

## **Economic Development Management Model Based Agro-Ecotourism as a Buffer Zone of Bromo Tengger Semeru National Park: Study in Ngadas, Malang Regency, East Java**

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**Abstract:** In supporting the economic development of the tourism sector, the Government of Malang Regency in 2007 set Ngadas as a tourist village. But so far, economic growth has not appeared as a result of the status. Poverty remains a problem that must be addressed. This study aims to formulate and develop a regional economic development model based on agro-ecotourism as an economic buffer area of Bromo Tengger Semeru (BTS) National Park as well as implementing the model in Ngadas. The research was conducted with a focus on the development of the region's economic development Model. This research is a qualitative descriptive with exploratory nature. The technique of collecting data using interviews, focus group discussions, observation and documentation. Data were analyzed using SWOT analysis and Analytical Hierarchy Process (AHP).

**Key words:** Model of economic development, agro-ecotourism, SWOT analysis, Analytical Hierarchy Process (AHP), technique, collection

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### **INTRODUCTION**

Rural areas in various parts of Indonesia are still tinged with problems of poverty and underdeveloped. Although, it has the potential of abundant natural resources but so far, all this potential is still not able to provide optimal support to community economic actors, especially those active in these areas and in general are still engaged in the informal sector, so that marginalized both socially and economically. To improve the welfare of the community, efforts need independent innovation development in the form of excavation potential resources, development cooperation and investment growth.

The government requires the involvement of other parties, especially the business sector and academics to jointly work together to formulate a plan of development and implementation. These three components are important actors for the success of our economic development program known as the Triple Helix concept (Etzkowitz and Leydesdorff, 2000). Those three parties with the resources, capacity and authority must move together to empower communities to become resilient economy.

In supporting the economic development of the tourism sector, the local government of Malang, East Java in 2007 set the various villages that have the potential of

becoming a tourist village. One of them is Ngadas. Ngadas had considerable potential resources, both natural resources, Human Resources (HR) and economic (SDE). Besides, agriculture other seed can be developed is the tourism sector. Based on the geographical location in the area of Bromo Tengger Semeru National Park (BTSNP), Ngadas has a unique cultural and natural panoramas can be appointed as a package tour.

Although, it has been established as a tourist village by local government in 2007 but it does not yet appear economic growth as a result of the determination of the status. There is no significant growth in business sectors emerging from the spirit as a tourist village. Various obstacles and barriers allegedly arise that requires an active role and interests of the various stakeholders such as governments, business, academics and local communities. Besides, the local government during this time may be stuck on the technical approach that is more oriented resources in rural tourism development than the human development approach (Roberts, 1983).

Based on the conditions, it is necessary to the preparation of the economic development model based rural agro-ecotourism as an economic buffer area of BTSNP based on the findings of real current conditions in the target area and local wisdom, so that the strategic policies made by the government area to be effective and appropriate. The main objective of this study was to

develop a model of economic development, agro-based rural ecotourism as an economic buffer area of BTSNP. Steps to create the model are: identify the factors supporting, inhibiting, opportunities and challenges of economic development in Ngadas; identify competitive products and priorities of regional economic development programs; create a model for rural economic development, agro-based ecotourism.

### **Literature review**

**Rural economic development:** Rural development is a process that is multi-level, multi-actor and multi-aspect (Ploeg *et al.*, 2000). According to Haeruman (1997), there are two sides to examine rural perspective, namely; development of rural areas is seen as a natural process that relies on its potential and the ability of rural communities themselves. This approach minimizes interference from outside so that, the changes are expected to take place within a long period; the other side considers that the rural development as an interaction between the potential of the rural community and encouragement from the outside to accelerate rural development.

Rural development has an important role in the context of national development because it covers the largest part of the national territory. About 65% of Indonesia's population reside in rural areas. Therefore, the development of rural communities should be improved through the development of human resource capabilities that exist in the countryside so that, creativity and its activity is growing and higher environmental consciousness (Adisasmita, 2006).

Rural regions have a key role in supporting national development. Independence development of rural areas is one of the approaches in the development of rural areas to encourage economic development in rural areas by utilizing the existing potentials in the region. The economic development of rural areas is expected to reduce the dependence of rural areas to the cities and strengthen the role of the village as a center of production and the need for development resources.

