



Economic Empowerment Model Based On Local Wisdom To Stretch Out Sustainable Development Goals In Padusan Village

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Abstract. Tourism business development isfr one way to increase community economic empowerment. The correct empowerment model can contribute to improved human resources and a rise in the standard of living. To be sustained and enjoyed by future generations, tourism development must preserve sustainability and natural ecosystem preservation while also considering the sociocultural circumstances of the local community. An appropriate paradigm is required so that the existence of tourist attractions can serve as a platform for community empowerment and contribute to the realization of Sustainable Development Goals. This study examines the Economic Empowerment Model suitable for the Local wisdom condition of the Padusan Pacet Tourism Village Community, Mojokerto, East Java. The approach employed is qualitative in nature. Key informants from the Padusan Pacet Tourism Village Society served as the primary data source for this research. Respondent selection in this study was based on the snowball sampling method. The data collection methods encompassed in-depth interviews, observation, and documentation. Data analysis involves processes such as data reduction, data presentation, and drawing conclusions. According to the findings of the study, the economic empowerment model that best fits the needs of the Padusan Tourism Village community is sociopreneurship. One strategy to attaining sustainable tourism is the sociopreneurship paradigm. With its resources, including customs, traditions, and culture, the community serves as a host. At the same time, the community may help to develop tourism. People that utilize this paradigm consider not only themselves but also others and the environment around them. Sociopreneurship is an effort to promote the economic well-being of the Padusan community, as well as to contribute to the achievement of the Sustainable Development Goals.

Keywords: Economic, Empowerment, Community, Tourism, Sustainable Development Goals.

1 Introduction

Tourism is the most successful sector for increasing foreign exchange in Indonesia. One of the causes is that Indonesia has a wealth of tourism development resources. Aside from Human Resources, a resource is the physical position of other areas as well as the diversity of natural resources, culture, cuisine, and wealth that exist in the country. This resource is the key draw for both domestic and international visitors. There are numerous interesting and beautiful destinations in Indonesia. Not only is Indonesia's natural beauty diverse, but so is its cultural tourism and history. From Sabang to Merauke, Indonesia boasts hundreds of cultural groups.

Tourism as a development sector should be prioritized by the government in order to fulfill development goals, namely, to promote societal welfare. However, tourism development has failed to deliver considerable societal advantages. One of the causes of subpar tourism development planning in Indonesia is a lack of community participation in the policy-making process. As a result, it is critical to adopt a participatory policy that positions the community as the primary actor in the tourism development process. [1] discovered, in his research in Caribbean countries on the importance of local entrepreneurs in tourist development, that tourism development has a direct impact on the local economy if local communities may participate in tourism activities. According to [2], a community is a group of people who reside in the same geographic area and make use of the local natural resources.

Tourism development cannot exist apart from robust community participation. The community must be actively involved in tourism development initiatives rather than simply receiving decisions from the authorities (government) [3]. According to Razak's viewpoint in a Seminar on the Development of a Maritime Area [3], tourism development must be linked to the socioeconomic characteristics of local communities so that tourist progress is merged with the local community economy. This is a type of tourism management that still considers the values of Local Wisdom.

On the other hand, the concept of sustainable development has gradually been included into the concept of sustainable tourist development. Sustainable tourism development is described as a tourism development method focused on maintaining the resources required for future growth. "Types of tourism that align with natural, social, and community values, fostering positive and meaningful interaction and shared experiences for both hosts and guests" [4].

Padusan Village is a tourist destination rich in local wisdom situated in the Pacet District of Mojokerto Regency. Positioned at an elevation of 600 meters above sea level, Padusan Village in Pacet is nestled at the base of Mount Welirang and Mount Penanggungan., with tourism areas and prospective plantations [5]. Pacet is well known as a tourist destination for its hot springs and picturesque waterfalls, as well as a very productive agricultural area due to its location between two volcanoes. This environmental situation promotes Padusan Village's potential as a tourism village [6]. Padusan Village is quickly expanding due to its location in a tourism area and on the main route between Mojokerto City and Batu.

