dinas Kelautan dan Perikanan Yogyakarta, 2021). Of the five regencies or cities in the region, three have coastal areas with beaches that serve as tourist destinations: Gunung Kidul, Bantul, and Kulon Progo. These attractive coastal areas are a source of income for the local community. Some of the notable coastal areas in the area include Cemara Sewu Beach in Bantul Regency, Glagah Beach in Kulon Progo Regency, and Slili Beach in Gunung Kidul Regency. All three coastal areas have shown positive growth in tourism activities, being potential examples for the other coastal economies (Miarsyah et al., 2024).

The vast potential of coastal resources must be balanced with the empowerment of coastal communities so that the positive impacts can be felt by everyone, not just a select few (Hamid et al., 2021; Ismail et al., 2018). Empowering coastal communities is one effort to improve their welfare by realizing their potential and capabilities (Rostiati et al., 2019). This empowerment can be achieved through professionally managed community groups, often referred to as "tourism awareness groups (POKDARWIS)" or non-governmental organizations. The role of coastal communities in this region is crucial in supporting the sustainable development and utilization of marine and environmental resources (Pribudi, 2020; Sukuryadi et al., 2020).

Communities have an important role in the development of coastal areas by being the main agents in resource management and adaptation to environmental challenges. The management of marine protected areas in Cagayan, Philippines, demonstrates the importance of local community participation for ecological sustainability through strengthening community-based governance and management (Ballad et al., 2022). In Karangsong, Indramayu, Indonesia, local communities use adaptive approaches such as mangrove planting to deal with coastal erosion, demonstrating their capacity in disaster mitigation (Putiamini et al., 2023). In Tanzania, identity as a fisherman remains an important element in livelihood diversification, which strengthens the economic resilience of communities (Bulengela, 2024b). In addition, local knowledge of changes in fishery resources provides important insights for more responsive and sustainable management (Bulengela, 2024a). Through this experience, it can be seen that the role of the community is not only as an implementer, but also as a driver of innovation and collaboration in creating a more balanced future for coastal areas (Emmanuel, 2021).

Ahsani et al. (2022), Ali et al. (2024), and Ballad et al. (2022) emphasized infrastructure and marketing as well as grassroots participation are important things in coastal tourism development, that participation can be started from community level. Despite growing attention to sustainable coastal tourism, few studies have explored how community members, particularly economic actors, shape tourism outcomes at the site level. The role of these communities in driving the economy and supporting the local economy has proven to have a positive impact (Bott et al., 2020). Generally, businesses perform optimally when supported by the community, both financially and non-financially

(Hanafiah et al., 2021). Non-financial support can include contributions to social activities, serving as learning platforms, expanding networks, managing the business climate, and acting collectively for mutual benefit. This study will contribute to the advancement of knowledge on coastal tourism economy development, particularly in the context of developing countries where such regions often require greater support and strategic intervention from stakeholders. Involvement of individual and community leader will reveal that the community can give more for tourism economy. The community in this study includes local traders, tourism service providers, and community leaders involved in coastal tourism. In the context of tourism, planning involves community input in tourism zoning; organizing includes coordinating local actors; implementing refers to managing services; and controlling covers monitoring visitor behavior and environmental impacts.

Economic activities in coastal areas are monitored and managed collectively within a community, making coastal communities play a very important role in shaping, organizing, implementing, and controlling economic activities in the tourism sector (Sukuryadi et al., 2020). Like the organizational structures in most communities, the management of coastal communities involves four main activities: planning, organizing, implementing, and controlling (Kusmulyono et al., 2023). The performance and role of coastal communities in the economic activities of the local population can be observed through the responses of economic actors in coastal areas who make a living from the growing coastal tourism sector (Rozaki et al., 2024). The four management functions need to be carried out by coastal communities in relation to economic activities in coastal areas. Thus, this study might have a positive effect on policies for improving community contribution to the coastal tourism economy.

2. Materials and methods
2.1 Study location

The selection of locations for this study was done purposively, considering that the chosen areas represent coastal tourism. Three coastal tourist destinations with different physical conditions were selected: Cemara Sewu Beach in Bantul Regency, Slili Beach in Gunung Kidul Regency, and Glagah Beach in Kulon Progo Regency (**Table 1** and **Figure 4**). The three research locations exhibit distinct physical characteristics. Slili Beach extends approximately 100 meters, facing the Indian Ocean and flanked by two karst hills. It is characterized by fine, white sand and relatively calm waves (**Figure 2**). In contrast, Cemara Sewu Beach and Glagah Beach are dominated by black sand and experience larger waves (**Figure 1**). Among these three beaches, only Glagah Beach is a coastal lagoon, and its shoreline is reinforced with tetrapods. These three coastal areas are being developed as coastal tourism destinations that can demonstrate the role of the community in the coastal economy, and each area has attractions that attract tourists to enjoy the beauty of its coastal areas (**Figure 3**). Moreover, Slili Beach promotes natural serenity, Glagah Beach features a lagoon, while Cemara Sewu Beach offers a shaded pine landscape that supports nature-based tourism and scenic relaxation.

Table 1 Research location and sample.

No	Location	Community Name	Category	Sample
1	Cemara Sewu Beach (Bantul Regency)	Working Group of Cemara Sewu Beach	Trader	24
			Service Provider	36
			Key Respondent	3
2	Slili Beach (Gunung Kidul Regency)	Tourism Awareness Group (POKDARWIS) of Slili Beach	Trader	40
			Service Provider	20
			Key Respondent	3
3	Glagah Beach (Kulonprogo Regency)	Pondok Laguna Group	Trader	31
			Service Provider	29
			Key Respondent	3
	Total			**189**

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Figure 1 Photos of Cemara Sewu Beach situation.

Figure 2 Photos of Slili Beach situation.

