

Community Empowerment Design Through the Pentahelix Model in Tourism Development

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ABSTRACT

The tourism sector has become a development sector that has really developed in recent years. Tourism development has three dimensions of development, namely government, academics and entrepreneurs, but this model is modified into five dimensions, namely government as regulator, academics as conceptualizer, tourism business as investor, community working in the tourism sector as accelerator and media as catalyst. These five dimensions are called the pentahelix model. Through this model, it is hoped that the tourism sector can contribute to the community's economy through an empowerment process. So this research aims firstly, to explore tourism development using the pentahelix model, secondly, to design community empowerment using tourism development using the pentahelix model. This goal was achieved with a qualitative approach, a type of case study on Ijen Geopark Bondowoso tourism. This location is one of the biggest tourist attractions in Bondowoso. Data was collected by means of observation, interviews, documentation and FGD. Data were analyzed using descriptive and interpretive techniques and the validity of the data was tested using triangulation of sources and techniques. This research results, firstly, tourism developed using the pentahelix model is more successful than that developed using the triple helix model, because the dimensions used are more comprehensive, secondly, the community empowerment design through the pentahelix model is comprehensive and can absorb a high level of participation in tourism development. Thus, people's income has increased and unemployment has decreased in the Ijen Geopark tourist area because the community participates in tourism development. So, this pentahelix model can be used in designing sustainable community empowerment.

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1. INTRODUCTION

The issue of community empowerment through tourism development is an interesting study in development economics [1]. Several regions in Indonesia have recently chosen to implement development through tourism [2]. This model is more profitable than the goods industry development model, such as building factories, companies or offices [3]. The tourism sector is the sector that has the most minimal impact when viewed from the perspective of the environmental impact of development [4]. Because so far, development has had a positive impact on economic growth, but negatively on environmental damage [5].

One of the famous tourism sectors in Indonesia and often used as a place to see blue fire by tourists, is Ijen Geopark in Bondowoso Regency. Local and foreign tourist visits have been recorded to increase every year, namely an average of 37 thousand tourists. This increase in the number of visits requires the role of various parties to continue to develop tourism in Ijen Geopark. In its development so far, Ijen Geopark tourism management has used the Penta Helix model. The Penta Helix model was first proclaimed by the Minister of Tourism Arief Yahya and was outlined in the Minister of Tourism Regulation (Permen) of the Republic of Indonesia Number 14 of 2016 concerning Guidelines for Sustainable Tourism Destinations that is to create orchestration and ensure the quality of activities, facilities, services, and to create experiences and the value of tourism benefits in order to provide advantages and benefits to society and the environment, it is necessary to encourage the tourism system through optimizing the role of business, government, community, academic and media (BGCAM). In this case, the catalyst for the development process can be carried out by the campus, where the campus brings together the other four pillars, namely the government as tourism regulator and facilitator, tourism business companies, tourism industry associations (GIPI, PHRI, etc.), and media (electronic, print, audio, and so on). In this

case, the campus uses information from business actors, industrial associations and the government as study material and disseminates the study results to the other four pillars. Meanwhile, the government formulates policies by taking into account the results of campus studies and feedback from the other three pillars. The same thing applies to business actors and industrial associations, where they provide feedback to the government and provide information for campus research, as well as implementing policies and study results [6]. Furthermore, mass media moves to all pillars in absorbing and disseminating information. In this way, it is hoped that the interests of stakeholders can be adequately met, and the tourism industry can move in a positive direction.

The tourism sector in Bondowoso that applies the pentahelix concept is the Ijen Geopark Bondowoso, which is a wealth of natural resources according to the meaning of a Geopark, namely preserving the earth and improving the welfare of the community, Geopark development aims to realize the preservation of Geological Heritage (Geoheritage), Geological Diversity (Geodiversity), Biodiversity (Biodiversity), and Cultural Diversity which is carried out jointly between the Government and Stakeholders through conservation, education and sustainable development efforts as well as socio-economic empowerment of the community. Through this concept, the Ijen Geopark Bondowoso Region emphasizes the pentahelix concept [7].

