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STRATEGY FOR SUSTAINABLE SMART TOURISM VILLAGE DEVELOPMENT IN PONGGOK VILLAGE, KLATEN, CENTRAL JAVA

Mahasika Dian Artianingsih[1], Tri Kuntoro Priyambodo[2,*]
[(1)]Gadjah Mada University, Yogyakarta, Indonesia, e-mail: **sikady.ask@mail.ugm.ac.id**
[(2)]Gadjah Mada University, Yogyakarta, Indonesia, e-mail: **mastri@ugm.ac.id**

Abstract

The development of ever-more-advanced technologies has led to intense competition in the tourism industry. The application of the Smart Tourism Village model is relatively new and has not been adequately realized in comparison to the already adopted Smart City concept. Ponggok Village is one of the communities that utilize the Smart Tourism Village model by employing technology to establish the community as a tourist destination. The development of a tourist village using the Smart Tourism Village model is a solution for the development of a village; with the application of this model, quality tourism activities can be created, which can have a positive effect on community welfare and competitiveness, as well as lead to the sustainability principle in tourism development. The purpose of this study is to examine the strategy for establishing a smart tourism village and its role in achieving a sustainable tourism village in Ponggok Village, Klaten, Central Java. This study is a qualitative descriptive investigation employing SWOT analysis. Observations on the field, interviews with pertinent sources, and documentation on the subject of study were used to conduct the research. Through this research, it is anticipated that studies will be produced in the form of village development with a smart tourism village model that leads to sustainable tourism villages, as well as the advantages and disadvantages of its application so that recommendations can be made to relevant stakeholders.

Key Words: Smart Tourism Village; Ponggok Village; Sustainable Tourism Village.

A. INTRODUCTION

The overall number of villages in Indonesia is 83,981, comprised of 75,436 villages, 8,444 villages, and 51 UPT/SPT (Transmigration Settlement Units/Transmigration Settlement Units). The sheer number of villages poses a difficulty for village development activities. Implementing the concept of a smart city that is suited to village conditions is one of the village development techniques. Although there are distinctions between the creation of smart cities in urban and rural areas, there are some similar standards that must be followed. The concept of the "Smart Village" allows for the development of rural areas. There are distinctions between smart cities and smart villages in terms of the size of the area and the difficulties present, making it impossible to apply all of the characteristics of a smart city to every region of Indonesia (Rachmawati, 2018).

Ponggok Village is one of the tourist villages in Klaten Regency, with a population of 2,200 people and a variety of tourism opportunities. Ponggok Village was included in the list of the wealthiest villages in 2018 due to its Village Revenue and Expenditure Budget (APBDes) of Rp. 4.2 billion and the Original Regional Income (PAD) was Rp. 1.7 billion. Village-Owned Enterprises (BUMDes) operates several tourism attractions and business units that generate 16 billion IDR in revenue. The youth of Ponggok Village innovate by employing information technology to further the village's growth. The smart village paradigm is utilized in the construction of Ponggok Village. In addition to being used for community services, the smart village application developed by Ponggok Village is utilized for tourism-related activities that take advantage of the village's diverse

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capabilities. The data from the Smart Village application is then used for the development of the village. By utilizing this program, Ponggok Village has become a very self-sufficient and successful village in terms of managing village potential.

Prior study on the topic of smart tourism has focused mostly on the perspective of tourists, which influences the intention to visit, contentment, and tourist experience of sites that employ smart tourism. According to (Shen, S., Sotiriadis, M., & Zhou, 2020), social networking platforms that incorporate the smart tourism paradigm have a favorable impact on tourist behavior and sustainable tourism. According to a separate study by (Tavitiyaman, P., Qu, H., Tsang, W. sze L., & Lam, 2021), smart tourism applications have a beneficial influence on perceived destination image and behavioral intention. Moreover, according to (Liberato, P., Alen, E., & Liberato, 2018), (Um, T., & Chung, 2021), and (Pai, C., Kang, S., Liu, Y., & Zheng, 2021), smart tourism destinations influence the tourist experience. (Gretzel, U., & Koo, 2021) conducted research on local communities in relation to the application of smart tourism and showed that the notion of smart tourism encourages convergence between tourists and local communities. With the assistance of specialists in the industry, (Lee, Hyunae, & Hlee, 2021) performed a study on the economic implications influenced by smart tourism. (Ye, H., Sun, S., & Law, 2021) conducted research with stakeholders as respondents to develop policy suggestions for smart tourism.