Socio-economic conditions of people living in rural areas in general still lags far behind that live in urban areas. This is a consequence of changes in the economy and the process of industrialization which economic investment by private and government tend to be concentrated in urban areas (Rondinelli, 1997). Besides, the economic activities developed in urban areas are still many who are not synergistic with that developed in rural areas. As a result, the role of cities which are expected to boost the development of rural areas, it adversely affected the growth of rural areas.

### **Triple helix; a synergy model of rural development:**

Triple-helix approach is a positive synergy between three different actors in discussing the development of innovation. Academics in universities and research institutions with the resources, knowledge and technology focuses on generating findings and innovations applicable. Business people who are in the industry to capitalize which offers economic advantages and benefits to society. While the government to guarantee and maintain the stability of their relationship with favorable regulations (Etzkowitz and Leydesdorff, 2000).

This model emphasizes that the interaction among academics, industry and government is the key to the improvement of conditions conducive to innovation. Irawati (2006) suggested this model involves the university as a center of excellence through academic activities based on research and development, the industry as a provider of customer demand based commercial activities as well as research and development and the government as policy maker in which the integration of these three different actors, this ideal will increasing the abundance of knowledge in an area and in turn promote the development of economic competitiveness.

There are three forms of triple helix model of evolution. The Triple Helix 1 shows a model of college relations Etatistic-industry-government; Triple Helix 2 is defined as a communication system that consists of the operation of the market, technological innovation affecting change in the future and control interface. The interface different functions operating in a distributed mode to third parties as it generates new forms of communication such as the transfer of sustainable technologies or in the Patent Act; Model Triple Helix 3 reveal developmental patterns are complex and dynamic partnership between the three main actors of the innovation system. The actors play a role in the creation of knowledge infrastructure in the form of a spiral circle overlap (overlapping) where each circle takes the role of other parties and on its interface organizations developing hybrid (hybrid organization).

Martini *et al.* (2012) declared the TH Model introduce three dimensions of the social system, namely geography, economics and science. The main actors responsible for the geography dimension is the government that set the region for the dimensions of science are academics who create and share knowledge in the region and to the economic dimension is a business entity that creates economic activity in the region. The interaction between these three dimensions

will create the infrastructure of science, political economy and innovation as a competitive advantage of the region and provide the greatest added value.

**Rural economic development policy:** Approach to the development of rural areas along with the development of agricultural activities have received special attention, through an agropolitan development and rural growth area approach. Agropolitan approach has been a concern of the government since the last 10 years, because it allows the development of agriculture and rural areas together with urban development. Agropolitan concept aims to reduce geographic disparities (regional disparity) as a result of the polarization in the growth of large cities with the decentralization of growth centers in rural areas that could potentially become a new growth pole (new growth poles) for the development of rural areas. Agropolitan development programs on a regional growth center of agribusiness is one of the efforts to realize the concept Agropolitan approach to system development and agribusiness.

The rural growth areas approach focuses on the identification and development of Rural Growth Centre. Rural Development Center (RDC) basically is a program of development of rural areas in order to create a balance between the regions by the rural and urban. RDC program in its handling touch and work on local potential in various fields which is expected to improve the lives and livelihoods of local people without having to leave his village, optimizing the function of rural areas to accommodate community activities as well as improving the quality of housing and residential environments.

During this time there are two wisdom of urbanization in Indonesia developed. First, the development of rural areas in order to have the characteristics of an urban area, which is known as the 'urbanization of the countryside'. Second, the development of centers of economic growth or known as the 'buffer zone growth center'. The second wisdom is to develop small and medium cities that have been there to offset the growth of large cities and metropolitan (Fahrudi, 2006) and contributed to restrain the rate of mobility of rural population to urban areas, especially the educated and skilled population particular in the field of agriculture.

## **MATERIALS AND METHODS**

The study was designed as a qualitative descriptive study. The collection of data based research three main components, space, actor and activity. Researcher acts more as a human instruments that spend a lot of time in

the field. Data collected by the Rapid Rural Appraisal (RRA) method. The method evolved since, the 1980's (Ellis and Biggs, 2001) the steps taken include:

- Key informant interviews
- Focus Group Discussion (FGD)
- Direct observation
- Documentation

**Data processed using SWOT analysis:** SWOT Analysis is a model analysis to compare the external factors such as opportunities and threats to internal factors such as the strength and weakness (Freddy, 2008). Data then analyzed using the Analytical Hierarchy Process (AHP) analysis. AHP is one method that breaks down a complex problem into hierarchical groups. AHP is able to provide an alternative priority and track inconsistency in judgments and preferences of the respondents (Saaty and Saaty, 2002). AHP analysis performed using the Super Decision Software.

