



Optimization of Pentahelix Collaboration in Tourism Development Management: Effective Strategies to Overcome Poverty

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Abstract

This study aims to develop a pentahelix collaboration model in tourism development as an effort to reduce poverty levels in Tojo Una-Una Regency, an area with great tourism potential but high poverty rates. In this study, qualitative methods were used, including Focus Group Discussion (FGD) and in-depth interviews, to collect comprehensive data. SWOT analysis is used to identify strategies that can exploit strengths and opportunities while addressing existing weaknesses and threats. In addition, a matrix analysis is carried out to illustrate the division of roles in each proposed strategy. The findings of this study resulted in eight main strategies, including increasing the attractiveness of ecotourism, fostering regional cooperation, and increasing public awareness of environmental protection. This strategy is expected to improve the quality of human resources supporting tourism and strengthen tourism infrastructure in the region. Based on the results of this study, a matrix of collaboration between the government, academics, businesspeople, communities, and media was created, which is expected to be the foundation for joint efforts in overcoming poverty and accelerating tourism development in Tojo Una-Una.

Keywords: Pentahelix; Tourism Development; Poverty Alleviation

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INTRODUCTION

One of the areas that has the best tourism potential in Central Sulawesi even at the national level is Tojo Una-Una Regency. The potential of marine tourism found in the Toge-an Islands in Tojo Una-Una Regency has been known and received attention and awards both nationally and internationally (Cole, 2018). The tourism potential in Tojo Una-Una Regency should be utilized and provide added value for the welfare of its community, through community participation in tourism business and job creation in the tourism industry. But in reality, the community around the tourist area in Tojo Una-Una Regency does not receive much economic benefit from the development of tourism. Currently, Tojo Una-Una Regency is one of the underdeveloped areas in Central Sulawesi in accordance with Presidential Regulation Number 63 of 2020 concerning the Determination of Disadvantaged Areas 2020-2024. The percentage of poor people in Tojo Una-Una Regency in 2020 is also the second highest of the 13 regencies and cities in Central Sulawesi. The poverty rate of Tojo Una-Una in March 2022 was 16.12 percent (Nurulwahida et al., 2020).

This certainly should not be left without preparing a plan for improvement and adaptation to the conditions that occur. The government must start preparing a tourism development plan that can improve the welfare of its people. Tourism development does not only rely on the government as a regulator, but all parties related and interested in tourism. Collaboration and cooperation between several parties in developing tourism will create synergies that can bring acceleration of tourism development (Tadung, 2023).

One of the models of collaboration between parties in tourism development is through the application of the pentahelix model. Initially, the concept of synergy between related parties was known as the triple helix concept. The pentahelix model has its origins in the triple helix where a trilateral network of academics, companies, and governments combine to take advantage of innovative research projects developed within educational institutions and make those projects commercially viable products or services (Dani Rahu & Suprayitno, 2021). Mukti et al., (2020) also stated that the triple helix concept in Indonesia should unite one heart of the problem through the synergy of the three (Rahmi et al., 2022).

Furthermore, there are not enough three parties to synergize, but 5 parties are needed to synergize and are named pentahelix. The first time this Pentahelix Model was launched by the Minister of Tourism Arif Yahya, and subsequently formulated into the Regulation of the Minister of Tourism of the Republic of Indonesia Number 14 of 2016 concerning

Guidelines for Sustainable Tourism Destinations. The Pentahelix model seeks to encourage the tourism sector and tourism system by increasing the role of business, government, community, academic and media to create tourism benefit value as well as benefits and benefits for society and the environment (Indrawijaya, 2020).

Pentahelix is a socioeconomic development model that fosters a knowledge-based economy to pursue innovation and entrepreneurship through fruitful collaboration and partnerships between academia, government, industry, NGOs and entrepreneurs (Romero Rodríguez et al., 2020). To the pentahelix model are added NGOs, communities, and entrepreneurs. The three actors have an important role in promoting common goals for growth and contributing to the socio-economic progress of the region. The best innovation is achieved when key-actors have strong collaboration and partnership (Khusniyah, 2020).