In the Besuki Raya area, only Situbondo and Banyuwangi use tourism development using the Pentahelix model, other areas have not yet used it. This model is interesting to research, because usually in developing tourism an area only applies the triple helix, but for Ijen Geopark tourism it uses a pentahelix. This model involves 5 important elements, namely government, community, in this case society, business entities, namely stakeholders or the private sector, academics (campus parties) and media (journalists) [8]. These 5 elements are the main elements in tourism development using the penta helix model, especially in the process of

community empowerment [9]. This model certainly has its own challenges, because it has to combine these 5 elements, but is more comprehensive [10]. Apart from that, according to research by Sucahyo I (2023), the pentahelix model is the most ideal model for developing tourism. This is due to the completeness of the elements possessed by Pentahelix, starting from the involvement of the government to academics [11]. Sucahyo I's (2023) research is also strengthened by Nashir's (2023) research which states that collaboration with the pentahelix model is able to encourage community empowerment to become a sustainable empowerment model [12][2]. Research by Ania Kurnia Ningsih and Jaka Nugraha (2023) also states that an integrated tourism development model with the pentahelix model can create a sustainable tourism model [13]

Based on this data, the pentahelix model is an ideal model in tourism development, especially in designing community empowerment around tourism locations [14]. Based on the studies above, it can also be seen that many studies have been carried out on the pentahelix and this model has been developed [15]. However, the fundamental difference between this research and previous research lies in the design of community empowerment resulting from the implementation of the pentahelix model [16]. The existing research only talks about the development of tourism potential and the collaboration models implemented. This research speaks more to the pentahelix in designing community empowerment [17].

The research objectives to be achieved are first, to explore tourism development using the pentahelix model, second, to design community empowerment using tourism development with the pentahelix model.

2. LITERATURE REVIEW

In discussing the theme of tourism development using the pentahelix model which is linked to community empowerment, there are several theories, including:

2.1 Pentahelix model

The Pentahelix model was launched in collaboration with 5 actors by the Minister of Tourism [18] Arief Yahya as stated in the Regulation of the Minister of Tourism of the Republic of Indonesia Number 14 of 2016 concerning Guidelines for Sustainable Tourism Destinations. The background to the birth of the pentahelix concept was the development and development of two previous models, namely the triple helix theory, then the quadra helix theory [19]. All three cannot be separated from the relationships between stakeholders. Stakeholders are a group of people or individuals who influence each other and are influenced by the achievement of certain goals of the organization [20]. In this case, the triple helix theory focuses on stakeholder relationships between government, entrepreneurs and academics. Meanwhile, the quadrahelix was added with the inclusion of another stakeholder, namely civil society [21].

To complete the stakeholders in Pentahelix, it has been refined into 5 (five), namely as follows [22]:

- a. Government This group is a cultural organization related to government institutions. At the national level there is the central government and at the regional level there is the regional government. This research is linked to the role of the Bondowoso Regency Youth and Sports Tourism Department (Disparpora) as a government actor who is involved in developing Ijen Geopark tourism in Kalianyar, Ijen, Bondowoso.
- b. Business World This group consists of representatives of the business sector such as MSMEs (Micro, Small and Medium Enterprises), the private sector, and others. Business groups locally, nationally or even internationally. This research

focuses on business actors around the Ijen Geopark tourist location.

- c. University Academic practitioners have relevant knowledge and experience for project/policy development. Expertise in research and development knowledge makes universities or organizations also important in the synergy of managing an activity, one of which is in the tourism sector. This research refers to the Kiai Haji Achmad Siddiq Jember State Islamic University as one of the universities targeted in researching a tourist location in the Ijen Geopark.
- d) Non-Governmental Organizations or Community Organizations founded by individuals or groups of people who voluntarily provide services to the community to obtain profits from their activities. There is participation in harmonious relationships and mutual respect for the interests of individuals in the group. This becomes a necessity if, although each person has rights, these rights are also limited by the property rights of other people in the same capacity.

This research also requires important information from PTPN XII, Perhutani, Pokdarwis and the community in efforts to synergize the development of Ijen Geopark tourism.

e) Mass Media The perpetrators in this case are all media, whether digital or print. Interest in the media is anything that is encouraged to be known to the wider public through the media they own. In this research, the media targeted is media owned by Ijen Geopark which already has access to media, both print (books) and social media that can be accessed by the wider community.

2.2 *Community empowerment*

Empowerment was born from the English language, namely empowerment,

which has the basic meaning of "empowerment" where "daya" means strength. Empowerment is defined as a process and goal [23]. Where as an empowerment process it is a series of activities to strengthen the strength and empowerment of weak groups in society, including individuals who experience poverty problems [24].