## **RESULTS AND DISCUSSION**

**SWOT analysis:** The economic development of Ngadas still faces many weaknesses. On the other hand there are quite a lot of opportunities that can be used for future development. Therefore, the Government and the parties concerned should focus much of regional economic development efforts Ngadas in effort to utilize opportunities and improve various weaknesses.

Based on the identification of internal and external factors, it can be arranged in a SWOT matrix.

### **SWOT Matrix**

#### **Factor external/internal**

##### **Strength (S):**

- he public aware of the potential for tourism
- The friendliness and attitude of the open society
- The ability of people take advantage of opportunities
- The values of social community support
- Having access to the travel entrepreneur
- Various art and culture events
- Natural beauty
- Locations near btsnp
- Environmental security

##### **Weakness (W):**

- Creativity and innovation
- Level of education
- Mastery technology
- Mastery of foreign languages
- Utilization potential

- Accessibility
- Facilities and infrastructure
- Telecommunication networks
- Promotion and information services
- Business tourism
- Structuring the environment
- Inhibiting agricultural sector

#### Opportunities (O):

- Market opportunities
- Government support
- Support industry, academia and NGO's
- The application of the concept of multi-functionality of agricultural land
- Needs alternative travel destinations
- Support tourism stakeholders
- Regional autonomy
- The emergence of new sources of revenue

#### SO strategy:

- Establish wider cooperation with business travel services
- Maintain the uniqueness of customs, art and culture
- Encourage the government to increase promotion
- Diversification of tourism
- Harnessing the opportunities of new revenue sources
- And preserve the natural beauty

#### WO strategy:

- Repair of roads and means of transportation
- Require the concern of government and private/business/industry to equip telecommunications facilities
- Involving government, academics and NGOs to provide business training
- Development of irrigation facilities
- Development of tourism infrastructures
- Mastery of a foreign language

#### Threats (T):

- Competition with other tourist areas
- Influence from outside
- Migrants
- Cultural differences
- The younger generation is reluctant to work in the agricultural sector
- Environmental pollution

#### ST strategy:

- Creating and maintaining the uniqueness
- Completing the facilities and infrastructure
- Invites tourists to respect and to feel the nuances of local culture
- Increasing public awareness of environmental hygiene

#### WT strategy:

- Irigrasi agricultural development strategy network
- Improving people's skills
- Improving the ability to master technology
- Tourist village management training

**AHP analysis results:** AHP analysis is done with tools super decision. Matric level of importance of some of the criteria for decision making Ngadas village tourism product are as follows Table 1.

Based on the AHP analysis results table above, the hierarchy of the development priorities on tourism sector in Ngadas shown in Table 2.

According to the Table 1 and 2 ranking of tourism products in Ngadas, it can be concluded that ranks tourism product of Ngadas, respectively are Rest Area, Art and Culture miniature, Homestay, Rental Vehicles, Restaurant, Horse Riding, Tour Guide, Agro-tourism, Souvenirs, Hotel and lodging as well as the latter is rafting.

**Model of economic development in Ngadas:** The model of economic development of Ngadas firmly positioned three

Table 1: Values eigenvector tourism product why priorities of Ngadas

Commodities/Products superior	Eigenvector				
	HR	Capital	Profit	Market	Infrastructure
Homestay	0.06127	0.065678	0.059731	0.08023	0.093778
Hotels and lodging	0.04679	0.068443	0.040335	0.05936	0.054087
Horse riding	0.10203	0.133405	0.075055	0.09355	0.154294
Rental vehicles	0.03261	0.031417	0.052624	0.03689	0.029387
Restaurant	0.12029	0.048252	0.178883	0.16789	0.053116
Tour guide	0.06504	0.165465	0.078637	0.03679	0.009642
Rest area	0.11284	0.082246	0.058895	0.09552	0.177032
Why art and culture miniature	0.09761	0.134389	0.104376	0.04412	0.089913
Rafting	0.02735	0.054838	0.030591	0.02393	0.029044
Agro why-tourism	0.19258	0.124832	0.026196	0.26869	0.121102
Souvenir	0.14158	0.091034	0.058913	0.09303	0.101826