Excerpted from J a h i d , (2 0 1 9) The history of the development of the concept of synergy in tourism development begins with the idea of the triple-helix adopted from the theory of Etzkowitz & Leydesdorff in 2000. This triple helix concept emphasizes the relationship between universities, industry, and government. In 2014, Lindberg developed a new concept called the quadruple helix by adding elements of local communities to complement the existing triple-helix concept. While the concept of pentahelix was proposed by R i y a n t o , (2 0 1 8) By including the media, which currently plays a very significant role in developing social capital development.

Linguistically "Penta" means five. The Penta Helix model is a development of the Triple Helix model started by (Wisudayati et al., 2020). In an article they wrote in the journal explained that the Triple Helix Model is a synergy between academics, government and businesspeople or businesspeople. According to Dani Rahu & Suprayitno, (2021) Pentahelix strategy is a strategy in the world of tourism that involves elements of the community and non-profit institutions to realize an innovation supported by existing tourism resources and potential (Pratama et al., 2023).

The division of roles in each actor in the pentahelix is important to formulate, so as to provide the direction of the role of each pentahelix actor. Through this study, it is hoped that the pentahelix collaboration model and the role of each actor in tourism recovery in Tojo Una-Una Regency can be known.

RESEARCH METHODS

The type used in this study is qualitative. Qualitative research is research that is descriptive in nature using analysis, prioritizing the process and perspective of the subject (Miles et al., 2014). In this study, the focus of his research is on how the collaboration model and the division of the role of pentahelix in tourism development to alleviate poverty in Tojo Una-Una Regency. The key informants involved in this study are; Head of Tourism Office of Tojo Una-Una Regency, Chairman of Tojo Una-Una Regency Hotel and Restaurant Association, Resort Business Actors in Tojo Una-Una Regency and Tourism Community. The data collection used in this study was carried out by Natural setting (natural conditions), using primary and secondary data sources, as well as data collection methods through in-depth interviews (in depth interview), Focus Group Discussion (FGD) and documentation (Sugiyono, 2019).

RESULTS AND DISCUSSION

The local government of Tojo Una-Una has taken significant steps to improve infrastructure in support of tourism development. One of the main priorities has been the enhancement of roads connecting tourist areas to the city center and the airport. Better roads not only increase accessibility for tourists but also facilitate the distribution of goods and services, thereby supporting local businesses (Hidayat et al., 2021). Additionally, improvements in healthcare facilities around tourist areas have been made to ensure the comfort and safety of visitors. These facilities, such as clinics and medical centers, are crucial in emergency situations, providing a sense of security for tourists. In terms of policy, the local government has implemented several regulations to foster a favorable investment climate in the tourism sector. Tax incentives for investors and entrepreneurs in tourism have been introduced to attract more investment to Tojo Una-Una. Furthermore, the government has established zoning regulations to ensure that tourism development adheres to environmental sustainability principles. Collaboration with relevant agencies for monitoring and enforcing these regulations has also been strengthened to ensure that tourism development does not harm the natural ecosystem and local culture. These efforts demonstrate the local government's commitment to creating a conducive environment for sustainable tourism growth that benefits the well-being of the local community (M. et al., 2021).

Active participation of the local community is crucial for sustainable tourism development in Tojo Una-Una. Training and empowerment programs have been implemented

to enhance the skills and capacities of residents in the tourism industry. Community members are increasingly involved in tourism businesses such as homestays, tour guiding, and culinary ventures. These initiatives not only provide additional income sources but also help in preserving and showcasing local culture and traditions. However, the level of community involvement remains limited, and more efforts are needed to fully integrate residents into the tourism sector. Raising awareness among the local community about the importance of maintaining environmental and cultural sustainability is also essential. Educational campaigns and community engagement activities can foster a sense of ownership and responsibility towards local tourist attractions. By encouraging community members to take an active role in protecting and promoting their heritage, tourism development can become more inclusive and beneficial. Strengthening the community's role in tourism ensures that the economic benefits are more evenly distributed and contributes to the overall well-being and resilience of the local population (Damanik, 2021).