Meanwhile, as a goal, empowerment refers to the conditions or results to be achieved in social change, namely people who are empowered, have power or have the knowledge and ability to fulfill their lives [25]. Apart from the above definition, empowerment is defined as a process of social, economic and political change to empower and strengthen community capabilities through a participatory collective learning process so that behavioral changes occur in all stakeholders [26].

Community economic empowerment is a development process that makes people take the initiative to start the process of social activities to improve their own situation and conditions [26]. Community empowerment can only occur if the community itself also participates [27]. So in essence the keywords of empowerment include: the process of community development taking initiative, improving one's own situation. In other words, the success of a community empowerment program or activity is not only determined by the party carrying out the empowerment, but also by the activeness of the party being empowered to change the situation and conditions to be better than before [28].

Based on the definition of empowerment that has been mentioned, it can be concluded that empowerment is a series of activities to enrich knowledge and strengthen the empowerment of vulnerable and weak groups in society, including individuals who experience poverty problems [29]. By empowering groups or individuals who are vulnerable, such as lack of knowledge and problems

of poverty, it makes them stronger and more empowered in meeting their life needs both physically, economically and socially, such as: being able to express their aspirations, being more confident [30]. Have a source of income, participate in social activities and be independent in covering their living needs and carrying out their duties [31].

The method used to carry out empowerment is by providing motivation or support in the form of resources, opportunities, knowledge and skills for the community to increase their capacity, increase awareness of their potential, then strive to develop this potential through seminars, training, provision, or other means to achieve empowerment goals [32].

2.3 Tourism Development

Tourism develops in line with social, cultural, economic, technological and political changes [33]. Development is defined as a process, or method for improving something to become advanced, good, perfect and useful. Tourism development is basically community and regional development based on [34]:

- a. Improving the community's standard of living while preserving local cultural identity and traditions.
- b. Increase the level of income economically while distributing it evenly to the local population.
- c. Oriented to the development of small and medium scale entrepreneurship with large labor absorption capacity and potential for comparative technology.
- d. Make optimal use of tourism as an agent contributing to cultural traditions with minimal negative impacts. Tourism development is a series of efforts to create integration in the use of various tourism resources, integrating all forms of aspects outside tourism that are directly or indirectly

related to the continuity of tourism development.

Tourism development is a model or framework that can be used by local governments to explore and develop a tourism industry that is attractive to tourists. In tourism development, it is aimed at improving the welfare of the community, especially the community around the destination [35]. Apart from that, tourism development is greatly influenced by the readiness of a destination to increase the number of tourism visits [36]. Therefore, it is necessary to have a management authority that covers all management functions regarding the elements of forming a destination. Tourism development is aimed at developing and utilizing national tourism potential, providing added economic value for fair ownership of local community assets [37].

The three main aspects in tourism development are as follows [38]: a. Product development, to develop products in order to provide quality tourism products that have their own characteristics and attract tourist visits. b. Marketing development, to promote tourist destinations and provide clear and effective tourism information. c. Environmental development, such as providing proper infrastructure, and related to human resource development. In implementing tourism development, Indonesia refers to Law Number 10 of 2009, namely Article 2, which states that tourism is implemented based on the principles of: 1) Benefit 2) Equality 3) Balance 4) Sustainability 5) Independence 6) Participation 7) Sustainability 8) Democratic 9) Welfare 10) unity

3. METHODS

This research uses a qualitative approach. This approach is used to explain in depth the design of community empowerment. Qualitative research does not describe numbers but rather in-depth exploration [39].

The type used is a case study. This type of research is used because in tourism development, almost the majority still use the triple helix, there are several areas that use the pentahelix, but the Ijen Geopark Bondowoso has uniqueness and characteristics that other locations do not have. This uniqueness comes from its location which is able to absorb a lot of labor and the development of a creative economy based on the local economy [40].

The locus chosen in this research is Ijen Geopark because it is one of the tourist areas that uses the pentahelix model. Apart from that, this location is a tourist location that empowers its community. The technique for determining research subjects uses purposive. Researchers take research subjects with certain criteria. Meanwhile, data collection techniques use observation, interviews and documentation techniques. The collected data was analyzed using descriptive analysis techniques using Miles and Huberman's flow analysis model. The validity of the data uses source triangulation and technical triangulation [41].

