

Resilience Strategy for The Tourism Sector in the New Normal Era: Pentahelix Synergy

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Abstract

This study aims to explore the impact of the COVID-19 outbreak on tourism in Batu City and formulate a resilience strategy. This study uses a model-building method with a descriptive approach, this is based on the purpose of research that examines tourism problems in Batu City as a result of the COVID-19 outbreak. Several strategies and programs have been inventoried for tourism recovery in Batu City, namely: rebranding of Batu City tourism, innovation for tourism village, development health protocol awareness movement, tour package innovation, institutional strengthening. All parties in the pentahelix (academics, business, community, government and media) play an important and significant role in the development of Batu City tourism. The pentahelix synergy in tourism recovery in Batu City is an effective strategy. Some strategies and programs that are implemented will not be optimal if one party does not play a maximum role. Therefore, collaboration is absolutely needed in the restoration of tourism in Batu City.

Keywords: Resilience Strategy, New Normal Era, Pentahelix Synergy

Introduction

Batu City is one of the leading tourist destinations in East Java. As a small city in East Java, Batu City, is able to become a first choice tourist destination visited by various domestic tourists. The impact of the Covid-19 pandemic on the economy of Batu City is quite large. The tourism sector, which is the leading sector in the city, was the most affected. This is exacerbated by the policy of restrictions for restrictions imposed by the government as an effort to break the Covid-19 chain, making tourism decline sharply. In 2020, the number of tourists coming to Batu City declined by 70 percent. The number of tourist arrivals in Batu City in 2020 is only 2.5 million visits. Reflecting on the achievements of 2019, the target of 6.5 million people was successfully exceeded by up to 7.2 million tourists (Disparta, 2021).

The decline in the number of tourist visits has implications for regional income from the tourism sector. PAD (local revenue) from the tourism sector reached Rp 38.7 billion or almost 40 percent. In 2019, the tourism sector's contribution to PAD reached 60 percent. Of the total PAD collected, Rp 200 billion. Realization of PAD in 2020 reached Rp 123.6 billion, meaning a decrease of 38.5 percent from the PAD of Batu City in 2020. Likewise with the PAD, investment sector in Batu City, throughout 2020 the incoming investment value was IDR 1 trillion, which was inversely proportional to the investment value recorded in 2019 which reached IDR 1.9 trillion (DPMPTSPK, 2021).

Based on the problems and descriptions above, this article describes the impacts of the COVID-19 outbreak on tourism in Batu City. In addition, this article proposes recommendations for what actions each actor in the Penta Helix Model (PHM) should take in the future to return tourism to its original condition before the COVID-19 outbreak, further what policy instruments must be prepared by the government. Batu City so that it can be used as a guide for stakeholders in Batu City to jointly realize tourism recovery and be able to bring in large numbers of tourists. The study on the impact of the COVID-19 outbreak on tourism in Batu City is expected to provide an overview of tourism conditions to the parties concerned and it is hoped that the policy recommendations compiled in this article can be used as input for the formulation of tourism recovery policy instruments after the COVID outbreak. -19 in Batu City.

Literature Review

The Triple Helix Model (THM) has been widely used in the literature that focuses on the relationship between universities, industry and government as a strategy to drive innovation dynamics. The THM emerged as a framework for the analysis of knowledge-based innovation systems, emphasizing the multiple and reciprocal relationships between the three main actors in the process of knowledge creation and capitalization (Lombardi et al., 2012). In this model of knowledge and innovation, each helix corresponds to its traditional function: universities provide creative researchers, companies turn research and creativity into products and innovation, and governments contribute with legislation and financial support. In addition, each helix can play the role of another helix. The interaction and reciprocity between the three fields is a key element of the innovation process (Etzkowitz, 2003; Laguna & Duran-Romero, 2017).

The new economic and social findings encourage rethinking the THM and expanding it with the addition of a new helix, given the presence of media and culture (organized civil society) as a supporter of knowledge dissemination towards a knowledge society (Carayannis & Campbell, 2010). Therefore, the quadruple helix model (university-industry-government-society) reinforces the need for the knowledge economy to advance in parallel with the knowledge society (Carayannis et al., 2012; Laguna & Duran-Romero, 2017) In this helix, civil society is also the user of innovation, acting as a driver of the innovation process and is a very important user for the model and driving the development of innovations that are relevant to them (Arnkil et al., 2010; Carayannis & Rakhmatullin, 2014). The central idea of this helix is the representation of “other actors” who occupy strategic positions and have a major role in the expression of their needs and demands in social groups (Aranguren et al., 2018; Lindberg et al., 2012; Mulyaningsih, 2015).