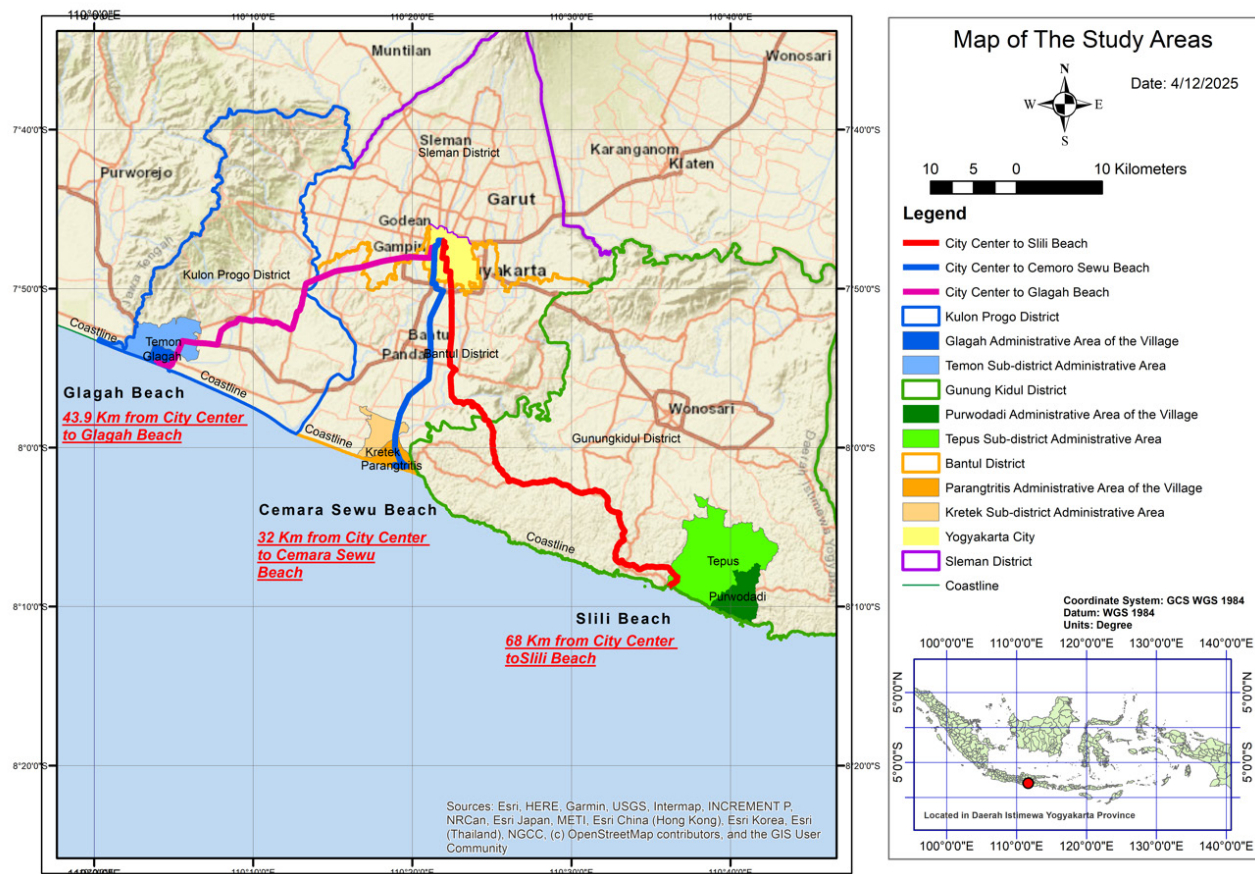**Figure 3** Photos of Glagah Beach situation.

Figure 4 Map of the study areas showing community roles in coastal tourism and access conditions.

2.2 Sampling procedure and data collection

The method used in this research is a combination of qualitative and quantitative approaches, also known as mixed methods. Data collection for the quantitative aspect was conducted through interviews using questionnaires with respondents engaged in economic activities in coastal areas. A total of 60 respondents from each of the three locations were purposively selected based on their engagement in tourism-related services such as trading and hospitality, totaling 180 respondents (**Table 1**), and 9 key respondents who were interviewed with deep interview method. The traders identified in, and selected as respondents of, this study included street vendors and stall owners with stands around the beach. Their goods varied, including food, drinks, souvenirs, toys, and local crafts. The service providers who participated as respondents included photographers, jeep rental services, parking attendants, and toilet operators. For the purposes of this study, 'community' refers to local traders, service providers, and management involved in coastal tourism economic activities.

For the qualitative aspect, in-depth interviews were conducted with managers of tourism groups in the research areas. In-depth interviews were employed to gather comprehensive information regarding the organizational structure of beach management communities, the management systems in place, available infrastructure, and human resources, as well as the relationships with external stakeholders that influence management development. Key respondents were selected purposively, focusing on core management roles such as the chairperson, secretary, or treasurer.

There was a total of nine key informants involved in this study. All of them have a deep understanding of the coastal community's conditions and its role in the coastal tourism economy. As shown in **Table 3**, each region is represented by three key informants who hold positions within the

community. The data triangulation process was conducted with these key informants to obtain saturated data that can accurately represent the actual conditions.

Table 2 Research variables.

Category	Variable	Indicator	Involved Party
Management (Ali et al., 2024)	Planning	Vision mission: availability, knowledge, and perception	Management person and member
	Organizing	Organization structure, recruitment system, routine meeting, role of management	Management person and member
	Implementation	Fund raising, monitoring, responsibility, inventory, data collection, guard, management	Management person and member
	Controlling	Regulation, evaluation, follow up action, economic effect	Management person
Internal Factor (Ahsani et al., 2022; Hamid et al., 2021)	Human Resource	Activeness of management, skill to manage	Management person and member
	Infrastructure	Completeness, management, accessibility	Management person
External Factor (Alamanda et al., 2022)	Government Support	Regulation, support	Stakeholder
	Tourists	Visit rate, service usage rate, purchase rate	Tourist

*Informed consent was obtained prior to conducting the interview.

Table 3 Key respondent characteristics.