4. RESULTS AND DISCUSSION

Based on the research conducted, the following are the results of the research conducted, namely:

Tourism Development with the Pentahelix Model and Community Empowerment Design

Ijen Geopark tourism development uses the Penta Helix model by involving actors who play an important role in the sustainability of Ijen Geopark tourism. The actors in question include:

- a. Ijen Geopark Tourism Government is a tourist attraction located on the border of Bondowoso and Banyuwangi Regencies. Ijen Geopark, in this case the Ijen Crater Tourist Park, is managed directly by the East Java Natural Resources Conservation Center (BKSDA) as stated by the Ijen Geopark Daily Management (PHIG). Meanwhile, the work area includes the conservation section of

region V, namely in Banyuwangi, which includes; Banyuwangi, Nusa Barong, Jember, Situbondo and Ijen Crater and the conservation section of region VI Probolinggo which includes; Lumajang, Pasuruan, Sempu Island, Malang and Argopuro. Apart from BKSDA, there are several other government agencies that take part in the management and development of Ijen Geopark tourism, including the Regional Development Planning Agency (Bappeda) of Bondowoso Regency, the Department of Tourism, Youth and Sports (DISPARPORA) of Bondowoso Regency, Perhutani and the Ijen Geopark Daily Management (PHIG). Improving road infrastructure is the authority of Bina Marga BSBK, then for conservation we involve BKSDA, Perhutani, DLH. Then, to mitigate disasters, we communicate with BPBD. Then, what is no less important is improving human resources, so we develop human resources or the community to become people who are aware of tourism and become business actors, not just spectators. The explanation above shows that Ijen Geopark is a complex tourist attraction that includes conservation, education and community empowerment. In its development, it requires the government's role to become a tourist attraction that continues to exist. In this case, the government as a stakeholder in the development of Ijen Geopark tourism collaborates with each other to prepare and implement the tourism management and development process. The following government agencies play a role in developing Ijen Geopark tourism: 1) Bappeda Bondowoso Regency 2) BPBD Bondowoso Regency 3) DLH Bondowoso Regency 4) Highways, Water Resources and Construction Development (BSBK) Bondowoso Regency 5) DISPARPORA Bondowoso Regency 6) BKSDA East Java Region III 7) Perhutani Bondowoso Regency

There are several government efforts to develop Ijen Geopark tourism, including updating facilities and infrastructure, amenities and visibility of Ijen Geopark tourism. Infrastructure improvements aim to provide comfort and the best service to tourists visiting Ijen Geopark. Infrastructure development involves several government parties such as BSBK, BPBD and Perhutani Bondowoso Regency. Next is the provision of amenities. Amenities are the provision of all the facilities that tourists need while visiting Ijen Geopark, such as providing restaurants, accommodation, cafes, places of worship, etc. Meanwhile, visibility is the visibility of a tourist attraction to potential tourists. In this case, to increase the visibility of Ijen Geopark, DISPARPORA is collaborating with PHIG and the media to promote Ijen Geopark through various media, both print and electronic media such as printing Ijen Geopark booklets, installing Ijen Geopark banners and creating content on various social media. Apart from the three things above, there is something that is no less important, namely the preparation of Human Resources (HR) which has a strong tourism awareness foundation. The formation of human resources who have a tourism-conscious character and a high entrepreneurial spirit is carried out through training held by the government with the aim that the community around Ijen Geopark can provide good feedback in order to increase the community's economic empowerment. The training provided is very diverse, including tracking guide training, tourist village management training, cultural tourism guide training, etc.

One of the ways in which empowerment has been carried out is by providing capital loans for those who have the desire to build a business, holding training, then budgeting around 25 million for several dervish groups to

manage MSMEs. There are those who set up cafes, stalls, and so on.

Based on the explanation above, it shows that the management of Ijen Geopark is under the auspices of BKSDA. BKSDA has the responsibility to manage and empower the economy of the community around Ijen Geopark for the sustainability and development of Ijen Geopark tourism. Forms of empowerment carried out include providing capital loans for prospective business actors, provision and training regarding business, and empowerment through communities in the Ijen Geopark area.

b. Stakeholder

Stakeholder is a group that is an actor in implementing the penta helix from business representatives. This group is part of the business world related to Ijen Geopark tourism. After being designated as part of the UNESCO Global Geopark (UGG), of course it is a challenge for Ijen Geopark to be able to develop its tourism into international level tourism. Therefore, it is a golden opportunity for business actors to participate in developing Ijen Geopark tourism.