The ability of society to manage tourism potential is important to the tourism industry's sustainability. With its resources, society functions as a host. At the same

time, society may help to boost tourism. As a result, Padusan Village's tourism sector is expected to grow to maintain sustainability, environmental ecosystem preservation, and community wisdom. This is done to guarantee that tourism is preserved for future generations to enjoy. Sustainable tourism development is characterized as a strategy in tourism development that seeks to safeguard the resources essential for future expansion.

2 Literature Review

2.1 Tourism Industry

Tourism is one of the world's largest and fastest-growing sectors [7]. Tourism, on the other hand, has three effects: economic, social, and cultural [8]. According to [9] the tourist industry is an important part of the Indonesian economy. This is since the tourist industry contributes to GDP [9], foreign exchange [10], and employment [11, 12]. The government is continuing to boost the tourism industry. Several variables influence the growth of the tourism industry. Human resources, infrastructure, natural resources, culture, and culinary are some of these elements. [7, 10, 13]. This component ultimately determines the image and appeal of tourism [7, 8].

2.2 The Role of the Community as Managers of Tourist Attraction

A good development incorporates the community, and one example is tourism [14–16]. Furthermore, [14] and [17] highlighted that tourist development necessitates the involvement of local communities throughout the planning, implementation, and oversight stages. This is since local communities are both actors and directly affected by tourism [17, 18]. Neglecting community participation in tourist development will result in future implementation failure [14, 17]. The community is involved in the process of identifying problems, developing goals, and making decisions linked to tourist development throughout the planning stage [14, 17]. Furthermore, the community must prepare in terms of skills (language, service, marketing, entrepreneurship, and culture) [14, 15]. Furthermore, the community is involved in the management of tourism attractions, housing providers, restaurant managers, and tour guides throughout the implementation stage [14]. The final component is community involvement in supervision. The community plays a vital role in influencing tourist development decisions.

2.3 Local Wisdom

Local Wisdom-based tourism is a tourism management concept that promotes active community participation in accordance with local wisdom to offer welfare while preserving the quality of the environment and safeguarding their social and cultural well-being. According to [19], based on various definitions, local wisdom comprises long-standing traditions and customs that have evolved in a particular region, originating

from that specific place or local communities. It is expressed through the community's collective learning, wisdom, and knowledge, transmitted from one generation to the next. It is envisaged that by utilizing local wisdom-based tourism, tourism empowerment can be aligned with community conditions and maximized.

2.4 Sustainable Tourism Development

The concept of sustainable tourism originates from the principles of sustainable development articulated by the World Commission on Environment and Development (WCED). It defines sustainable tourism as a type of travel that harmonizes with both natural and socio-cultural elements, ensuring reciprocal advantages [20]. This involves tourism growth tailored to meet tourist preferences and emphasizes initiatives that contribute to the social, economic, and cultural empowerment of the community. In this approach, the community plays a central role in advancing regional tourism [21]. The development of sustainable tourism necessitates consideration of three key elements: economic sustainability, sociocultural sustainability, and environmental sustainability [20]. Economic sustainability is reflected in tourism's ability to alleviate poverty, generate employment, and stimulate societal economic growth. Sociocultural sustainability in tourism involves preserving the authenticity of a community's socio-cultural fabric, safeguarding cultural assets, and fostering tolerance. Moreover, achieving sustainability involves maximizing the use of existing resources and guaranteeing the conservation of biodiversity in the tourism sector [20, 22].

3 Method

This study was conducted in the Padusan Pacet Tourism Village in Mojokerto. This research employed qualitative methodology, which involves comprehending a phenomenon through the perspectives of research subjects, such as behavior, perception, motivation, and actions. Qualitative research has the potential to enrich theory, inform practice and policy, address social issues, and manifest in actions based on observed observations and factual evidence. This study's data is derived from key informants. Padusan Village residents served as key informants in this study. In this study, respondents were identified utilizing a snowball sampling technique, which means that respondents continued to develop purposefully until the data obtained was deemed satisfactory or saturated. In-depth interviews, observation, and documentation were employed as data gathering approaches in this study. This research has two stages: 1) research preparation and 2) research implementation. According to [23], data analysis is a critical part of qualitative research because it allows researchers to determine the type of the research they are undertaking. This research employs data reduction, data display, and deriving conclusions or verification. Moreover, the examination of the study's results was conducted about credibility (internal validity), transferability (external validity), dependability (reliability), and objectivity (neutrality).