Table 2: The ranking of development program priorities on tourism of Ngadas

Alternatives	Total	Normal	Ideal	Ranking
Agro-tourism	0.0361	0.0721	0.3722	8
Souvenir	0.0269	0.0538	0.2776	9
Homestay	0.0558	0.1117	0.5761	3
Hotels and lodging	0.0183	0.0366	0.1888	10
Art and culture miniature	0.0568	0.1137	0.5865	2
Tour guide	0.0442	0.0885	0.4564	7
Rental vehicles	0.0527	0.1053	0.5433	4
Horse riding	0.0047	0.0941	0.4854	6
Rafting	0.0166	0.0332	0.0171	11
Rest area	0.0969	0.1938	0.0001	1
Restaurant	0.0486	0.0973	0.5019	5

Data analysis, processed (2014)

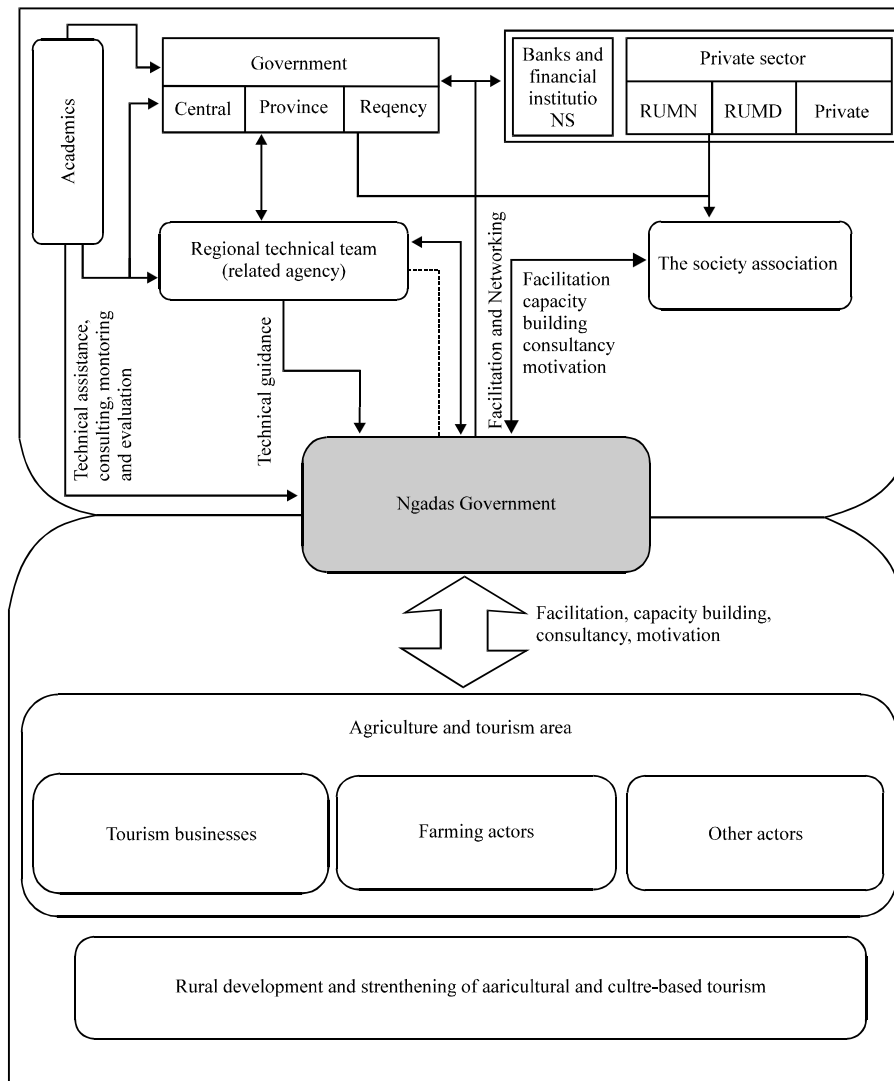


Fig. 1: Economic development model of Ngadas

important things as follows: the presence of public space in which the holder authority is composed of elements of the government, state/enterprises and Private sector, which acts as the Prime Mover in making changes

through centralized and sectoral development programs are sustainable; the development of public space mediator which involves a series of community property, non-government and NGOs (Social Institution) which acts

as a social agent to speed up the process of the development program which is based on local wisdom; the strengthening of the public space in which the authority actors move businesses and act as actors of change are struggling conscious effort to advance together with other businesses in order to achieve prosperity.