So it is closely related to quality human resources in playing a role in developing Ijen Geopark tourism. Ijen Geopark Bondowoso has several sites registered with UGG, including 10 geological sites (geosite), namely Ijen/Bluefire Crater, Wurung Crater, Kalipait Acid Flow, Gentongan Waterfall, Blawan Hot Springs Complex, Blawan Lava, 81 Ijen Megasari Caldera Walls, So'on Solor Rock Park, and Plalangan Lava Flow. It also consists of 2 biological sites (biosites), Pelangi Forest and Bondowoso Coffee. Then there are 5 cultural sites (culturesite), namely Singo Ulung, Butha Cermee Cave Structure, Butha Sumbercanting Cave Structure, Sumberwringin, Maskuning Kulon Megalithic Site and Coffee Picking Dance.

The sites above are potential sites and provide great opportunities for business actors to take part in the development of Ijen Geopark tourism and participate in tourism activities.

Based on the explanation above and observations made by researchers, there are several business actors in the Ijen Geopark tourist area which are classified into: 1) Culinary Tourism Ijen Geopark culinary tourism offers various processed food and beverage products. Culinary is closely related to tourist attractions because it involves logistics. Moreover, Ijen Geopark tourism is a climbing tourism so it is an opportunity for business people to provide food and drink products for tourists who want to eat while enjoying the panoramic view of the beauty of the Ijen Crater peak. Food and beverage businesses in Ijen Crater are divided into two categories, namely; a) Culinary Tourism in collaboration with DISPARPORA with the Bondowoso community, and b) Street Food Stalls spread across various areas of the Ijen Crater. The following is a portrait of one of the Ijen Geopark culinary tours. 2) Mask and Jacket Rental Due to the cold weather and peak temperatures, this business has a promising opportunity. Mask and Jacket Rental makes it easy for tourists to make their tours and climbing trips more practical. Apart from masks and jackets, other climbing knick-knacks are also available such as head coverings, gloves, backpacks and so on. 3) Tour Guide/Guide Services Renting a guide or renting a tour guide is really needed for climbers who are still beginners. Renting a guide is highly recommended for ease and comfort in climbing. The tour guides are people who are used to Ijen conditions. So that tour guides can ensure the comfort and safety of their members during the climb. Apart from these 84, the tour guides will provide important information during the climb, such as climbing requirements and good photo spots during the climb. 4) Climbing support services Climbing support

services are service products offered by business actors in the form of transportation known as trolleys. This trolley taxi service is an alternative for tourists who are reluctant to climb on foot. There are at least 10 business actors who provide this trolley taxi service. Each trolley service provider varies in setting prices. The majority of business actors in the Ijen Geopark tourist area come from former sulfur mining workers in the Ijen crater area. Sulfur mining workers who have stopped changing professions become business actors who offer guide services or better known as tour guides. The former sulfur mining workers have experience and mastered the climbing routes in the Ijen Crater tourist area so they can ensure tourists feel comfortable during the climb. Apart from that, there are also active mining workers who offer trolley services and push to the top of Ijen Crater

The business actors above certainly synergize with other stakeholders to support the development of Ijen Geopark. The collaboration carried out includes the management of Ijen tourism which is carried out with government agencies, in this case BKSDA and DISPARPORA. Apart from that, business actors also collaborate with academics who are qualified in the tourism sector through their latest research to support the development of Ijen Geopark tourism through the business world.

c. University or Academics

In this section, the development of Ijen Geopark will involve academics in the field of tourism science. In the Penta Helix model, academics have a role as drafters through data analysis in the field which gives birth to new ideas in the future development of Ijen Geopark tourism. This means that academics are the actors who bridge the implementation of science-based Ijen Geopark development.

Ijen tourism development should be a shared responsibility. We here as

academics position ourselves as producers of innovation through research in the field whose results will later become a common reference for managing Ijen Geopark tourism in the future. Research related to Ijen Geopark is not only focused on tourism science. However, in other aspects such as environmental health, natural sustainability, economics and education.