In addition to the four helix representation as shown by Arnkil et al. (2010) and Carayannis & Campbell (2010), society can include different entities, such as financial organizations (Colapinto & Porlezza, 2012), citizens and workers (Campanella et al., 2017; Grundel & Dahlström, 2016), nongovernmental organizations or associations (Grundel & Dahlström, 2016), groups (Mineiro et al., 2021) or arenas with multiple actors (Hasche et al., 2019). Research by Mulyaningsih (2015), Campanella et al. (2017) and Machado et al. (2018) shows a clearer quadruple helix performance. Mulyaningsih (2015) treats it as a

community with a major role in attracting the innovation process, by creating demand for goods and services. The author studied two cases: the Creative Community Association (CCA) and the Community Development Center (CDC). In the case of the CCA, it is at the center of the helix, with government and society being the dominant helix. In the case of the CDC, industry is the dominant sector, and the center plays a role in helping the community. Campanella et al. (2017) observed that this helix is an explanatory variable for maintaining the importance of collaboration with users, consumers, and citizens to create innovation. Finally, for Machado et al. (2018), society participates in innovation dynamics, including various forms of commercialization, and all actors create value in the innovation ecosystem.

The Pentahelix is a socio-economic development model that encourages the use of knowledge to pursue innovation and enhance entrepreneurial skills through partnerships and collaborations between academia, government, industry, NGOs and the civil society sector, and social entrepreneurs (Tonkovic et al., 2015). This means that if the Penta Helix stakeholders work together synergistically, it will provide benefits in growing innovation and creating an innovation-based economy. According to (Soemaryani, 2016) the pentahelix model is a reference in developing synergy between agencies to achieve goals. According to (Rampersad et al., 2010) the role of pentahelix collaboration has the goal of innovation and contributing to regional socio-economic progress. In the field of tourism Aribowo (2019) said that in creating orchestrations and ensuring the quality of activities, facilities, services, creating experiences and values of tourism benefits in order to provide benefits and benefits to the community and the surrounding environment, it is necessary to encourage the tourism system through optimizing the role of academics, business, community, government, and media (media publications) or ABCGM.

Jahid (2019) stated that the history of the development of the concept of synergy in development began with the idea of a triple-helix which was 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 as a complement to the triple-helix concept that had already developed. While the pentahelix concept was proposed by Riyanto in 2018 by involving the media, which currently plays a very significant role in developing social capital. The following is the role of each element in the pentahelix.

Table 1. The Role of Pentahelix in Tourism

Element	Role
Government	<ul style="list-style-type: none"> • Regulation • Guidance • Implementation • Supervision
Industrial/Private	<ul style="list-style-type: none"> • Sources of venture capital • Create jobs • Local human resources as tourism industry players
Academics	<ul style="list-style-type: none"> • Implementing tourism HR training and development • Executor of scientific studies

	<ul style="list-style-type: none"> • Implementing socialization and assistance to community groups
Local community	<ul style="list-style-type: none"> • Acting as a business actor who is engaged directly/indirectly in the tourism industry • Monitor the impact of tourism on the culture and social community
Media	<ul style="list-style-type: none"> • Promotion instrument • Information distribution • Tourism image improvement

Source: Jahid (2019)

Method

This study uses a model-building method with a descriptive approach, this is based on the purpose of research that examines tourism problems in Batu City as a result of the COVID-19 outbreak. By using a descriptive approach, the results of the analysis will be obtained in the form of a natural description of the reality of tourism in Batu City which involves the following matters: First, how is the impact of COVID-19 on tourism in Batu City. Second, what steps or efforts should be taken by the government so that tourism in Batu City can run optimally as before. The description of the problem above is in line with the understanding of experts such as (Creswell, 2016) which state that qualitative research with descriptive analysis methods will produce a description of the reality of the problem naturally in descriptive form and not in the form of descriptive analysis. statistical figures.