Area	Key Respondent	Characteristic
Cemara Sewu Beach	P1	Head of group, 55 years old
	P2	Secretary, 40 years old
	P3	Treasury, 48 years old
Slili Beach	P4	Head of group, 37 years old
	P5	Vice of head of group, 43 years old
	P6	Secretary, 24 years old
Glagah Beach	P7	Head of group, 56 years old
	P8	Secretary, 53 years old
	P9	Treasury, 60 years old

The data collected from both quantitative and qualitative processes covered external, internal, and management identification indicators necessary to understand the role and contribution of coastal communities in the economic activities that support the welfare of local business actors in coastal areas. As shown in **Figure 5**, there is a flow of how the coastal community contributes to economic activities in coastal regions. This figure shows coastal community roles in term of management, such as planning, organizing, implementations, and controlling, is affected by internal and external factors, form which it contributes to the coastal tourism economy. A detailed explanation of the variables

studied can be found in **Table 2**, where all variables and indicators were gathered using both questionnaires and in-depth interviews with key respondents.
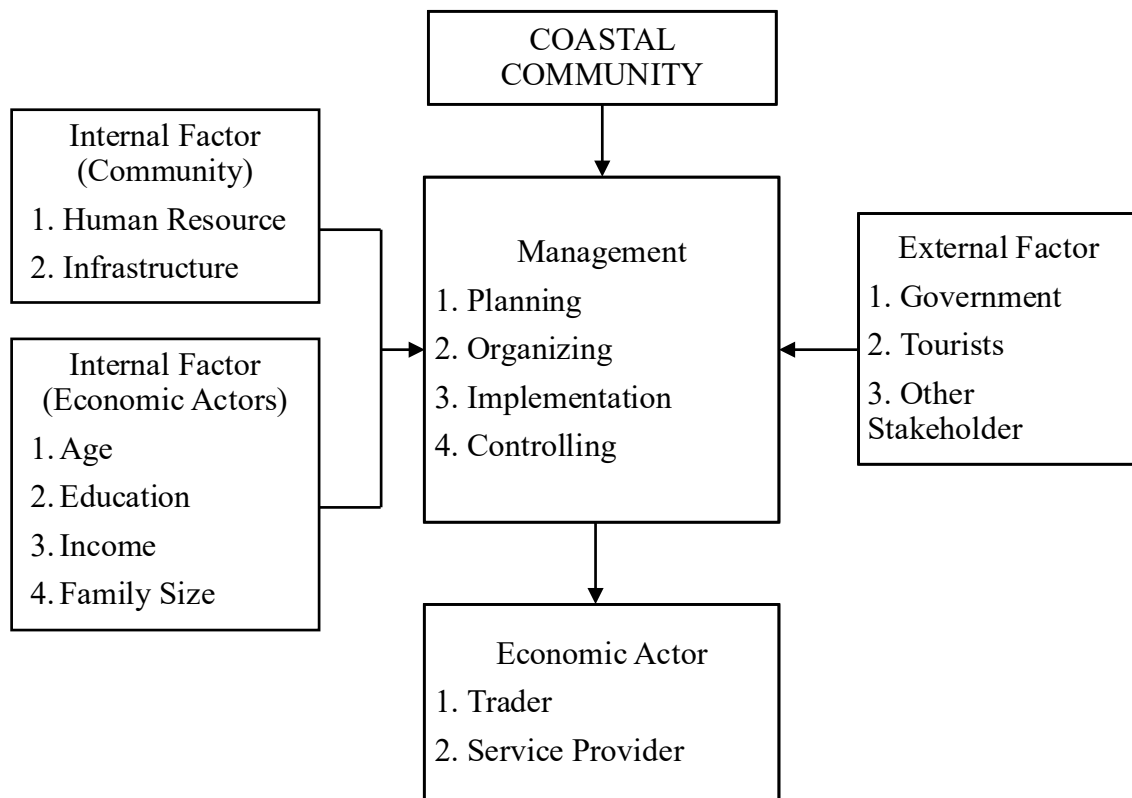

Figure 5 Conceptual framework of community roles and socioeconomic factors in coastal tourism development.

2.3 Analytical technique

The analytical approach used in this study is descriptive, where the findings are thoroughly explained based on the facts discovered. All community members (traders, service providers, and key informants) were analyzed as a single group, unless otherwise noted. Quantitative data is presented in scores and percentages; in the score from 1 to 5, the average score category will comprise 4.0 - 5.0, indicating strong performance; 3.0 - 3.9 moderate; below 3.0 low performance. Multiple linear regression (MRA) analysis is also conducted to identify the factors influencing the role of coastal communities in the coastal tourism economy. These factors significantly influence the communities' roles, as they can lead to changes in management outcomes, including financial performance and human resource productivity. In this analysis, the dependent variable is the respondents' characteristics, while the independent variable is the community's role in economic activities (Peltonen-Sainio et al., 2020; Santoso et al., 2023; Papageorgiou et al., 2024; Silalahi et al., 2024). MRA was used to identify which community management functions most significantly affect tourism outcomes. The formula design is:

$$Y = \alpha + b_1 X_1 + b_2 X_2 + b_3 X_3 + b_4 X_4 + e$$

Note:
Y   : Community role
α : Constant
b   : Regression coefficient
X_1 : Age

X_2 : Formal education
X_3 : Family member
X_4 : Income

Table 4 Economic actor characteristics.

Characteristic	Total (N: 180)		Cemara Sewu (N: 60)		Slili (N: 60)		Glagah (N: 60)	
Age	**Freq**	**Percent**	**Freq**	**Percent**	**Freq**	**Percent**	**Freq**	**Percent**
19-30	32	17.78	7	11.67	14	23.33	11	18.33
31-40	59	32.78	23	38.33	25	41.67	11	18.33
41-50	50	27.78	21	35.00	13	21.67	16	26.67
51-60	28	15.56	6	10.00	7	11.67	15	25.00
61 ≤	11	6.10	3	5.00	1	1.66	7	11.67
	180	100.00	60	100.00	60	100.00	60	100.00
Family member	**Freq**	**Percent**	**Freq**	**Percent**	**Freq**	**Percent**	**Freq**	**Percent**
0-1	1	0.55	0	0.00	1	1.67	0	0.00
2-3	34	18.89	5	8.33	14	23.33	15	25.00
4-5	54	30.00	16	26.67	24	40.00	14	23.33
6-7	86	47.78	38	63.33	20	33.33	28	46.67
8	5	2.78	1	1.67	1	1.67	3	5.00
	180	100.00	60	100.00	60	100.00	60	100.00
Education	**Freq**	**Percent**	**Freq**	**Percent**	**Freq**	**Percent**	**Freq**	**Percent**
No education	4	2.22	0	0.00	1	1.67	3	5.00
Elementary School	60	33.33	20	33.33	21	35.00	19	31.67
Junior High School	98	54.44	37	61.67	30	50.00	31	51.67
Senior High School	17	9.44	3	5.00	7	11.67	7	11.66
University	1	0.57	0	0.00	1	1.66	0	0.00
	180	100.00	60	100.00	60	100.00	60	100.00
Income	**Freq**	**Percent**	**Freq**	**Percent**	**Freq**	**Percent**	**Freq**	**Percent**
≤ 1,000,000	59	32.78	21	35.00	21	35.00	18	30.00
1,100,000-1,500,000	31	17.22	11	18.33	11	18.33	14	23.33
1,600,000-2,000,000	52	28.89	10	16.67	10	16.67	20	33.33
2,100,000-2,500,000	18	10.00	6	10.00	6	10.00	2	3.34
2,600,000 ≤	20	11.11	12	20.00	12	20.00	6	10.00
	180	100.00	60	100.00	60	100.00	60	100.00