Based on the most recent research, it has been established that the smart tourism theme requires additional research that can provide a clearer picture of the application of smart tourism in both the research focus and in other locations that have implemented the use of smart tourism for tourism activities. Because previous research focused more on tourists and there is still a dearth of research on sustainability, a research gap was identified regarding the application of smart tourism that supports tourism sustainability; in this case, the research locus will be on tourist villages that are beginning to use smart tourism in their development.

B. RESEARCH METHOD

This research employs a qualitative methodology based on case studies (observational case studies). Descriptive research is utilized to provide an overview of the issue that can provide answers to research questions. Experts in their respective domains were consulted for qualitative data (human perception). Using a SWOT analysis, the collected qualitative data analysis will be analyzed. The study was carried out in Ponggok Tourism Village, Klaten, Central Java. The selection of Ponggok Tourism Town Klaten Central Java was based on the implementation of the Smart Tourism Village idea by employing technology to empower the people and develop the village as a tourism destination. This study focuses on the application of the Smart Tourism Village idea to village development to realize a sustainable tourism village. Regarding the construction of the Smart Tourism Village in Ponggok Village, Klaten, Central Java, interviews with village administrators and neighboring villages were performed to support the research.

Expert perception based on the findings of interviews about the evaluation of the primary research indicators in the Ponggok Tourism Village, Klaten, Central Java, is separated into two parts, including internal and external aspects. Based on the results of the assessment of internal and external factors, the elements that fall into the categories of strength, weakness, opportunity, and threat are identified and categorized. Processing of data based on an analysis that maximizes strengths and opportunities while reducing weaknesses and risks. This is done to strike a balance between internal and external influences; thus, the data will be included in the SWOT matrix, which tries to determine the optimal plan. SWOT analysis is utilized in policy analysis and strategic decision-making procedures that are tightly tied to the

current situation and future expectations. In the SWOT matrix analysis, the process of combining internal elements (Strengths and Weaknesses) with external factors (opportunities and threats) will be carried out.

C. RESULTS AND ANALYSIS

One of the tourism village development techniques that might have a substantial impact on the tourism industry is the Smart Tourism Village model. Currently, as technology develops, many tourist villages are beginning to use the smart tourism village model. With the development of the Smart Tourism Village, it is anticipated that the participation of local communities in tourism activities will increase, as will public awareness of environmental sustainability, thereby achieving the objective of transforming the village into a sustainable tourism village.

Ponggok Village has begun implementing the smart tourism village model to encourage community participation in all facets of village activity. Internet-accessible programs based on information technology have been developed by village officials in partnership with an innovative team of developers. However, as time passes, challenges emerge, necessitating enhancements to the application that has been developed. The application of the smart tourism village model in Ponggok village has not been carried out optimally; therefore, it is necessary to conduct a study regarding its development strategy so that it can be properly utilized by the community and the goal of transforming Ponggok Village into a sustainable tourism village can be realized.

An internal environmental study identifies the strengths and weaknesses of a firm or organization, which may then be utilized to determine the best development strategy. While the purpose of external environment analysis is to identify opportunities for the organization's maintenance and growth, it also serves as a means of identifying threats, To determine the optimal development strategy, a business or organization must identify both opportunities and risks that must be avoided. Based on the results of the analysis of the internal and external environment, the following SWOT (strength, weakness, opportunity, and threat) analysis was conducted on the internal and external variables of Ponggok Village:

1. Strength
   Strength have four condition a) Commitment of village leaders to advance Ponggok Village via the Smart Village application; b) The primary objective for transforming Ponggok Hamlet into a tourism village is to develop natural resources in the form of springs or banners; c) Programs of local government openness; c) Inform the public about the use of information technology for life support; d) Allocation of village funds for the creation of the Smart Village application as a commitment to the creation of smart tourism villages.
2. Weakness
   Weakness have four condition a) Insufficiently qualified personnel in the field of information technology; b) Lack of concentration in application development for Ponggok Smart Village; c) Not optimal use is made of the Ponggok Smart Village application; d) The information system within the application for Ponggok Smart Village is not current.
3. Opportunity
   Opportunity have three condition a) Existence of government policy concerning village growth and village revenues; b) Indonesia's economic expansion is improving; c) Existence of technology advancements that facilitate village growth.

4. Threat
   Threat have two condition a) Recovery following Covid-19; b) New competitors who are also transforming their community into a tourism village have emerged.