4 Result and Discussion

4.1 Result

Padusan Village, Mojokerto. Padusan stands as one of the settlements situated at the foothills of Mount Welirang, precisely in Pacet District, Mojokerto Regency, East Java Province. Presently, Padusan has gained recognition for its tourism appeal, attributed to its elevated position, providing cool weather and captivating natural scenery. During weekends, numerous local tourists from nearby regions frequent Padusan Village.

Padusan Village, in addition to tourism potential, contains historical value that is worth studying. According to a local elder, Padusan local was originally a hot spring place popular among inhabitants for swimming. Meanwhile, Ki Ageng Padusan was the person who discovered and created this community. A follower of Islam originating from Tamiajeng (currently Trawas) traveled through Tamiajeng, Kemloko, Krapyak, and eventually reached Padusan. The term "Padusan" is ultimately derived from the English word "adus," signifying a bath or a location for personal cleansing. The hot spring is now a tourist destination, known as Padusan hot spring tourism. Because of its location on the slopes of Mount Welirang, Padusan Village offers strategic potential for environmental tourism. Padusan Village's tourism features include Padusan Hot Springs, Grenjengan Waterfall, Krapyak Hills, Padusan Agro Tourism, Outbound, and Rafting.

Many temple ruin sites have been uncovered along the base of Mount Welirang. According to the Dutch newspaper *Bataaviaasch Nieuwsblad*, the Regent of Mojokerto discovered the ruins of a tiny temple near the Padusan well [24]. The structure is constructed from square-shaped andesite rock, with only the floor and a segment of the standing wall still intact. A year later, a similar occurrence was documented. As per another media account, eleven temple remnants were found on the summits of four mountains (Gunung Jambe, Bekel, Penanggungan, and Semodo). Many of these remnants are connected by pathways, staircases, and trails linking Mount Butak, Welirang, and Anjasmoro. The unearthed stone fragments are believed to date back to the late 14th century AD [25].

Changes at Padusan Village, Mojokerto. The tourist industry is one of the sectors on which the government depends for foreign exchange and income. This has been demonstrated by the residents of Padusan Village, who live near the Padusan Hot Springs tourist attraction, who are witnessing changes in social terms and the economic sector. There are changes in livelihoods from farmers to the tourism industry. The transformation of Padusan Pacet Tourism Village into a sought-after tourist spot not only attracts visitors but also inspires the local community to explore novel business prospects. This has led to the establishment of various Small and Medium Enterprises, including food and beverage stalls, street vendors, and individuals employed in cafes, factories, farms, and plantations. The engagement of the Padusan Pacet Tourism Village community in tourism, through the establishment of new business ventures, has

resulted in a positive impact on income growth. This is attributed to the creation of additional employment opportunities, providing the community with the means to fulfill their living requirements.

Furthermore, the presence of Padusan tourism has an impact on the Padusan community's way of life. Interactions with tourists who come to visit cause this. Interaction with tourists has indirectly boosted the Padusan community's understanding of outside information. According to [26], the tourism industry will expedite the pace of change since tourists from other cultures will interact with the local population. In addition, it generates cultural acculturation and cultural imitation, in which a person adapts, experiences, and learns the way of life in the metropolis. Finally, there was a process known as the "imitation process" [27]. Changes in structure, social systems, values, and attitudes from the old style (village style) to the new style (city style) are social change aspects that are adopted individually or collectively in a social system.

Changes in the Padusan community's lifestyle, among other things, have begun to realize the existence of communication technology. According to [12] research, one kind of lifestyle that is changed by tourism is the usage of technology and how to dress. Direct face-to-face conversation has given way to the use of communication technologies such as mobile phones. Every respondent has a mobile phone that they can use to speak with their coworkers. This has lessened the habit of meeting directly with neighbors or family members because technological advancements have begun to supplant these behaviors. Furthermore, the availability of public knowledge in the usage of mobile communication tools might help their business in the tourism sector. This is highly felt by respondents who work in lodging services since tourists can order lodging services via the service owner's cellphone, making it more easier and facilitating the community's business.