For the qualitative data, the results of the in-depth interviews are analyzed comprehensively. To obtain valid and reliable data, the triangulation process was conducted. The process includes data reduction, data presentation, and conclusion drawing. Additionally, the qualitative results are

combined with the quantitative findings using Vensim software to create a Causal Loop Diagram. This diagram helps identify which variables or factors can be further developed to enhance the role of coastal communities in improving the local economy through the coastal tourism sector. Causal Loop Diagram also was used to visualize dynamic relationships and feedback loops within the community tourism system.

3. Results
3.1 Respondent characteristics
3.1.1 Economic actors

The age of economic actors in Yogyakarta's coastal areas, consisting of traders and service providers, is dominated by those aged 31 - 40 years, at 32.78 %, followed by those aged 41 - 50 years, at 27.78 % (**Table 4**). In terms of educational background, this study shows that the economic actors in coastal tourism are dominated by those with a junior high school education at 54.44 %. Educational level may influence the economic actors to choose their way of life (Peltonen-Sainio et al., 2020).

Regarding the number of family dependents, the majority have 6 - 7 family members, with 47.78 %; the number of family members tends to affect household welfare due to costs being bigger, and also can influence household labor and decision making (Santoso et al., 2023). A total of 32.78 % earn less than IDR 1,000,000, followed by 28.89 % earning in the range of IDR 1,600,000 - 2,000,000. Higher income may increase the possibility of people improving their economic activities (Papageorgiou et al., 2024). Generally, age and income have been linked to entrepreneurial motivation in tourism (Silalahi et al, 2024).

3.2 Coastal community role
3.2.1 Planning

The first management activity carried out by coastal communities is planning. Referring to **Figure 6**, it can be seen that the planning activity that scored the highest across all components, including vision and mission, shared perception, and knowledge, is at Cemara Sewu Beach. This contrasts with two other beaches, Slili Beach and Glagah Beach, where performance scores are only at a moderate level. Effective planning is a critical component in sustainable tourism and environmental management, as it enables integrated development strategies (Ali et al., 2024), fosters collaborative community-based tourism initiatives (Ahsani et al., 2022), and supports participatory approaches to coastal resilience and spatial governance (Hamid et al., 2021).
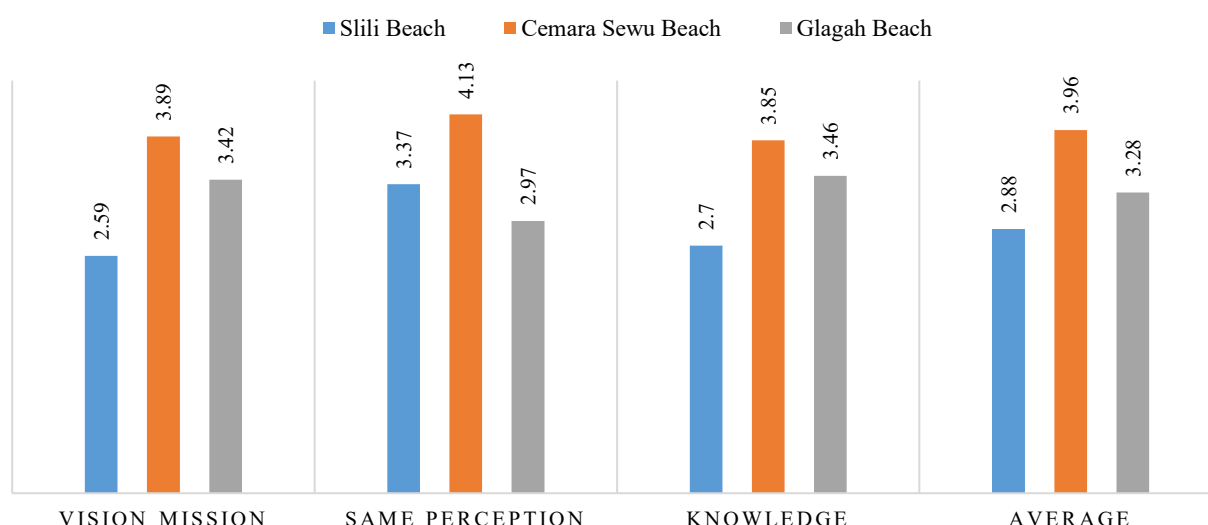

Figure 6 Community planning.