The model-building method is used to construct tourism recovery in Batu City based on findings in the form of the impact of the COVID-19 outbreak on tourism in Batu City. This understanding is in line with the opinion of (Shepherd & Suddaby, 2016) which suggests that theoretical findings can be built on the empirical basis in the field. The data as the basic source of analysis in this study were obtained using a documentation data collection technique (documentary study) in which various data deemed relevant to the research being conducted were sourced from books, journals, laws and regulations, web pages and other reference sources. . This data will then be processed through three stages consisting of data reduction, data presentation/display and drawing conclusions Creswell (2016).

Result

Impact of the Covid19 Pandemic on the Tourism Sector

The Covid-19 pandemic has greatly impacted the tourism sector in Indonesia, including in Batu City. The impact of Covid-19 is felt from not only health, but also economic aspects. As a city that relies a lot on the tourism sector, Batu City has felt the impact so much that it has fallen into disrepair in many aspects. The impact of the COVID-19 pandemic is not only felt by the government and the private sector, but also including street vendors and residents of Batu City. The Batu City Government was forced to stop existing tourism due to policy demands from the government regarding Large-Scale Social Restrictions (PSBB) as stipulated in the Decree of the Minister of Health No:HK.01.07/MENKES/259/2020. Not only shopping centers, tourist destinations and even

MSMEs have also felt a significant impact since the Covid 19 pandemic which has changed the condition of Batu City which is usually crowded with tourists who are on vacation, but has experienced a very sharp decline in visitors. The PSBB policy has implications for reducing the number of tourists visiting Batu City by 68 percent as shown in the following figure:

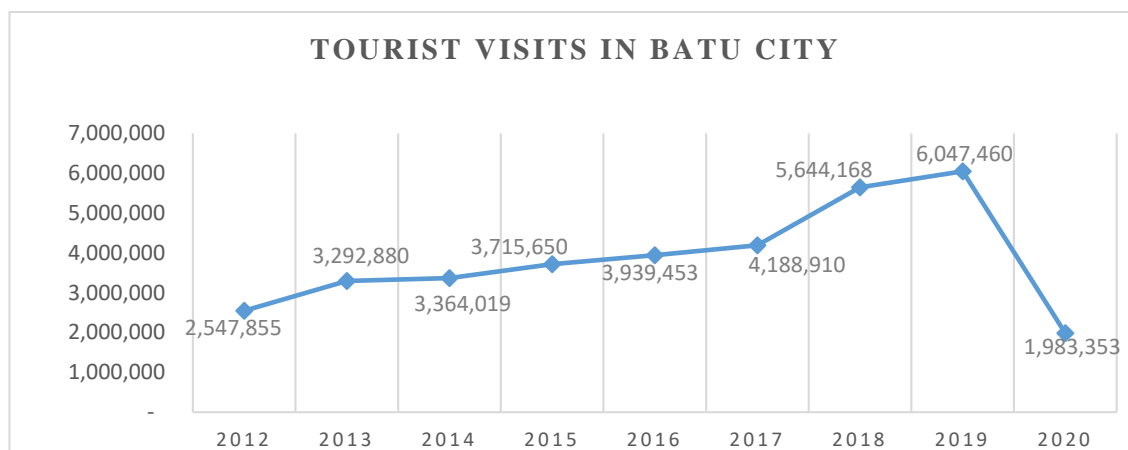


Figure 1. Tourist visits in Batu City

In addition, the impact of this pandemic has greatly affected Batu City's Original Regional Revenue (PAD), which is mostly generated from the tourism sector, especially PAD related to the tourism sector. In 2020, Batu City's PAD reached Rp 136.95 billion. The tourism sector contributes the highest to PAD, which is almost 40 percent. In 2019, the tourism sector's contribution to PAD reached 60 percent. With the cessation of tourism activities in Batu City, the potential loss will be very large, in which the target of tax revenue from the tourism sector will be much reduced compared to 2019. Overall tax revenue in 2020 decreased by 28.4 percent. The biggest decline occurred in tourism supporting sectors such as hotel tax, restaurant tax, entertainment tax, parking tax and underground water tax. The loss of potential tax revenue from the tourism sector will have direct implications for Batu City's PAD where regional income is needed to finance various development recovery programs after the COVID-19 outbreak, including to finance tourism recovery programs.