Calculations are performed for each strength and weakness component based on the identification of internal factors in Ponggok Village. In this phase of establishing a strategy for Pongggok Village to become a sustainable smart tourism village, an examination of the village's internal elements, including its strengths and weaknesses, is performed. By completing questionnaires based on the compatibility of internal components with situations in the field, resource individuals conduct evaluations. The criteria are applied to the strength and weakness components by assigning weights ranging from 0.0 (not significant) to 1.0 (most significant), with the total number of weights for the total score not exceeding 1.0. The rating column employs a 4-point system, ranging from 1 (extremely poor) to 4 (excellent). The score is calculated by multiplying the weight by the rating. The following are the outcomes of the calculation of the IFAS Matrix based on the evaluation of the sources:

Table: 1 Internal Factor Analysis (IFAS) Matrix for the Village of Ponggok

No	***Internal Factor Analysis* (IFAS)**	**Weight**	**Rating**	**Amount**
1	Strength			
	Commitment of village leaders to build Ponggok Village through the application Smart Village	0,144	3,750	0,541
	Ponggok Resort will become a tourist village primarily through the development of natural resources, such as springs and banners.	0,154	4,000	0,615
	Programs of local government openness	0,115	3,000	0,346
	Inform the public about the use of information technology for life support	0,125	3,250	0,406
	Allocation of village funds for the creation of the Smart Village application as a commitment to the creation of smart tourism villages.	0,096	2,500	0,240
2	Weakness			
	Insufficient qualified personnel in the field of information technology	0,087	2,250	0,195
	Lack of concentration in application development for Ponggok Smart Village	0,096	2,500	0,240
	Ponggok Smart Village application usage is not optimal.	0,087	2,250	0,195
	The Ponggok Smart Village application lacks an up-to-date information system.	0,096	2,500	0,240
	Total	1,000		3,019

Source: Research Results 2022

The weighting for each internal key factor in Ponggok Village is determined by the results of the Internal factors, which have an aggregate weighted value of 3,019. According to the results of the weight score for strength, the value 2,149 was determined. As for the total weakness score of 0,870. This demonstrates that the strength score is bigger than the weakness score; therefore, based on the findings of the score computation, it can be inferred that Ponggok Village's features have a strong internal position.

Based on the identification of external factors in Ponggok Village, each opportunity and weakness factor is calculated. In this stage, a study of external elements, including opportunities and risks, is

conducted in Pongggok Village, which influences the determination of strategies to become a smart, sustainable tourism village. By completing questionnaires based on the influence of external variables on the development of Ponggok Village, resource individuals conducted the evaluation. The opportunity and threat categories are assigned weights ranging from 0.0 (not significant) to 1.0 (very important), with the proviso that the total number of weights cannot exceed 1.0 for the total score. The rating column employs a 4-point system, ranging from 1 (extremely poor) to 4 (excellent). The score is calculated by multiplying the weight by the rating. The following are the findings of the calculation of the EFAS Matrix based on the evaluation of the sources:

Table 2: Matrix of the External Factor Analysis (EFAS) in Ponggok Desa Village

No	***External Factor Analysis* (EFAS)**	**Weight**	**Rating**	**Jumlah**
	Opportunity			
1	Existence of government policy concerning village growth and village revenues	0,215	3,500	0,754
	Indonesia's economic expansion is improving.	0,200	3,250	0,650
	Existence of technology advancements which facilitate village growth.	0,200	3,250	0,650
	Threat			
2	Recovery after Covid-19	0,200	3,250	0,650
	New competitors who are also transforming their community into a tourism village have emerged.	0,185	3,000	0,554
	Total	1,000		3,258

Source: Research Results Year 2022

Applying a weight to each significant external factor in Ponggok Village's External Factor Analysis (EFAS) matrix. Based on the outcomes of external factors with a combined weight of 3,258. Based on the weight score for Opportunity, the value 2,054 is determined. The total Threat score is currently 1,204.

Determination of the formulation of the strategy based on the results of the IFAS and EFAS matrices and the calculation of the difference in the weights of strengths, weaknesses, opportunities, and threats:

SW = 2,149 - 0,870 = +1,279

OT = 2,054 – 1,204 = + 0,850

Based on the aforesaid computations, a strategy formulation using a space matrix is executed, namely:

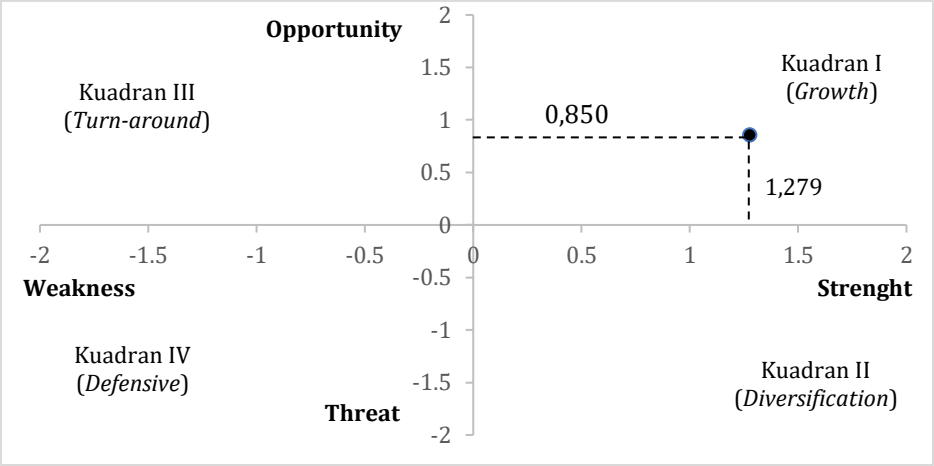

Figure 1: Strategy Formulation Based on IFAS and EFAS Matrix
Source: Researcher Process 2022

Using the space matrix to determine the formulation of the strategy reveals that the SW value has a positive difference of 1,279 while the positive OT is 0,850, placing Ponggok Village in quadrant I, which indicates an aggressive strategy. Quadrant I is a particularly profitable scenario, according to Rangkuti (2013: 20), because the business or organization can seize on chances that are already present. Supporting an ambitious growth policy is the strategy that has to be implemented in this region (Growth Oriented Strategy).

A SWOT analysis, also known as a list of Strengths, Weaknesses, Opportunities, and Threats analysis, can be constructed based on the outcomes of the identification of the internal and external environment. As indicated in the following table, the SWOT analysis is entered into the SWOT Matrix table to generate potential alternate strategies for the growth of Ponggok Village:

Table 3: Matrix of SWOT analysis for Ponggok Village

	Strength	***Weakness***
	1. Village authorities' dedication to utilizing the Smart Village program to develop Ponggok Village 2. Development of natural resources in the form of springs or banners as the main object to make Ponggok Village a tourist village 3. Programs of local government are transparent. 4. Inform the public about the use of information technology for life support 5. Allocation of village funds for the creation of the Smart Village application as a commitment to the creation of smart tourism villages.	1. Lack of qualified personnel in the information technology sector 2. Lack of concentration in application development for Ponggok Smart Village 3. Ponggok Smart Village application usage is not optimal. 4. The information system within the application for Ponggok Smart Village is not current.

	S-O	**W-O**
Opportunity		
1. Existence of government policy concerning village growth and village revenues 2. Indonesia's economic expansion is improving. 3. Existence of technology advancements that facilitate village growth.	1. Develop smart village applications in the mobile version to enhance Ponggok Village's community services and tourism activities (S1, S3, S5, O1, O3). 2. Develop a pattern of partnership or cooperation with investors or entrepreneurs in the tourism industry to transform Ponggok Village into a smart, sustainable tourism village S1, S2, O2). 3. To entice people to visit Ponggok Village, we will promote the area through a variety of channels and organize tourism-related activities, such as festivals (S2, O2).	1. Update smart village statistics in accordance with Ponggok Village's growth (W2, W3, W4, O1, O2). 2. Conduct human resource training in Ponggok Village in accordance with smart village applications 3. Create and utilize smart village applications as informational resources for travelers that wish to visit Ponggok Village (W2, W3, O2, O3).
Threats	**S-T**	**W-T**
1. Recovery after Covid-19 2. New competitors who are also transforming their community into a tourism village have emerged.	1. *Rebranding* Ponggok Village to improve tourism conditions and distinguish it from like tourist destinations (S2, S3, T1, T2). 2. Utilizing technology that reduces direct physical contact to enhance Ponggok Village travelers' safety and convenience.	1. Participation of the community in the improvement of infrastructure to support tourism activities in Ponggok Village as part of the development of tourist villages. 2. By maximizing the usage of smart village apps, Ponggok Village will be technologically superior to comparable tourist communities.

Source: Research Results 2022

As previously indicated, there are still gaps in Ponggok Village's implementation of the notion of a sustainable smart tourism village. This demonstrates that the execution of a sustainable smart village in Ponggok Village was subpar. To realize Ponggok Village's aim of becoming a sustainable tourism village, it is necessary to research to develop a strategy that can be implemented.