3.2.2 Organizing

The organization conducted by the communities at the three beaches consists of the structure of the management team, recruitment system, regular meetings, and the roles of the management. Overall, the scores from the three beaches are good, indicating that the organizational aspect is functioning well (**Figure 7**). However, there is a difference between the communities at Glagah Beach and Cemara Sewu Beach, which received high scores, and Slili Beach, where the organizational aspect was only rated moderately. This finding is in line with Pribudi et al (2020) who emphasize the importance of the organizing aspect in management.
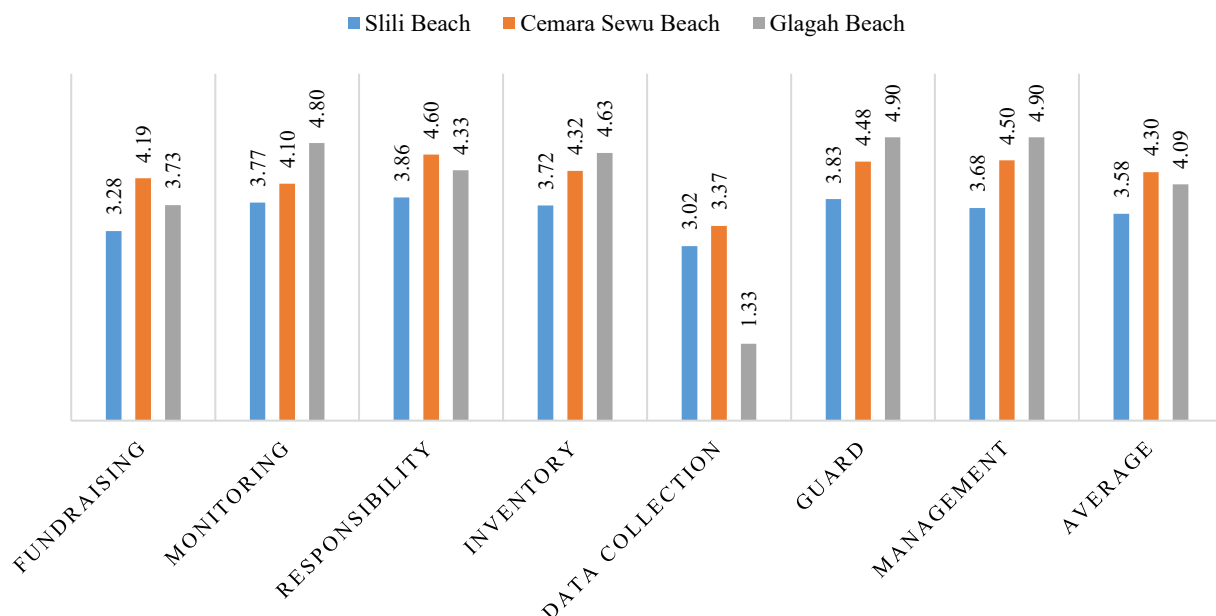

Figure 7 Community organizing.

Figure 8 Community implementation.

3.2.3 Implementation

Figure 8 shows that Cemara Sewu Beach has the highest average score in community implementation, with a score of 4.30, while Slili Beach has the lowest average score of 3.58. In the

variable of community implementation, the indicators observed are how the community raises funds, conducts monitoring, takes responsibility for managing the community, inventories its resources, collects resource data, maintains the community, and manages it. Among these indicators, resource data collection scored the lowest compared to the others, with Glagah Beach scoring only 1.33. This aligns with Ali et al. (2024), who emphasize that community-based tourism implementation involves not only managing tourism resources and maintaining infrastructure, but also includes raising funds, conducting local monitoring, and inventorying community assets to support sustainability.

3.2.4 Control

In the community control variable, four key indicators were measured: rules, evaluation, follow-up actions, and economic influence. The results of this study show that effective planning, organizing, and implementation do not always guarantee strong control. This is evident from the findings at Cemara Sewu Beach, which has a lower community control score compared to other locations, despite having higher scores in other variables (Ahsani et al., 2022). As seen in **Figure 9,** the overall scores for all three communities are high, with Slili Beach receiving the highest score. Compared to Glagah Beach and Cemara Sewu Beach, the conditions at Slili Beach are indeed more organized, with better-maintained structures and cleanliness. The community at Slili Beach places a high value on cleanliness, a principle instilled in all business actors at the beach (Miarsyah et al., 2024).
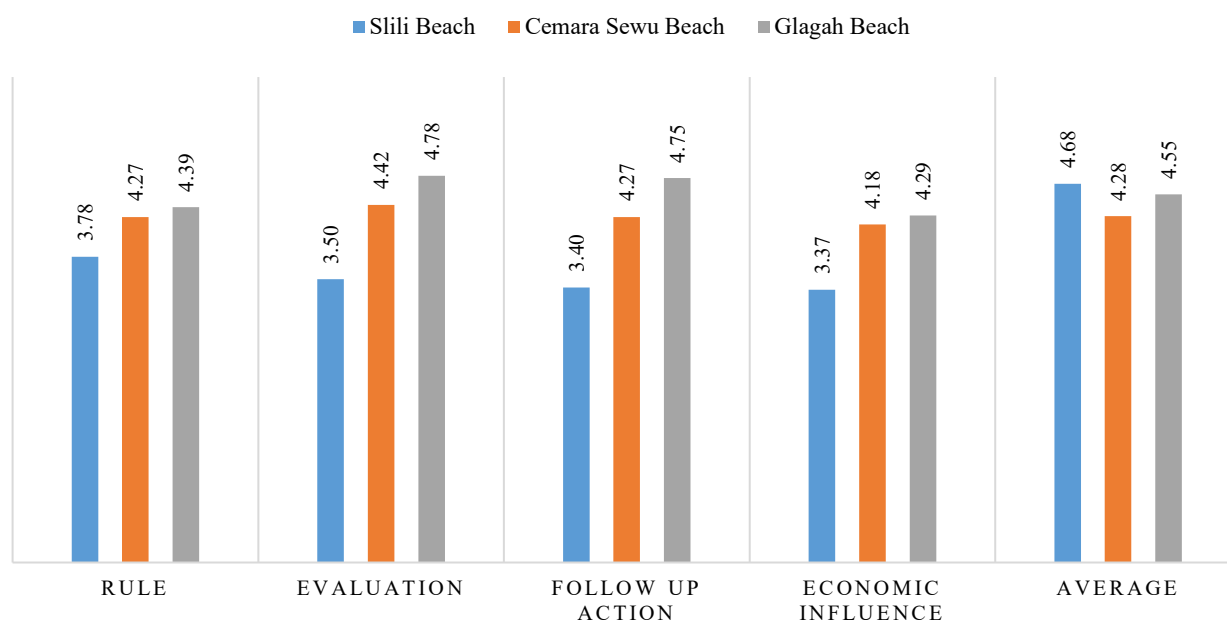

Figure 9 Community control.