Academics play a vital role in supporting tourism development in Tojo Una-Una through research and development initiatives. Universities and research institutions conduct studies to identify the region's tourism potential, analyze its economic impacts, and develop effective marketing strategies. These research efforts provide valuable data and insights that inform policy-making and strategic planning. By collaborating with local government and communities, academics help to design and implement evidence-based solutions that enhance the sustainability and competitiveness of the tourism sector. Their contributions ensure that tourism development is guided by scientific knowledge, ultimately leading to more effective and impactful outcomes for the region. The government plays a crucial role in the development of tourism in Tojo Una-Una by providing essential infrastructure, creating supportive policies, and fostering a conducive environment for investment. By improving roads, healthcare facilities, and other public services, the government enhances the overall accessibility and appeal of tourist destinations. Additionally, policies such as tax incentives for tourism-related investments and strict zoning regulations ensure sustainable and responsible tourism growth. The government's proactive approach in collaborating with various stakeholders, including local communities, businesses, and academics, further strengthens the tourism sector, driving economic growth and improving the welfare of local residents (Hermawan et al., 2023).

Community involvement in tourism businesses is essential for sustainable development in Tojo Una-Una. Residents are increasingly participating in various tourism-related

activities, such as running homestays, providing guided tours, and operating culinary ventures. Training and empowerment programs have been crucial in enhancing the skills and capacities of the community, enabling them to offer better services to tourists. By fostering a sense of ownership and active participation, the local community can significantly contribute to and benefit from the tourism sector, ensuring that economic gains are more equitably distributed and cultural heritage is maintained. However, challenges remain, including increasing community involvement, ensuring environmental sustainability, and optimizing investment impacts. By fostering closer collaboration and more focused strategies, tourism development in Tojo Una-Una can significantly reduce poverty and enhance the well-being of the local community. (Sutono, 2020).

In the preparation of tourism development strategies for Tojo Una-Una Regency, the analytical tool used is SWOT Analysis (*Strength, Weakness, Opportunity, Threat*). The initial stage in compiling the SWOT Matrix is the identification of internal analysis related to strengths and weaknesses and external analysis related to opportunities and threats. The following is an overview of the strengths, weaknesses, opportunities and accumulations of tourism development of Tojo Una-Una Regency (Windiani, 2021). Here is an analysis in the table below:

Table 1. Internal Factor Matrix Analysis and External Factor Matrix Analysis of Tourism Development Competition from Other Destinations is getting higher

Internal Strategic Factors Strength & Weakness				
	Strategic Factors	Weight	Rating	Score
STRENGTH	1. Incredible Natural and Cultural Wealth.	0,14	4	0,5
	2. Diversity of Tourist Attractions	11	3	33
	3. It is a National Tourism Destination One of KSPN	7,3	3	22
	4. It has been designated as a UNESCO World Biosphere, Man and Biosphere (MAB) Reserve	11	4	44
	5. It is a national garden	7,3	4	29
	Sub Total	37		129
WEAKNESS	1. Limited tourism supporting infrastructure	11	2	22
	2. Limited accommodation facilities	22	3	66
	3. Community involvement in the tourism industry is still very lacking	11	3	33
	4. The creative industry supporting tourism is still not varied and its competitiveness is weak.	22	2	44
	5. Human resource support that fills the tourism industry	22	3	66
	6. Tourism promotion has not been integrated	11	2	22
	Sub Total	99		253
External Strategic Factors Opportunities & Treaths				
	Strategic Factors	Weight	Rating	Score
Opportunities	1. Global trends towards ecotourism.	6	3	18
	2. IKN population growth as a market for tourism	9	2	18

Table 1. Internal Factor Matrix Analysis and External Factor Matrix Analysis of Tourism Development Competition from Other Destinations is getting higher

	3. Central Government Policy Support	18	4	72
	4. Joint marketing potential with other central and district governments.	4,5	3	13,5
	5. The potential to build value chains with other countries	6	2	12
	Sub Total	43,5		134
Treaths	1. Competition from Other Destinations is getting higher.	9	2	18
	2. Environmental problems and ongoing fish bombing activities and marine pollution	18	1	18
	3. The interest of tourists heading towards green tourism is getting higher	9	2	18
	Sub Total	36		54