Table 2. Revenue of Batu City Regional Tax Sector

No	Tax Type	2019	2020	+/-
1	Hotel Tax	33,308,563,239	19,701,670,536	-40.9%
2	Restaurant tax	18,209,120,880	13,053,369,040	-28.3%
3	Entertainment Tax	32,117,335,069	14,251,004,321	-55.6%
4	Advertisement tax	1,059,661,497	1,005,272,224	-5.1%
5	Street Lighting Tax	15,128,084,978	14,295,487,734	-5.5%
6	Parking Tax	2,700,803,666	1,189,552,541	-56.0%
7	Underground Water Tax	1,686,621,970	688,669,650	-59.2%
8	Land and Building Tax (PBB)	22,555,042,105	13,117,768,833	-41.8%
9	Tax on Acquisition of Rights on Land and Buildings (BPHTB)	33,398,566,998	37,413,912,131	12.0%
	Amount	160,163,800,402	114,716,707,010	-28.4%

The Covid-19 pandemic has forced governments around the world to be alert in dealing with the various impacts, including on the tourism sector. This is in line with research conducted by Polukhina et al., (2021) which suggests that the concept of sustainable development in solving local tourism development problems, especially during the pandemic, is very important for the government and related stakeholders.

Based on this, efforts to restore tourism after COVID-19 in Batu City are absolutely carried out based on at least 5 (five) reasons, namely: First, Batu City already has an image as a tourist city with many types of tourism activities, but these activities have been stopped due to COVID -19. Efforts to restore tourism in Batu City after COVID-19 are interpreted as a way to restore the image of Batu City tourism as well as a way to restore tourism activities that have been taking place in Batu City. Second, tourism does not only provide income to the Batu City government through taxes and levies, but has also become a source of livelihood for the community, so that tourism recovery efforts are interpreted as an effort to restore the economy of the community, especially those who work in the tourism sector to return to their initial conditions before the existence of tourism. COVID-19.

Third, tourism in Batu City is one of the leading sectors that contribute to development, so that efforts to restore tourism are not only interpreted as sectoral efforts in the tourism sector, but are also interpreted as efforts to restore the development process in general. This is because tourism is related to many other sectors in development which will provide multiple positive effects. Fourth, efforts to restore tourism in Batu City have become a momentum to convince stakeholders including tourism business actors that the Batu City Government is committed to continuing the development process in the new normal era, one of which is tourism development, so that it is hoped that it will be able to convince and encourage local residents. These stakeholders to work together according to their respective capacities. Fifth, tourism recovery efforts in Batu City are interpreted as tourism rebranding which is expected to be able to provide confidence to tourists that the overall condition of Batu City has returned to its initial condition, including tourism conditions that have recovered and are ready to organize tourism activities, so that tourists will return to doing tourism activities in Batu City.

Tourism Resilience Strategy in the New Normal Era

The Batu City Government targets economic growth of 5.4-5.8 percent in 2022 with a focus on handling and strengthening the economic sector as well as infrastructure development and sustainable spatial planning. The recovery of the regional economic sector carried out by the Batu City government is based on leading economic transformation from the agricultural sector, tourism, MSMEs and village empowerment. The reorientation of tourism development policies is the first step that must be taken by the Batu City government considering that the annual tourism development policy has been prepared by the Batu City government along with its budget. The reorientation of tourism development policies is aimed at remapping tourism programs and budgets as well as tourism potential within the scope of tourism development in the new normal era, so that various programs to be implemented and their budgets will be adjusted to current conditions.

The COVID-19 pandemic has ravaged the tourism industry landscape. Currently there is a new tourism economy model (new tourism economy) which is characterized by 4

characteristics: First, Hygiene, when the threat of COVID-19 continues to lurk, then Cleanliness, Healthiness, Safety, Environment (CHSE) becomes the main priority and preference of consumers. So adherence to health protocols is a key factor in the recovery of this industry so that the discipline of health protocols becomes the most powerful branding tool.

Second, Low-Touch. During the pandemic, physical contact will be avoided because it is a source of massive COVID-19 transmission. So the nature of the tourism industry has changed from high-touch to low-touch. So the contactless solution is the main choice for tourists. And digital is a temporary solution as well as forever. Third, Less-Crowd When crowds are increasingly avoided in the pandemic era, tourists will choose destinations and attractions that are far from crowds (less-crowd) and in remote areas. Then solitude and remoteness will become the new "luxury". Wellness and mindfulness will be sought in the midst of fear and mental anxiety due to the pandemic. Fourth, Low Mobility. The era of the pandemic is the era of low-mobility. People reduce mobility because the farther the movement is, the greater the potential for COVID-19 transmission. Tourists will tend to make short trips. In the beginning, traveling by plane was avoided and they preferred to use land transportation (roadtrip), especially private cars.