3.3 External factors

The government and tourists play a significant role in influencing the performance of coastal communities in tourism activities at Slili Beach, Cemara Sewu Beach, and Glagah Beach (**Figure 10**). Glagah Beach shows the highest average score for external factors compared to other areas, both in terms of government and tourist involvement. Slili Beach's lower external factor score may stem from limited visibility and minimal local government involvement. The importance of government and tourist support in enhancing coastal community performance is in line with Ali et al. (2024), who highlight the role of local government institutions in tourism development, and Miarsyah et al. (2024), who emphasize tourists' positive engagement with environmental efforts at coastal destinations.
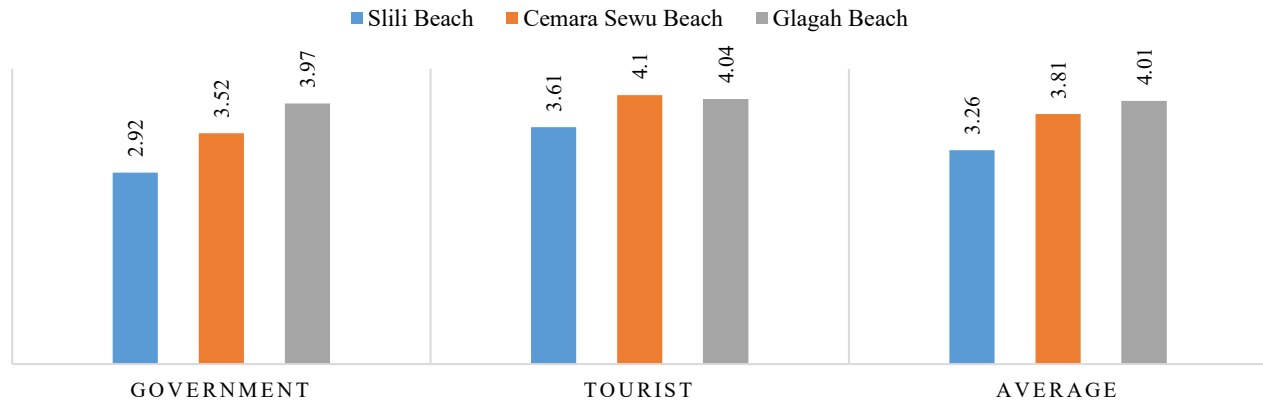
Figure 10 External factors.

3.4 Internal factors

Internal factors consist of human resources management and the infrastructure that supports business activities in tourism (**Figure 11**). Human resource management focuses on enhancing skill and competencies to optimize business activity management. From an infrastructure perspective, improvements and additions are essential in creating positive value for the tourism industry, thereby increasing its appeal to visitors. Internal factors, such as human resources and infrastructure, are essential in supporting business activities. This aligns with Rokhani et al. (2020), who emphasize the importance of institutional and community capacity in tourism development. Cemara Sewu scored highest due to its direct road access, parking areas, and existing tourism signage; also, this site was established before Glagah and Slili.
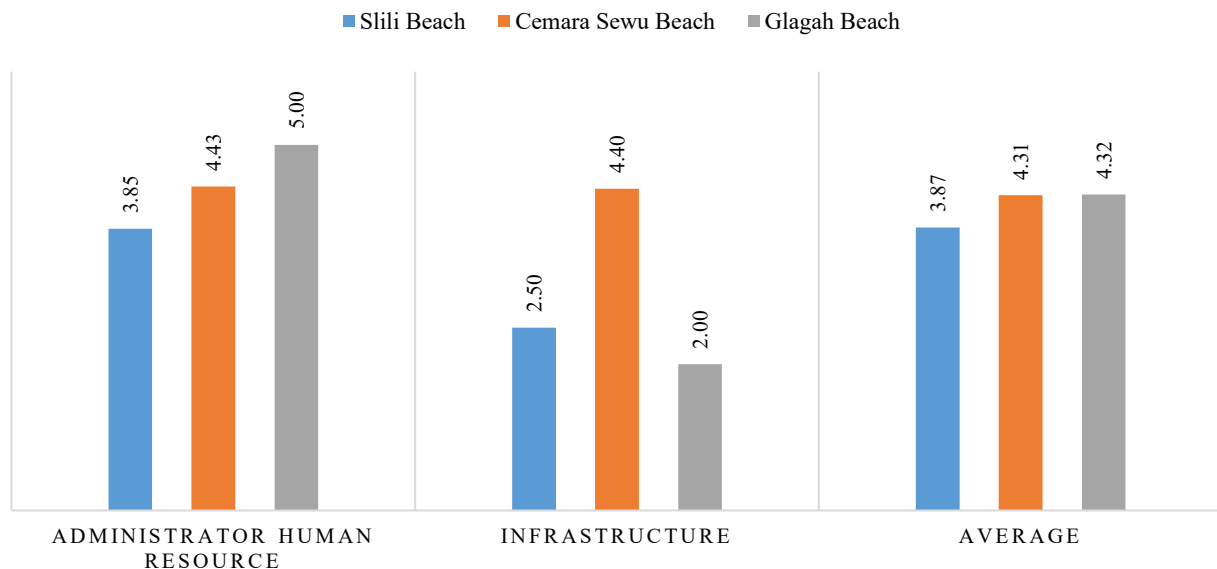

Figure 11 Internal factors.

3.5 Influencing factors

Regarding infrastructure, Cemara Sewu Beach has the highest score, with 4.4. This is understandable, as Cemara Sewu Beach was developed for tourism longer than the other two sites, allowing more time for infrastructure such as access roads, signage, and visitor facilities to be established and improved.

Table 5 Influencing factors for age and education.

Variable	Age				Education			
	(1)	**(2)**	**(3)**	**Total**	**(1)**	**(2)**	**(3)**	**Total**
Government	0.644	0.321	0.204	0.488	0.634	0.123	0.453	0.428
Tourist	0.765	0.587	0.595	0.992	0.154	0.463	0.796	0.139
Administrator Human Resource	0.552	0.075	0.586	0.035*	0.767	0.394	0.511	0.445
Infrastructure	0.625	0.294	0.130	0.05	0.970	0.303	0.720	0.028*
Planning	0.602	0.144	0.321	0.861	0.450	0.399	0.481	0.324
Organizing	0.011	0.029*	0.958	0.313	0.026*	0.210	0.926	0.352
Implementation	0.451	0.030*	0.023*	0.132	0.271	0.034*	< 0.001*	0.256
Control	0.088	0.878	0.971	0.389	0.408	0.067	0.904	0.994
ANOVA	0.181	0.128	0.155	0.112	0.081	0.067	0.085	0.106
Model Summary (R^2)	0.064	0.083	0.073	0.214	0.108	0.118	0.106	0.217

*Significant at 0.05
Note: (1) Slili Beach, (2) Cemara Sewu Beach, (3) Glagah Beach

Table 6 Influencing factors for family member and income.