According to the explanation above, it is clear that the role of academics in the development of Ijen Geopark tourism is demonstrated through research conducted by various scientific experts at universities. Several scientific fields that are research topics include nature and environmental sustainability, economics and education. To create tourism that is futuristic and continues to exist, academics of course collaborate with other stakeholders in the Ijen Geopark development process. Academics collaborate with the government in determining policies that are deemed to need updating based on research that has been conducted. Academics also collaborate with Bapedda and DISPARPORA in several science-based activities such as: a. Procurement of community empowerment studies b. Making the Ijen Geopark master plan c. Training on governance and increasing HR capacity d. Guide training e. Homestay management training

Furthermore, there are non-research activities such as training and outreach to the community regarding matters relating to Ijen Geopark. As we have done, we provide education about environmental sustainability. There is also training related to developing human resources with a tourism perspective, making master plans, and other training and counseling that comes into direct contact with business actors, such as guide training, managing homestays, restaurants and so on... So that in developing Ijen Geopark we are doing this together. - Same bro, and of

course we academics are present in the middle.

d. Media

In the penta helix model, the media plays a role as an expander. Media is a place to introduce Ijen Geopark to a wider reach. The media carries out publications and promotions to increase the reputation of the Ijen Geopark brand. Media provides easier access for prospective tourists to obtain information about Ijen Geopark. Based on observations made by researchers, there are many mass media that actively publish news and information about Ijen Geopark, ranging from local media such as Bondowoso Tourism, Bondowoso Radar, JMSI to national media such as Travel Kompas, merdeka6, detik.com. The mass media above will directly cover the latest news about Ijen Geopark as well as tourism events held at Ijen Geopark.

Based on the explanation above, it shows that JMSI media actively covers and publishes information about Ijen Geopark, even collaborating with the government and actors. An example of cooperation carried out with the government is related to communication and information related to Ijen updates in media coverage. JMSI Media is also active in promoting the products of Ijen Geopark business actors. Of course this provides positive feedback for business actors and for the development of Ijen Geopark. Apart from mass media, social media is no less important in terms of publication and promotion of Ijen Geopark, especially in this era of technological development. The use of social media has an important role in easy internet access for potential tourists to access the latest information about Ijen Geopark. Ijen Geopark has social media accounts on several platforms including: 1) Instagram: [instagram.com/geoparkijen](https://www.instagram.com/geoparkijen) 2) Facebook: [facebook.com/IjenGeopark](https://www.facebook.com/IjenGeopark) 3) Tiktok: [tiktok.com/kawahijen](https://www.tiktok.com/kawahijen) 4) Youtube: [youtube.com/IjenGeopark](https://www.youtube.com/IjenGeopark) Social media owned by Ijen Geopark not

only contains the latest news about Ijen Geopark, but also contains content that can attract the interest of potential tourists. Social media management is carried out by a creative team who are members of the Ijen Geopark Daily Management (PHIG).

Social media has become a field for promotion and introducing Ijen Geopark to the world. It's our creative team that's in charge, bro. As for the social media content itself, it's like videos and photos that show off the natural beauty of Ijen Geopark.

Based on the observations and explanations above, it shows that social media owned by Ijen Geopark shares videos and photos of the natural beauty of Ijen Geopark. It is not uncommon for the Ijen Geopark creative team to edit Ijen Geopark's social media content according to what is currently trending on social media.

e. Community

The role of the community in tourism development using the pentahelix model is as an accelerator. The community comes from the surrounding community with interests that are in line with the existence of the Ijen Geopark tourist attraction. The community is a group that bridges connections between society and the government which aims

5. CONCLUSION

Tourism development using the pentahelix model involves five elements, namely government, stakeholders, academics, community or society and the media. This model contributes to a more comprehensive community empowerment design and is able to provide income to the community. Apart from that, the pentahelix model contributes more to prosperity and independence for

to make it easier to achieve the common goal, namely the development of Ijen Geopark.

This is as explained by Brother Nurul as the General Chair of the Tourism Awareness Group or better known as Pokdarwis in Kalianyar Village, Ijen District: The formation of this Pokdarwis in Kalianyar started with my friends and I realizing the importance of empowering the surrounding community to help develop the name of Ijen, bro. So that through this community it can become a liaison between the government and the community to participate in advancing Ijen Geopark. The Pokdarwis community also synergizes with the media and academics through training and mentoring by academics as well as product publications and promotions by the media. This pentahelix model is much more complete than the triple helix model, so it can produce more successful and successful community empowerment designs [42]. The empowerment design resulting from the pentahelix model is a design for empowering independent communities with an entrepreneurial spirit. So, it is able to contribute to family income and regional income [17].

society. So, the pentahelix model is more suitable for use in the context of tourism development.

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