(Source: Field Observation Results)

Based on the table above, Matrik Analysis has become Internal strategic factor analysis shows that the main strength of this destination lies in its extraordinary natural and cultural wealth with a score of 0.5, the variety of tourist attractions with a score of 33, the status as a National Tourism Destination (KSPN) with a score of 22, recognition as a World Biosphere Reserve by UNESCO with a score of 44, and status as a national park with a score of 29. The total strength score is 129. However, significant weaknesses also exist, such as limited tourism supporting infrastructure with a score of 22, limited accommodation facilities with a score of 66, public participation in the tourism industry that is still lacking with a score of 33, creative industries supporting tourism that are not yet diverse and have weak competitiveness with a score of 44, human resource support that fills the tourism industry with a score of 66, and tourism promotion that has not been integrated with a score of 22. The total weakness score reached 253. External strategic factors show that there are great opportunities, such as the global trend towards ecotourism with a score of 18, the population growth of IKN as a tourism market with a score of 18, policy support from the central government with a score of 72, the potential for joint marketing with the central and other regional governments with a score of 13.5, and the potential to build value chains with other countries with a score of 12. The total odds score is 134. However, there are also threats to watch out for, such as increased competition from other destinations with a score of 18, environmental issues and ongoing fish bombing activities and marine pollution with a score of 18, and increased tourist interest towards green tourism with a score of 18. Total threat score is 54.

Tojo Una-Una faces internal weaknesses such as limited tourism infrastructure, accommodation, public facilities, and insufficient community involvement in the tourism

industry. Additionally, the creative industry supporting tourism is underdeveloped, and human resources in the tourism sector need enhancement. However, external opportunities such as the global trend towards ecotourism, the population growth in IKN as a potential market, and central government policy support offer significant potential for tourism development. Joint marketing with central and district governments and building value chains with other regions and countries are also promising opportunities. Conversely, external threats include increased competition from other destinations, environmental issues like fish bombing and marine pollution, and a rising demand for green tourism. A solid, well-planned strategy is necessary to leverage these opportunities and mitigate the challenges, and the SWOT Matrix can help develop a more effective and focused approach by utilizing strengths, capitalizing on opportunities, minimizing weaknesses, and addressing threats (Wicaksono et al., 2023).

Using the TOWS Matrix based on IFAS and EFAS tables, the tourism development strategy in Tojo Una-Una Regency can be described as follows: Increasing the attractiveness of ecotourism tourism can be used as a key strategy to reach growing markets, while increasing regional cooperation with surrounding regions and growing investment in the tourism sector. Meanwhile, road, telecommunications, electricity, and clean water infrastructure in tourist areas need to be developed, along with increased tourism promotion through digital media. In addition, coral reef conservation strategies and increased public awareness in environmental protection can address competition from other destinations and environmental concerns. The development of tourism supports human resources and creative industries based on tourism communities is the key to overcoming internal weaknesses and facing external threats, thus enabling the development of a more effective and sustainable tourism sector in Tojo Una-Una Regency (Hoerniasih et al., 2022).

Pentahelix Collaboration Model to Implement Tojo Una-Una Tourism Development Strategy

The development of tourism in Tojo Una-Una Regency requires coordination between related institutions in tourism known as *Pentahelix*, namely *cademician* (Academics), *Business*, *Community*, *Government* (Government) and *Media* (Media Publications). Institutions that need to be involved in the development of tourism in Tojo Una-Una Regency are as follows:

Government

In accordance with regional conditions and the type of tourism to be developed in Tojo Una-Una Regency, good coordination is needed between the Regional Government of Tojo Una-Una Regency with the Central Sulawesi Provincial Government and the Central Government. OPDs that are interested and related directly or indirectly to the development of this tourism area include: Bappeda, Agriculture Office, Tourism Office, Plantation Office, MSME Cooperative Office, Industry and Trade, Public Works Office, Transportation Office, and other agencies (Sutomo et al., 2019).