Variable	Family Member				Income			
	(1)	**(2)**	**(3)**	**Total**	**(1)**	**(2)**	**(3)**	**Total**
Government	0.272	0.127	0.710	0.353	0.962	0.209	-1.781	0.255
Tourist	< 0.001*	0.715	0.804	0.195	0.150	0.114	-0.213	0.362
Administrator Human Resource	0.629	0.612	0.700	0.706	0.861	0.570	0.728	0.785
Infrastructure	0.390	0.454	0.666	0.013*	0.831	0.642	0.992	0.538
Planning	0.024*	0.767	0.914	0.161	0.100	0.604	-1.869	0.988
Organizing	0.974	0.264	0.522	0.697	0.629	0.927	-2.138	0.811
Implementation	0.123	0.214	0.488	0.150	0.374	0.636	-1.869	0.256
Control	0.994	0.857	0320	0.046*	0.949	0.154	2.482	0.291
ANOVA	0.013*	0.609	0.979	0.054	0.439	0.501	0.017*	0.831
Model Summary (R^2)	0.194	-0.029*	-0.113	0.247	0.002*	-0.010*	0.181	0.076

*Significant at 0.05
Note: (1) Slili Beach, (2) Cemara Sewu Beach, (3) Glagah Beach

The regression analysis shows that, at Slili Beach, the age of respondents is significantly correlated with their involvement in organizing activities (p = 0.029). Older economic actors are more active in management roles, such as coordinating schedules, assigning responsibilities, and maintaining regular meetings, likely due to their experience and social standing in the community. Meanwhile, at Cemara Sewu Beach, income significantly affects planning, organizing, and

implementation (p < 0.05), indicating that higher-income individuals are more engaged in shaping tourism activities and sustaining services. These findings emphasize that demographic factors like age and income are not only statistically significant but also practically relevant to how communities manage tourism operations.

The age variable, as seen in **Table 5**, has a significant impact on human resource administrators. The older the coastal economic actors are, the better they understand the dynamics of managing coastal communities, and they also recognize that managing a community is not easy and requires contributions from all involved parties (Shalli et al., 2024). Education is an important variable in individual development and skill enhancement. In this study, the education variable has a significant influence on the infrastructure variable. The number of family members has a significant influence on two variables: infrastructure and control (**Table 6**).

The regression analysis reveals that the age variable significantly influences the *organizing* indicator at Slili Beach, suggesting that older individuals are more active in organizing community activities, likely due to their experience (Shalli et al., 2024). However, the overall model is not significant, indicating age alone does not fully explain community roles. The education variable significantly affects the *human resource* indicator, reflecting the contribution of educated individuals to human resource development. Still, the model is not significant overall, pointing to the need for additional factors.

The number of family members shows a significant model, influencing both *control* and *infrastructure*, suggesting that larger families play a stronger role in internal social control and infrastructure support. The income variable has the strongest, with significant impacts on *planning*, *organizing*, and *implementation* at Cemara Sewu Beach. This highlights that increased income is closely tied to active involvement in tourism development.

3.6 Building relationships between issues (Causal Loop Diagram)

The role of community in the tourism economy is needed because it plays a role in gathering the economic actors and in organizing the economic activities. The parties who are involved in a coastal economy are economic actors, community management, government, tourist, and private. They have relations with each other, and have the same goal to develop the coastal tourism economy.
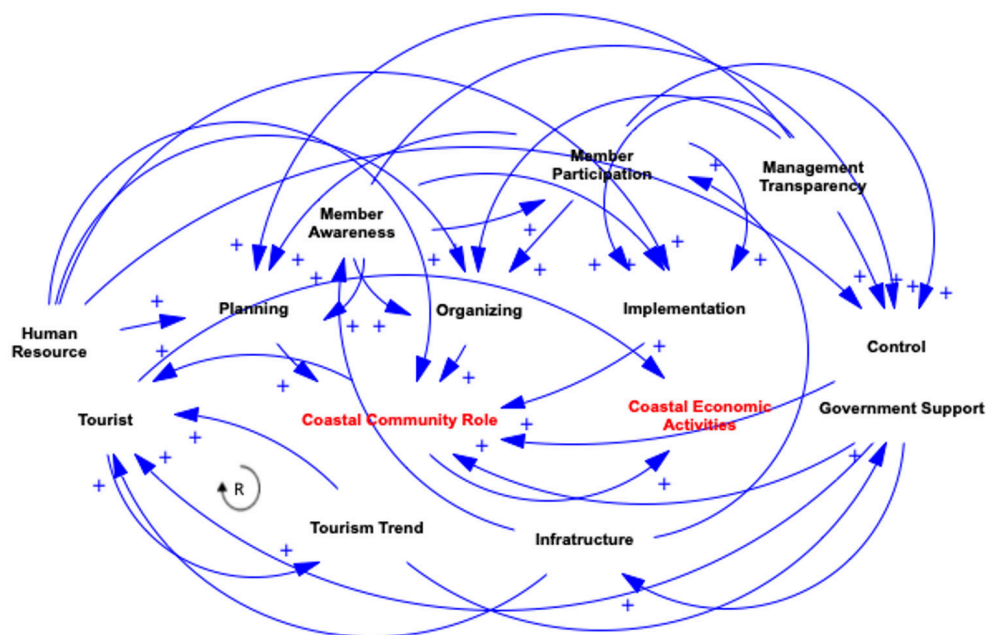

Figure 12 Causal Loop Diagram for coastal community role.

From **Figure 12**, it can be seen that the role of the coastal community in coastal tourism economic activities is quite significant and is felt by economic actors. However, the magnitude of this role is influenced by planning, organizing, implementation, and control. These four variables require sufficient participation from community members, and to increase this participation, efforts to raise member awareness are necessary. This can be achieved through management transparency, allowing all members to understand and perform control functions, ensuring that community management aligns with its goals and stays on track. From an external perspective, the government can support the coastal economy through policies or programs that improve infrastructure and encourage positive trends in coastal tourism. As seen in **Figure 8**, a reinforcement causal loop occurs between tourists and tourism trends, indicating that approaches or promotions for coastal tourism can help sustain tourist interest and visits to coastal destinations. Collaboration among stakeholders might boost the reinforcement causal loop condition.