Local Wisdom in Padusan, Pacet, Mojokerto. Padusan Village is renowned not only for its tourism potential and historical richness but also for its local traditions. Among them is the ruwah desa, a festival deeply ingrained in the memory of various Indonesian communities. Generally observed annually, ruwah desa is a festivity acknowledged by villages throughout Indonesia. Also known as alms of the earth, its primary purpose is to express gratitude to Allah SWT for the bountiful harvests that sustain the livelihoods of farmers. The commemoration of ruwah desa varies in its observance across Indonesian communities but typically involves a parade (kirab) and the display of the agricultural yields, symbolizing the celebration of the land's abundance [28].

Apart from the ruwah desa, the megengan tradition represents a form of local wisdom that continues to be embraced by the residents of Mojokerto Regency, including those in Padusan Village. This customary practice is typically observed preceding the holy month of Ramadan, a period of fasting for Muslims. The megengan tradition holds a significant place in Javanese culture and has been transmitted through generations. The ritual includes a procession, with one of its components being nyekar (pilgrimage) to the graves of their parents and ancestors [29].

The term "nyekar" originates from the word "sekar," meaning "flower." In Javanese tradition, nyekar is a customary practice where individuals bring flowers and perfumes to be scattered on graves. This ritual is typically carried out in the afternoon following the 'Asr prayer, around 3-4 p.m. Javanese people believe that the spirits of their ancestors, considered experts of the graves, return to visit their descendants before the onset of the fasting month. In regions under Mataraman rule, nyekar is also referred to as "nyandran." During visits to ancestral graves, men (grave experts) often engage in prayers for the spirits.

Another step in the megengan ritual involves the preparation of food and sharpening, known as "asahan" [30]. The term "asahan" is derived from "isah," meaning "to clean," signifying a cleansing from past misdeeds. A specific food item that undergoes sharpening is the "apem" cake, prepared by family members and subsequently brought to the langgar or mosque for a communal meal, also known as "banca'an." Due to the abundance of food, any leftovers from the sharpening process are often packed and taken home, symbolizing a form of blessing.

4.2 Discussion

The transition from agriculture to tourism as the primary source of livelihood has led the Padusan community to heavily rely on the sustainability of Padusan tourism. Conversely, a crucial aspect of the sustainable tourism development concept involves empowering and involving local communities in tourism activities to ensure they derive benefits from them. Razak, during the Maritime Area Development Seminar [3], emphasized the necessity of linking tourism development to the socio-economic characteristics of local communities. This integration is essential for aligning tourism progress with the local community's economy. Implementing a tourism empowerment model in harmony with local wisdom can maximize the outcomes of tourism management for the community.

Based on the explanation previously mentioned, it is known that there are several local wisdoms that are still practiced by the Padusan people. This local wisdom includes ruwah village, megengan, asahan and nyekar. Each of these activities contains values that are very close to social togetherness and cooperation. Therefore, the empowerment model that suits its characteristics is sociopreneurship.

Sociopreneurship involves establishing a business grounded in social activities. It is a method of harnessing rural social capital to address societal issues through the creation, organization, and management of a company with the aim of achieving social objectives. Traditionally, entrepreneurship has been associated with profit-centric endeavors, but sociopreneurship distinguishes itself with a more constructive goal — the cultivation of robust and competitive social capital. Among the responsibilities of a sociopreneur is the task of bolstering community motivation and enthusiasm, fostering a collective will to surmount challenges by leveraging inherent potential.

Sociopreneurship is defined as a form of business dedicated to addressing social issues [31]. This field encompasses various skills, such as contributing to the resolution of social problems, effecting positive transformations, altering systems to address issues, and innovating entrepreneurial approaches with a focus on social, economic,

and environmental considerations [31]. As per the concept of sociopreneurship, entrepreneurs are required to consider the social and environmental impacts, along with local cultural values, throughout each stage of the production process [31].

Moreover, according to UNDP, sociopreneurship is characterized as a business model that involves the inclusion of the impoverished at various stages of the value chain, serving as providers, employees, business contributors, and consumers [32]. The implementation of sociopreneurship demands the active participation of the community in attaining social objectives, requiring investments in human resources, especially in enhancing education quality, and relying on political and economic stability for support [33]. Thus far, sociopreneurship has garnered public attention because of its ability to tackle social problems through cooperative business initiatives that empower communities, highlighting its potential for generating socio-economic value [31, 33].