Academics

Higher education institutions, esteemed as centers of excellence, are poised to establish robust partnerships with the Tojo Una-Una Regency government to advance research endeavors within the realm of tourism. These collaborations are envisioned to encompass a spectrum of activities, including studies, research, and development initiatives, as well as ongoing consultations. By leveraging the expertise and resources available within academic institutions, the Tojo Una-Una Regency government can harness innovative solutions to address the multifaceted challenges and opportunities within the tourism sector. Through continuous engagement in research activities and regular consultations with key stakeholders, higher education institutions can contribute significantly to the formulation of evidence-based policies and strategies that promote sustainable tourism development. Furthermore, these partnerships serve as conduits for knowledge exchange and capacity building, fostering a culture of innovation and excellence within the local tourism ecosystem. Thus, the symbiotic relationship between higher education institutions and the government emerges as a cornerstone in driving forward the research agenda and advancing the overall trajectory of tourism development in Tojo Una-Una Regency (Sutomo et al., 2019).

Community

The community in the penta helix is a group of people who are oriented, have care and work in the tourism industry. In the context of social change, communities can act as accelerators. In this case, the community acts as an intermediary or liaison between stakeholders to assist the community in the overall process of social change and expedite its business process. In addition, the community also has a role to promote products or services produced by the community (Tanzil et al., 2022).

Business People

To realize Tojo Una-Una Regency as a premier tourism destination, it is crucial to actively engage and support the participation of various tourism business stakeholders within the region. The involvement of these key players is essential as the overall satisfaction and experience of tourists are significantly influenced by the quality and services provided by these businesses. This includes fostering a hospitable environment through well-maintained and welcoming accommodations, offering diverse and delicious culinary experiences, and providing unique, locally crafted souvenirs that capture the essence of Tojo Una-Una. Additionally, by promoting local businesses and ensuring their active participation in tourism development, the region can create more job opportunities, boost the local economy, and enhance the overall appeal of Tojo Una-Una as a tourist destination. (Khourh et al., 2021).

Media

One of the important stakeholders, because tourism development must be published into news and disseminated via online or offline media. News of tourism development will very quickly have a positive impact on the community if it cooperates and cooperates with the mass media as a publication of tourism activities. The collaborative efforts of the government, academia, business community, local community, and media are crucial in enhancing tourism in Tojo Una-Una. The government enhances ecotourism appeal, develops destinations like Lake Banano, and facilitates investment growth through simplified licensing and tax breaks. Academia contributes research on tourist resources, assists tourism villages, and prepares regulatory cooperation documents. The business community establishes travel business cooperation, prepares culinary and craft enterprises, and synchronizes investment policies. The local community actively engages with tourists, organizes village trips, and strengthens customary institutions supporting tourism. Media promotes tourist destinations and socializes regional cooperation on social media, increasing visibility and attracting tourists. These combined efforts address weaknesses like limited infrastructure and growing competition, leveraging government policy, academic research, business investment, community participation, and media promotion to create a thriving and sustainable tourism sector (Senyo et al., 2021).

The Pentahelix Collaboration Model Matrix Strategy for leveraging tourism development opportunities to alleviate poverty in Tojo Una-Una Regency involves five main pillars: government, academia, business, communities, and media. Key S-O (Strengths-Opportunities) strategies include enhancing the attractiveness of ecotourism to reach a

growing market by increasing the competitiveness of 11 tourism villages, supported by community service, strengthening customary institutions, and improving tourist interactions. Developing Banano Lake Rest Area and boosting the competitiveness of the Una-Una Islands through research and promoting diving, snorkeling, and cultural tourism are also strategic steps. Additionally, regional cooperation between Central Sulawesi, Gorontalo, and Kendari aims to expand market reach. The strategy also focuses on increasing investment in the tourism sector through easier investment permits, regional tax breaks for tourism businesses, and promoting investment via digital media (Wahyuningsih, 2021). Through this collaboration between various stakeholders, it is hoped that tourism development in Tojo Una-Una Regency can have a positive impact on poverty alleviation and sustainable development in the region.