The presence of a new tourism economic model encourages the government and tourism industry players to build innovation, adaptation and collaboration strategies. The reduced level of tourist visits during the pandemic has encouraged players in the tourism industry to make various innovations in order to survive in the midst of a pandemic. The tourism industry and other supporting sectors must not run out of ideas to innovate during the COVID-19 pandemic. Based on the results of the literature review on various strategies in handling the impact of COVID19, several strategies and programs have been carried out and proposed as the flagship program of economic recovery in Batu City from the tourism sector. The following table presents the data:

Table 2. Strategy and Program

Strategy	Program
Rebranding Batu Tourism City	<ul style="list-style-type: none"> • “Come to Batu City” and "Let's Go to Batu" Campaigns • Organizing various massively publicized events to help increase tourist visits and the economy of the people who depend on existing tourism. • a. Cooperation with travel bloggers, vloggers, and celebrities for travel campaigns. The use of travel bloggers, vloggers and celebrity services is quite effective in creating brand awareness in Batu City.
Innovation for Tourism Village Development	<ul style="list-style-type: none"> • Campaigning for Healthy, Safe and Friendly Tourism Villages (Dewi Sandra). This innovation is carried out to ensure the safety and health of tourism in Batu City, especially at the tourism village level • Build new tourist destinations based on nature, special interests, culture, and religion. • Building supporting infrastructure for tourism village development
Health protocol awareness movement	<ul style="list-style-type: none"> • CHSE certification • Develop supporting facilities to meet health protocol standards at all tourist sites and support tourism • Organizing socialization and training on health protocols • Making leaflets or X-banners of appeals regarding health protocols at every front desk of tourist attractions and hotels

Tour package innovation	<ul style="list-style-type: none"> • Special tour packages • Promo packages or hot deals • Joint promotion among tourism actors • Create product bundling or discount packages
Institutional Strengthening	<ul style="list-style-type: none"> • Strengthening BUMDes • Strengthening Poktan • Family Welfare Empowerment Organization (PKK) • Strengthening of tourism awareness groups (Pokdarwis).

The COVID-19 pandemic has changed many things, including trends in tourism. The COVID-19 outbreak has made health and safety a top priority. The selfie trend in instagramable places will be one that will be displaced by this pandemic. Nature tourism will become a popular trend that is favored by the public in new normal conditions. In the early stages of recovery after the pandemic, the boredom caused by staying at home will encourage tourists to go out of the house to simply enjoy the fresh air and natural beauty. The reason is because nature provides great benefits for health, but low risk. Nature tourism also provides the flexibility to continue to implement physical distancing with other tourists. Adventure-based nature tourism also has a great opportunity to be popular during the new normal, especially activities in small groups with dynamic activities, such as trekking, snorkeling, and diving. As self-social distancing will become a new habit in the next normal era, tourists will tend to avoid traveling in groups or in groups. Micro-tourism and even solo traveling will be an option, especially among the millennial and millennial generations, at least until the vaccine is mass-distributed later. That way, some destinations that have been popular with many people (mass tourism) will also be temporarily avoided. Serving destinations and attractions that offer the concept of nature, eco, wellness, adventure (NEWA) will be more in demand and become the new mainstream in the tourism industry. In 2021, NEWA's innovations will evolve rapidly to capture this shift in traveler preferences. Local governments and tourism managers must be able to present tourism with the concept of localize, personalize, customized, and smaller in size.