Sociopreneurship is a solution that fulfills the Padusan requirement because it involves commercial operations in overcoming social problems that affect the utilization of all resources in an innovative method to accelerate social transformation in meeting society's social needs. Rather than being given to shareholders, financial advantages are used to expand the scope of activities. This is an essential element, as the presence of Padusan is intricately connected to the role of the neighboring community. Sociopreneurship ensures that the community oversees and manages the business, with the objective of benefiting the community itself.

Community participation in Padusan development is required to achieve Sustainable Tourism Development. Using the sociopreneurship approach, you may maximize your community involvement. This concept will inspire the Padusan community to innovate to tackle social problems and boost economic welfare. The engagement of the community in the development of tourism cultivates a feeling of attachment and a willingness to contribute to the preservation of the tourism potential in their locality. Additionally, the extent of control that local communities exert over their area is closely tied to the sustainability of tourism development.

5 Conclusion

A fundamental idea within the realm of sustainable tourism development revolves around empowering and engaging local communities in tourism activities to harness the benefits of tourism. Due to the research findings, community participation in the development of Padusan tourism is required to achieve Sustainable Tourism Development. Using the sociopreneurship approach, you may maximize your community involvement. This concept will inspire the Padusan community to innovate to alleviate social problems and increase economic prosperity. Community involvement in tourism development fosters a sense of ownership and a desire to contribute to the area's tourism potential. Furthermore, the level of local community sovereignty over their region has a significant impact on the sustainability of tourism development. This is significant because people are more aware of and familiar with the issues in their community than people who live elsewhere.

References

1. Meyer, D.: Caribbean tourism, local sourcing and enterprise development: Review of the literature. (2006)
2. Subadra, I.N.: Ekowisata Hutan Mangrove dalam Pembangunan Pariwisata Berkelanjutan: Studi Kasus di Mangrove Information Center, Desa Pemogan, Kecamatan Denpasar Selatan, Kota Denpasar. S2 Kaji. Kepariwisata. Bali Univ. udayana. (2006)
3. Manafe, A.H.: Wisatawan dan Penerimaan Masyarakat Lokal Nemberala, (2003)
4. Smith, V.L., Eadington, W.R.: Tourism alternatives: Potentials and problems in the development of tourism. University of Pennsylvania press (1992)
5. Sholikhah, Y.R., Wijaya, D., Arisandi, R.S.: KEBIJAKAN PEMERINTAH DALAM MENINGKATKAN PENDAPATAN ASLI DESA.
6. Putri, W.D.R., Hakim, L., Arwani, M., Sutan, S.M.: PEMBERDAYAAN MASYARAKAT DAN PENGEMBANGAN MODEL DESA WISATA–STUDI KASUS DESA PACET MOJOKERTO. Pros. Sembadha. 1, 180–182 (2018)
7. Hong, W.-C.: Global competitiveness measurement for the tourism sector. *Curr. issues Tour.* 12, 105–132 (2009)
8. Luthfi, R.R., Suman, A.: Peran Pariwisata Terhadap Kesejahteraan Masyarakat di Sektor Lapangan Pekerjaan Dan Perekonomian Tahun 2009–2013 (Studi Kasus: Kota Batu). *J. Ilm. Mhs. FEB.* 1, (2012)
9. Utami, B.A., Kafabih, A.: Sektor pariwisata Indonesia di tengah pandemi COVID 19. *J. Din. Ekon. Pembang.* 4, 383–389 (2021)
10. Rahma, A.A.: Potensi sumber daya alam dalam mengembangkan sektor pariwisata di Indonesia. *J. Nas. Pariwisata.* 12, 1–8 (2020)
11. Pambudi, A.S., Masteriarsa, M.F., Wibowo, A.D.C., Amaliyah, I., Ardana, A.K.: Strategi pemulihan ekonomi sektor pariwisata pasca Covid-19. *Maj. Media Perencana.* 1, 1–21 (2020)
12. Indah, F.R., Nuraini, I., Syaifullah, Y.: Pengaruh Sektor Pariwisata terhadap Penyerapan Tenaga Kerja di Provinsi Jawa Timur Tahun 2012-2018. *J. Ilmu Ekon.* 5, 339–353 (2021)
13. Ramayah, T., Lee, J.W.C., In, J.B.C.: Network collaboration and performance in the tourism sector. *Serv. Bus.* 5, 411–428 (2011)
14. Dewi, M.H.U.: Pengembangan desa wisata berbasis partisipasi masyarakat lokal di Desa Wisata Jatiluwih Tabanan, Bali. *J. Kawistara.* 3, (2013)
15. Nabila, A.R., Yuniningsih, T.: Analisis Partisipasi Masyarakat Dalam Pengembangan Desa Wisata Kandri Kota Semarang. *J. Public Policy Manag. Rev.* 5, 375–395 (2016)
16. Sidiq, A.J., Resnawaty, R.: Pengembangan desa wisata berbasis partisipasi masyarakat lokal di desa wisata Linggarjati Kuningan, Jawa Barat. *Pros. Penelit. Dan Pengabd. Kpd. Masy.* 4, 38–44 (2017)
17. Muganda, M., Sirima, A., Ezra, P.M.: The role of local communities in tourism development: Grassroots perspectives from Tanzania. *J. Hum. Ecol.* 41, 53–66 (2013)
18. Sutawa, G.K.: Issues on Bali tourism development and community empowerment to support sustainable tourism development. *Procedia Econ. Financ.* 4, 413–422 (2012)
19. Abbas, E.W.: Pendidikan IPS berbasis kearifan lokal. *WAHANA Jaya Abadi* (2015)
20. Qodriyatun, S.N.: Implementasi Kebijakan Pengembangan Pariwisata Berkelanjutan Di Karimunjawa. *Aspir. J. Masal. Sos.* 9, 240–259 (2019)