The Pentahelix Collaboration Model Matrix Strategies to Reduce Weaknesses to Seize Tourism Development Opportunities in Alleviating Poverty in Tojo Una-Una District sparked a series of strategies focused on reducing existing weaknesses to take advantage of available opportunities. Some of the proposed W-O strategies include the development of road, telecommunications, electricity, and clean water infrastructure in tourist areas, supported by the construction and improvement of roads to tourist attractions and assistance in planning these infrastructures. Meanwhile, increasing tourism promotion through digital media is supported by training on the use of digital technology in tourism marketing, organizing regional tourism festival events, and implementing tour tours aimed at improving tourist experience (Sutono, 2020). Through cooperation and coordination between these five main sectors, it is hoped that infrastructure weaknesses and tourism promotion in Tojo Una-Una Regency can be overcome, so that sustainable tourism development opportunities can be optimally utilized to alleviate poverty in the region. The Pentahelix Collaboration Model Matrix Strategies Using Power to Avoid the Threat of Tourism Development in Alleviating Poverty in Tojo Una-Una Regency emphasized the importance of collaboration between the government, academics, business people, communities, and the media in overcoming threats to tourism development. One of them is coral reef conservation and revitalization supported by coral reef protection regulations and research on coral reef ecology. Furthermore, increasing public awareness in environmental protection is also the focus of the strategy, by formulating environmental policies that support environmental conservation in tourist destinations and conveying environmental conservation messages to tourists through promotional materials and

tourism services. In addition, training and education to the workforce in landfill on best practices in waste management as well as participation in sustainable waste management programs are important steps in avoiding threats that may arise to the environment. (Hardianto et al., 2019).

Pentahelix Collaboration Model Matrix Strategies to Reduce Weaknesses to Avoid the Threat of Tourism Development in Alleviating Poverty in Tojo Una-Una Regency formulated several strategies aimed at overcoming internal weaknesses and avoiding external threats that could hinder tourism development. In addition, through the development of tourism community-based creative industries, efforts are made to provide a platform for communities and creative industry players in marketing their products and experiences to tourists. The implementation of this strategy involves various parties, including educational institutions, industry players, local communities, and the media, who together contribute to improving the quality of human resources and advancing the creative industry in the tourism sector. (Budhi et al., 2022).

From the series of presentations on the Pentahelix Collaboration Model Matrix in tourism development strategies in Tojo Una-Una Regency, several significant conclusions can be drawn. First, cross-sector collaboration between government, academia, business, communities, and media is key in facing challenges and taking advantage of opportunities in tourism development. Through this synergy, various strengths can be utilized to seize existing opportunities, while weaknesses can be overcome to avoid threats that may arise. Second, the proposed strategy covers various aspects, ranging from infrastructure development, human resource improvement, to environmental preservation and community-based creative industry development. It reflects a holistic approach in tourism development that pays attention to various dimensions, including economic, social, cultural, and environmental. Thus, it is expected that tourism can be the driving force of the local economy while preserving nature and culture (Lisrianto et al., 2023).

Finally, the importance of implementing strategies in an integrated and sustainable manner in the long term. Tourism development is not only about increasing the number of visitors or income, but also about maintaining environmental sustainability, strengthening local communities, and safeguarding cultural heritage. With joint commitment from all relevant parties, it is hoped that Tojo Una-Una Regency can experience sustainable tourism development and provide benefits for all stakeholders in a fair and sustainable manner (Rahatmawati et al., 2021).

CONCLUSION

The Pentahelix collaboration model in Tojo Una-Una aims to alleviate poverty through sustainable tourism. Starting with a comprehensive SWOT analysis, the model identifies key strengths, weaknesses, opportunities, and threats in the tourism sector. The strategy focuses on enhancing ecotourism by preserving natural assets, fostering regional cooperation with neighboring areas, and investing in tourism infrastructure such as roads and telecommunications. Digital media is leveraged for broad and effective promotion. The model also emphasizes community engagement, conservation efforts, and the development of creative industries tied to tourism. Each sector—government, academia, business, local communities, and media—plays a distinct role. The government formulates policies and allocates resources, academia provides research, the tourism industry invests in infrastructure, local communities participate in tourism activities, and the media promotes the destination. This collaborative approach aims to boost tourism, combat poverty, and foster sustainable socio-economic development.

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