The Batu City Government has carried out various innovations related to this shift in tourist interest. The Batu City Government has issued Regional Regulation No. 1 of 2021 concerning Tourism Villages to achieve the vision of a victorious city empowered village as well as a momentum for the revival of Batu City tourism. Some of these innovations include: 1) rebranding tourism by campaigning for "Let's Go to Batu" to prove that Batu City is ready to rebuild its tourism but still comply with existing health protocols; 2) organize a variety of events that are published massively to help increase tourist visits and the economy of the people who depend on existing tourism. These events include "Sambang Batu Biro in Java-Bali", Sambang City, Festival Photography, Festival VLOG (Video Blog) which is open to the public while still applying the discipline of health protocols; 3) build a new tourist destination named "Sendratari Arjuna Wiwaha" The art shown is a typical art of Batu City which has received an award from the Ministry of Education and Culture as an Intangible Cultural Heritage (WBTB), namely the art of jaran braid and the art of bantengan; 4) Campaigning for a Healthy, Safe and Friendly Tourism Village (Dewi Sandra). This innovation is carried out to ensure the safety and health of tourism in Batu City, especially

at the tourist village level; 5) Developing the potential for culinary tourism, religious diversity tourism and rafting tourism in Mojorejo Village; 6) Developing Village Garden Tourism in Tulungrejo Village; 7) Develop a Flower Mall in Sidomulyo Village, with the concept of one stop shopping so that tourists can buy various flowers. In addition, products are also sold through the marketplace. Payments can also be made using non-cash transactions, simply by scanning a barcode, or a QR code to reduce interactions between sellers and buyers.

Along with the implementation of the PSBB transition to the new normal, the tourism industry has also adapted by implementing distance and capacity restrictions and complying with health protocols that meet CHSE. Hospitality will remain the "spirit" of service to consumers. But that's not enough. The COVID-19 pandemic has raised tourists' awareness of the CHSE (Cleanliness – Health – Safety – Environment) concept. Therefore, hospitality service must be perfected with hygiene, low-touch, less crowd (HLL) solutions to produce a complete service. In the next normal era, CHSE will be the main consideration for tourists in choosing tourist destinations. The government and tourism destination managers quickly responded to this issue by taking health measures. In various public places, including tourist destinations, it has also required visitors to wear masks, provide hand-sanitizer in every corner of the place, to limit visitors and increasingly tightened queue distances.

The recovery period for the tourism industry to welcome the new normal will be filled with promo packages or hot deals to attract tourists back to vacation. Tourism actors such as hotels and travel agents to tourist attractions can collaborate to design hot deals packages that provide offers that consumers cannot refuse. Joint promotions between tourism actors, making bundling products or tempting discount packages can be done to revive the tourism sector which is in a slump. This aims to boost the economy and make consumers willing to spend money during a pandemic. As a result, business people began to be creative and innovative in making offer packages. Industry players can offer special mini group tour packages or exclusive tour packages. This tour package service will become popular in the future because people tend to be more comfortable going with people they know closely. So that the potential for transmission of the virus from other tourists can be avoided. For example, in the hotel sector, the problem faced is the decline in room occupancy during this situation, which has prompted hotel owners to issue innovations such as lodging packages ranging from vacation packages "Staycation At Hotel", best price offers for 4-star hotels and above and ease of payment "Book Now, Pay. Later". In addition, hotel owners can also maximize other businesses when room booking demand drops through offering buffet & restaurant menu packages that can create additional income for hotel owners.

In addition, institutional strengthening needs to be carried out on BUMDes, Family Welfare Empowerment Organizations (PKK), and existing tourism awareness groups (Pokdarwis). Through strengthening BUMDes, local communities can invest in the development of tourist villages. Economically, the tourist village can also ultimately prosper the surrounding community.

Pentahelix Synergy in Tourism

The government's alignment with developing tourism in Indonesia is marked by the recognition of this sector as one of the economic pillars, especially in bringing in foreign exchange, increasing regional income and absorption of investment as well as reducing unemployment by opening up many new jobs. However, the development of this sector cannot only depend on the government, given that many parties are involved and have an interest. Therefore, there is a need for synergy in the management of the tourism industry, especially when faced with the situation in this new normal era. The pentahelix synergy in Batu City tourism development is as shown in the following figure:



Figure 2: Pentahelix synergy in tourism development

The role of academics here is to make inventions and innovations for tourism development, create tourism support application technologies, help build business models for tourism business actors, provide consultation and assistance and empowerment for tourism actors through various kinds of training. The number of universities in Malang Raya include 6 universities in Batu City, 61 universities in Malang City, 19 universities in Malang Regency. They also assist the Batu City government by conducting a thorough study of public perceptions of the event, evaluation studies on the effectiveness and efficiency of activities, to measuring the impact of activities on the tourism sector, assisting the city government in training, mentoring and empowerment as well as becoming expert staff for tourism development. .