21. Yatmaja, P.T.: Efektivitas pemberdayaan masyarakat oleh kelompok sadar wisata (pokdarwis) dalam mengembangkan pariwisata berkelanjutan. *J. Ilm. Adm. Publik dan Pembang.* 10, 27–36 (2019)
22. Junaid, I., Mansyur, M., Ulang, A.: Implementasi Pariwisata Berkelanjutan di Pulau Maratua, Kabupaten Berau, Kalimantan Timur. *J. Pariwisata Terap.* 3, 110 (2020)
23. Komariah, A., Satori, D.: Penelitian Kualitatif. Bandung Alf. (2013)
24. BataaviaaschNieuwsblad: Monumenten. (1914)
25. DeLocomotief: VerspreideIndischeBerichten. (1892)
26. SIDARTA, I.W.T.: Dampak Perkembangan Pariwisata terhadap Kondisi Lingkungan, Sosial dan Ekonomi Masyarakat (Studi Kasus Kawasan Pariwisata Sanur, Denpasar-Bali), (2002)
27. Marius, J.A.: Perubahan sosial. *J. Penyul.* 2, (2006)
28. Windiatmoko, D.U., Mardiyah, A.A.: Ruwah Dusun Sebagai Entitas Kearifan Lokal di Dusun Urung Urung Kecamatan Trawas Kabupaten Mojokerto. In: *Prosiding Seminar Nasional Vokasi Indonesia.* p. 68 (2018)
29. Ridho, A.: Tradisi megengan dalam menyambut Ramadhan: Living Qur'an sebagai kearifan lokal menyemai Islam di Jawa. *J. Literasiologi.* 1, 27 (2018)
30. Indahsari, H.M.: Megengan: Tradisi Masyarakat Dalam Menyambut Ramadhan Di Desa Boro Kecamatan Kedungwaru Kabupaten Tulungagung. *J. (Kediri Fak. Keguruan, Univ. Nusanant. PGRI Kediri.* (2017)
31. Kurniawan, F., Parel, K.A.: Sociopreneurship masyarakat gusuran dalam membangun konsep kampung wisata tematik topeng malangan. *Dialekt. Masy. J. Sociol.* 2, 35–48 (2018)
32. Qasim, A.W.: United Nations development Programme (UNDP). Human development report 2013. *Pak. Dev. Rev.* 52, 95–96 (2013)
33. Suyatna, H., Nurhasanah, Y.: Sociopreneurship sebagai tren karir anak muda. *J. Stud. Pemuda.* 6, 527–537 (2017)

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