According to the results of the SWOT analysis, Ponggok Village is in quadrant I, which indicates that Ponggok Village is experiencing a favorable situation. Therefore, the strategy that should be implemented is a growth-oriented strategy, which can be interpreted as Ponggok Village being in a prime and stable condition, so it is crucial. To achieve sustainability, it is possible to continue to expand, increase growth, and make maximum progress.

According to the aggressive growth policy, Ponggok Village may use its advantages to take advantage of opportunities, therefore the S-O strategy is the primary one that can be put into practice based on the SWOT Matrix that has been completed.

a) Develop smart village applications in the mobile version to enhance Ponggok Village's community services and tourism operations. The use of Information and Communication Technology

(ICT) in Indonesia over the last five years has shown rapid development. The fastest development of ICT indicators of 78.18 percent is the use of the internet in the household. In addition, the population growth using cellular phones was 62.84 percent in 2020. Meanwhile, the percentage of the population using the internet in 2020 was 53.73 percent. The percentage of households owning/controlling computers according to the classification of rural areas in 2020 is 9.58 percent (BPS, 2020). Based on these data, it shows that the use of ICT is much more developed in the use of the internet and cellular phones, while the use of computers is still very lacking, especially in rural areas. For this reason, it is necessary to develop a smart village application in the mobile version, so that it can be easily utilized by rural communities that are more familiar with the use of the internet on cell phones. This is consistent with the study conducted by Gretzel (2015), which indicates that the purpose of information technology in a platform is to integrate numerous parts to provide tourism-related information and services efficiently.

b) To transform Ponggok Village into a sustainable smart tourism village, and establish a pattern of partnership or cooperation with investors or entrepreneurs in the tourism sector. According to the research of Nalayani (2016), the tourism village development strategy may be implemented through improved management and increased cooperation. In this instance, partnerships can be formed to facilitate the transformation of the community into a tourist village, so ensuring that all tourism-related demands are satisfied.

c) To attract travelers to Ponggok Village, routine and scheduled tourism events, such as festivals, will be promoted through a variety of media outlets. The key to expanding tourism activities is advertising, with incentives designed to lure travelers to Ponggok Village and encourage them to stay longer. The availability of recurring events in Ponggok Village can also boost the number of tourists that arrive yearly, thereby ensuring the sustainability of the tourism industry. This is consistent with prior studies indicating that increasing promotion in a sustainable manner is one of the tourism development methods that may be implemented.

However, based on the analysis of the IFAS and EFAS Matrix calculations, the results in quadrant I am not very significant because they are still close to 0, namely 1,279 for internal factors and 0,850 for external factors. This shows that in addition to focusing on strengthening strategies by maximizing strengths and taking advantage of opportunities in accordance with a growth-oriented strategy, they also need to pay attention to alternative strategies by reducing weaknesses and overcoming threats. So that the alternative strategies generated from the SWOT Matrix analysis can be taken into consideration to get maximum results in the process of developing Ponggok Village towards a sustainable smart tourism village.

The produced plan based on the SWOT analysis will be most beneficial if the village government is committed to adopting it and the community is also willing to participate in its implementation. Involving local communities and providing maximum benefit value to the social and economic elements for the local community from tourist activities is the most fundamental thing to accomplish in realizing tourism development so that it can function and be managed effectively (Sunaryo, 2013). The village authority and the community can work together effectively to tackle all the challenges that arise with technological village development. Finally, the entire village development strategy was implemented to promote community welfare as an expression of the sustainability idea to be attained in the development of Ponggok Village.

D. CONCLUSION

Ponggok village creates smart village applications to sustainably enhance villages via the use of technology. Ponggok Community has not, however, fully adopted the concept of a sustainable smart tourism village. The creation of a sustainable smart tourism village in Ponggok Village

necessitates the formulation of the appropriate plan. Ponggok Village is in quadrant I, which indicates that the area is experiencing the good condition, according to the findings of the SWOT analysis that has been conducted. Therefore, an aggressive expansion program should be implemented (*growth-oriented strategy).* Researchers construct the formulation of priority strategies for Ponggok Village by utilizing all available strengths to capitalize on current prospects, Specifically, developing smart village applications to support community services and tourism activities in Ponggok Village, collaborating with investors and conducting promotions via various media, and organizing routine and scheduled tourism activities such as festivals to entice tourists to visit Ponggok Village. Expanding the object of study and comparing the application of the concept of a sustainable smart tourism village employed by similar tourist villages is the next research that can be conducted to determine the optimal approach for implementing village development.

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