The government is one of the stakeholders who has the power to make policies and regulations, build infrastructure, provide assistance and consultation, encourage the creation of community empowerment and be responsible for developing tourism. Act as a regulator

as well as a controller. In this case it involves all types of activities such as planning, implementation, monitoring, control, promotion, financial allocation, licensing, programs, legislation, development and knowledge, public innovation policy, innovation network support and partnerships. Several things that the government has done to overcome the pandemic are providing Tourism grants, free CHSE (Cleanliness, Health, Safety, and Environmental Sustainability) Certification and Tourism Reactivation Stimulus by the ministry of tourism and the creative economy. Meanwhile, the Batu City government carried out rebranding, held events contained in the tourist calendar, promote tourism, conducted training, built various main infrastructure and tourism support and others to develop tourism.

Business actors are hotels, homestays, restaurants, travel agents, gift centers, MSMEs, insurance agencies, brokers who act as enablers who provide facilities and quality for regional economic progress and can help tourism development become more effective, efficient, and productive. . Other roles played include developing markets, helping to increase the value added of other actors, providing CSR and building networks with various other actors to develop tourism.

The community acts as an accelerator, actor, mover and communicator that helps tourism development in the whole process from the start. Several communities in Batu City are POKDARWIS, homestay association, PHRI, ASITA and ASPPI. They become the driving force of activities that will carry out operational events or become connoisseurs of the ongoing event; acting as a business actor who is engaged directly/indirectly in the tourism industry; monitor the impact of tourism on the culture and social community; receive and disseminate good information; intervene in the community related to the planned program and as a facilitator who is able to bridge other actors in the network.

Furthermore, the media serves as a provider of information, education, entertainment, and as a social controller. The media also acts to help information dissemination and publicity of various tourism events that are carried out. The media that helped the publicity of Batu City a lot were 10 Local TVs, 12 National TVs, Bulletins and local mass media and radio. The Batu City Government also builds an information network through the website of the tourism office, the Ministry of Communication and Informatics, various social media, brochures, banners and others for promotional and publicity activities.

Conclusion

The tourism sector is a sector that has the potential to be explored in recovery in the new normal era. In this study, several strategies and programs have been inventoried for tourism recovery in Batu City, namely: Rebranding Batu Tourism City, Innovation for Tourism Village, Development Health protocol awareness movement, Tour package innovation, Institutional Strengthening. All parties in the pentahelix (academics, business, community, government and media) play an important and significant role in the development of Batu City tourism. The pentahelix synergy in tourism recovery in Batu City is an effective strategy. Some strategies and programs that are implemented will not be optimal if one party does not play a maximum role. Therefore, collaboration is absolutely needed in the restoration of tourism in Batu City.

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References

- Aranguren, M. J., Magro, E., Navarro, M., & Wilson, J. R. (2018). Governance of the territorial entrepreneurial discovery process: looking under the bonnet of RIS3. *Regional Studies*, 0(0), 1–11. <https://doi.org/10.1080/00343404.2018.1462484>
- Aribowo, H., Wirapraja, A., & Putra, Y. D. (2019). Implementation of the Collaborative Pentahelix Model of Tourism in East Java and Improving the Domestic Economy. *Mebis Journal*, 31–38.
- Arnkil, R., Järvensivu, A., Koski, P., & Piirainen, T. (2010). *Exploring Quadruple Helix Outlining user-oriented innovation models*.
- Campanella, F., Peruta, M. R. Della, Bresciani, S., & Dezi, L. (2017). Quadruple Helix and firms' performance: an empirical verification in Europe. *The Journal of Technology Transfer*, 42(2), 267–284. Retrieved from https://econpapers.repec.org/RePEc:kap:jtecht:v:42:y:2017:i:2:d:10.1007_s10961-016-9500-9
- Carayannis, E. G., Barth, T. D., & Campbell, D. F. J. (2012). The Quintuple Helix innovation model: global warming as a challenge and driver for innovation. *Journal of Innovation and Entrepreneurship*, 1(1), 1–12.
- Carayannis, E. G., & Campbell, D. F. J. (2010). Triple helix, Quadruple helix and Quintuple helix and how do Knowledge, Innovation and the Environment relate To Each other? *International Journal of Social Ecology and Sustainable Development*, 1(1), 41–69. <https://doi.org/10.4018/jsesd.2010010105>
- Carayannis, E., & Rakhmatullin, R. (2014). The Quadruple/Quintuple Innovation Helixes and Smart Specialisation Strategies for Sustainable and Inclusive Growth in Europe and Beyond. *Journal of the Knowledge Economy*, 5(2), 212–239. Retrieved from <https://econpapers.repec.org/RePEc:spr:jknowl:v:5:y:2014:i:2:p:212-239>
- Colapinto, C., & Porlezza, C. (2012). Innovation in Creative Industries: from the Quadruple Helix Model to the Systems Theory. *Journal of the Knowledge Economy*, 3(4), 343–353. Retrieved from <https://econpapers.repec.org/RePEc:spr:jknowl:v:3:y:2012:i:4:p:343-353>
- Creswell, J. W. (2016). *Research Design Qualitative, Quantitative, and Mixed Approach*. Yogyakarta: Pustaka Belajar.
- Etzkowitz, H. (2003). Innovation in innovation: The Triple Helix of university-industry-government relations. *Social Science Information*, 42(3), 293–337. <https://doi.org/10.1177/05390184030423002>
- Grundel, I., & Dahlström, M. (2016). A Quadruple and Quintuple Helix Approach to Regional Innovation Systems in the Transformation to a Forestry-Based Bioeconomy. *Journal of the Knowledge Economy*, 7(4), 963–983. <https://doi.org/10.1007/s13132-016-0411-7>