4. Discussion
4.1 Community characteristics
The majority of economic actors in this study fall within the productive age range, particularly between 31 and 50 years old. This demographic is known for its physical stamina and ability to engage in demanding activities, which positively contributes to their performance in the coastal tourism sector (Maulida & Subejo, 2021). Tourism along the coast provides employment opportunities across various age groups, allowing individuals to participate in economic activities that meet their daily needs. In terms of education, most actors have completed at least a junior high school education (54.44 %), which is considered a strong foundation for adapting to new ideas and improving business practices (David & Ardiansyah, 2017; Euriga et al., 2021). Although a small number of individuals lack formal education, the overall education level is sufficient to support tourism-related innovation and learning.

Family size also plays an important role. Most respondents have 6-7 family members, a reflection of cultural norms in Indonesia where larger families are seen as both a source of labor and blessings (Ruhyana et al., 2020; Sulistyo et al., 2022; Santoso et al., 2023). However, while this belief persists, a larger household also increases financial responsibilities. Despite the growing trend in coastal tourism, the average income of economic actors remains low. As much as 32.78 % earn less than IDR 1,000,000 per month, with an average income of IDR 1,793,889, still below the regional minimum wage of Yogyakarta (Statistics Indonesia, 2024). Some stakeholders believe tourism in these areas is starting to stagnate due to a lack of innovation and evolving attractions (Nurzaman et al., 2020). This income gap reflects the limited resources available to many small business owners, restricting their ability to scale up (Papageorgiou et al., 2024).

4.2 Community management functions
4.2.1 Planning
The community at Cemara Sewu Beach demonstrated strong planning capabilities, especially in terms of transparency and communication with local economic actors. A clear understanding of the community's vision and mission among stakeholders indicates the importance of inclusive and transparent planning. Such practices ensure stakeholder alignment and improve the success rate of tourism initiatives (Shammi et al., 2020; Santoso et al., 2023).

4.2.2 Organizing
Findings also suggest that effective organizing depends on structured management and strong internal communication. Communities with better coordination and role distribution within their leadership teams tend to perform more effectively in supporting tourism operations (Beilstein et al., 2021).

4.2.3 Implementation

Challenges in implementation are largely due to a lack of awareness regarding data collection and resource management. This includes both physical and human resources. For implementation to succeed, full participation from all community members is essential. It also requires early understanding and commitment to the community's goals (Rokhani et al., 2020; Alamanda et al., 2022).

4.2.4 Control

A shared understanding of the community's objectives contributes to more effective control mechanisms. When stakeholders collaborate to preserve the tourism environment, it helps ensure continued economic benefits for all involved (Spooner et al., 2021; Farajzadeh, 2024; Shalli et al., 2024).

4.3 External factors

External factors, particularly government support and tourist behavior, significantly influence coastal tourism development. Government contributions such as legal recognition, infrastructure aid, training, and mentoring are crucial in enhancing community capabilities (Ali et al., 2024; Li & Cao, 2024). Glagah Beach, for example, has benefited from government attention and infrastructure investments due to its strategic location near Yogyakarta International Airport (Kusumaningrum et al., 2024; Rachman et al., 2018). Tourist trends also play a key role. Coastal tourism is increasingly driven by visitor demand for new and diverse experiences. Areas with easier access and innovative attractions tend to draw more tourists (Prayitno et al., 2024; Morales-Zamorano et al., 2020).

4.4 Internal factors

Internally, the success of coastal communities relies on competent human resources and adequate infrastructure. Strong leadership is essential for managing activities, maintaining operations, and navigating challenges (Sullivan & Sagala, 2020). Infrastructure not only supports local businesses but also enhances the visitor experience (Fatkhurahman et al., 2024; Suryawan et al., 2025). Glagah Beach stands out in this regard due to both strong leadership and developed facilities.

4.5 Influencing factors

The growth of coastal tourism in Yogyakarta has encouraged competition among sites to offer better infrastructure and experiences. Traditionally, coastal tourism focused on beach scenery, but today it includes various attractions such as cafés, water rides, ATVs, and cultural experiences (Farajzadeh, 2024; Silalahi et al., 2024). Infrastructure improvements have proven to increase visitor appeal. Socio-demographic factors such as age, education, and family size also affect tourism participation. Older individuals often bring valuable experience (Peltonen-Sainio et al., 2020), while higher education fosters awareness and long-term planning. Larger families, though culturally valued, also increase household dependency ratios, which may impact financial stability.

4.6 Synthesis and implications

This study emphasizes the essential role of coastal communities in managing tourism activities, especially through planning, organizing, implementing, and controlling efforts (Das et al., 2024). Transparent leadership and inclusive governance enhance local ownership and sustainability (Turisno et al., 2024; Jayawinangun et al., 2024). However, challenges such as weak organizational structures and limited resource monitoring remain (Tuswadi & Hayashi, 2014), and require targeted capacity-building interventions (Cariappa et al., 2022).

Both internal and external factors influence the performance of tourism in these areas. While infrastructure improvements can attract more visitors, underserved locations require equitable investments to ensure consistent visitor experiences (Azni & Alfitri, 2020). Government policies and

tourist trends also significantly shape tourism development (Mayuzumi, 2020), supported by major infrastructure like airports (Rachman et al., 2018). However, a lack of innovation in tourism offerings can lead to stagnation (Ahsani et al., 2022).

Despite its positive socio-economic potential, coastal tourism still faces challenges, especially income inequality and the financial burden of large households (Wang et al., 2019; Idawati et al., 2024). Sustaining tourism growth will require collaboration among all stakeholders and attention to evolving tourist preferences (Rustinsyah et al., 2021).

5. Conclusions

The potential for developing coastal tourism, particularly beach tourism, remains high, given the current trend in tourism, which leans towards nature and coastal experiences. In Yogyakarta, coastal tourism, especially beach tourism, continues to grow, and this trend is being well-utilized by the relevant stakeholders. The economy of the local community is also helped by tourism, with most members becoming administrators or business owners. Community involvement is a characteristic of Eastern societies, where people gather based on common goals and manage their activities collectively. The role of the community in coastal tourism in Yogyakarta has shown positive results, contributing significantly to its development. This role is closely tied to the involvement of local economic actors in the coastal tourism area, as they are directly engaged in various community activities and policies. Transparency and openness from community administrators are crucial to encouraging greater awareness and active participation from members in all community activities. The involvement of the government as a policymaker is also necessary to advance coastal tourism and strengthen the community's role.

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