- Hasche, N., Höglund, L., & Linton, G. (2019). Quadruple helix as a network of relationships : creating value within a Swedish regional innovation system. *Journal of Small Business & Entrepreneurship*, 0(0), 1–22. <https://doi.org/10.1080/08276331.2019.1643134>
- Jahid, Jamaludin (2019). Travel Destinations: Need Synergy and the role of Penta Helix. Accessed from: <https://fajar.co.id/2019/06/17/destinasi-wisata-need-sinergi-dan-peranpenta-helix/amp>
- Laguna, N. E., & Duran-Romero, G. (2017). Science parks approaches to address sustainability: A qualitative case study of the science parks in Spain. *International Journal of Social Ecology and Sustainable Development (IJSESD)*, 8(3), 38–55. <https://doi.org/10.4018/IJSESD.2017070103>
- Lindberg, M., Danilda, I., & Torstensson, B.-M. (2012). Women Resource Centres—A Creative Knowledge Environment of Quadruple Helix. *Journal of the Knowledge Economy*, 3(1), 36–52. Retrieved from <https://econpapers.repec.org/RePEc:spr:jknowl:v:3:y:2012:i:1:p:36-52>
- Lombardi, P., Giordano, S., Farouh, H., & Yousef, W. (2012). Modelling the smart city performance. *Innovation: The European Journal of Social Sciences*, 25. <https://doi.org/10.1080/13511610.2012.660325>
- Machado, H. V., Lazzarotti, F., & Bencke, F. F. (2018). Innovation models and technological parks: interaction between parks and innovation agents. *Journal of Technology Management & Innovation*, 13(2), 104–114.
- Mineiro, A. A. da C., Souza, T. A. de, & Castro, C. C. de. (2021). *The quadruple and quintuple helix in innovation environments (incubators and science and technology parks)*. 18(3), 292–307. <https://doi.org/10.1108/INMR-08-2019-0098>
- Mulyaningsih, H. D. (2015). Enhancing innovation in quadruple helix perspective: The case of the business incubators in Indonesia. *International Business Management*, 9(4), 367–371.
- Rampersad, G., Quester, P., & Troshani, I. (2010). Managing innovation networks: Exploratory evidence from ICT, biotechnology and nanotechnology networks. *Industrial Marketing Management*, 39(5), 793–805. <https://doi.org/10.1016/j.indmarman.2009.07.002>
- Shepherd, D. A., & Suddaby, R. (2016). Theory Building: A Review and Integration. *Journal of Management*, 43(1), 59–86. <https://doi.org/10.1177/0149206316647102>
- Soemaryani, I. (2016). Pentahelix model to increase tourist visit to Bandung and its surrounding areas through human resource development. *Academy of Strategic Management Journal*, 15(249-259).
- Tonkovic, A. M., Veckie, E., & Veckie, V. W. (2015). Applications of Penta Helix Model in economic development. *Josip Juraj Strossmayer University of Osijek*, 4, 385–393.