Economic development of Ngadas is shown in Fig. 1. The role of each component in efforts to develop regional economies that had pillars of the development of human resources, natural resources and economics resources is as follows.

**The role of universities:** Universities and colleges through research and community agencies and NGOs plays an important role in the economic development of rural communities. Role of universities and NGO's have three-dimensional strength: should be able to explore the potential of the human and natural resources; knowing the potential environment of rural communities and business opportunities that fit with the social and cultural including the availability of infrastructure; formulation of recommendations from the combination of the first and second dimension to community groups who work mostly in agriculture, trade and services. Universities as institutions that are social agents are required to build and empower rural communities through various forms of facilitation, technical assistance, consulting, motivation against a variety of activities focused on community economic development oriented to the development of agriculture and tourism village-based socio-cultural. Universities should be able to establish networking with developing the concept of Triple Helix.

**World private sector (business):** Capital owners should establish cooperation with other private parties in the provision of technology providers that support the economic development of rural areas. Its function as a trader is a supplier of agricultural products that are mostly featured as the implementation of the concept of OVOP (One Village One Product) which must have the touch of Appropriate Technology in processing so that the target markets adjusted to the criteria of existing products, may export, supermarkets, restaurants, hotel or the traditional market. Business sector also provide information regarding the purchasing power of the market is the market, market opportunities and so forth. Included also provide expert stationed in the organization should be established as a forum to develop an agriculture and culture-based tourism village. These experts tailored to the needs on the ground, whether experts in production and marketing of processed agricultural and development of

tourist products. The paradigm change businesses continue to be socialized into a jargon that elevates the image of entrepreneurs in which shifting behavior is not solely profit oriented should be shifted into a social oriented who are able to develop socialpreneurship in rural area through Corporate Social Responsibility (CSR). Financial institutions and banks provide credit support through soft loans which are not burdensome.

**Government:** The involvement of the government in the economic development model of rural areas through the development of an agriculture and culture-based rural tourism is expected only limited to policy makers and development. Policies regarding the rules and regulations mutually beneficial business operators in agriculture and business travel services. While the guidance given to the travel business community, farmer groups and travel services businesses. Related agencies may be to provide guidance to these three groups by using professionals from outside, either from universities, NGOs as well as from other professional institutions.

## CONCLUSION

Ngadas village has met the prerequisites to become an agricultural and cultural-based tourist village as well as the potential to improve the community economy because it has met some of the aspects that is located adjacent to natural areas with exceptional beauty; the attitude of an open society has a tradition of cultural and artistic attractions that attract visitors and have the opportunity to develop in the future. Weakness or deficiency in the context of economic development in Ngadas is the low quality of human resources; poor infrastructure and accessibility; there has been no lack of promotion and integrated tourism information services; facilities and infrastructure are inadequate; not optimal management of tourism; structuring a disorganized environment and barriers in the agricultural sector (irrigation and agricultural fertilizer). Opportunities in the framework of economic development in Ngadas are domestic and foreign tourist market is quite good for a trend back to nature; the support of government, industry, academics and NGOs; the tendency of applying the concept of multifunctional agricultural land; the need for alternative tourist destinations; establishment of cooperation between the government, investors, communities, businesses of tourism services; regional autonomy and opportunities for new sources of revenue for local communities. Challenges in the economic development in Ngadas include competition with other tourist areas in attracting tourists, changing the mindset and behavior of

society because of external influences, the migrants, the cultural differences between tourists, especially foreign tourists, the reluctance of most young people to live in the village and work in agriculture, environmental impact. The development priority of tourism in Ngadas respectively are rest area, art and cultural miniature, homestay, vehicle rental, restaurant, horse riding, tour guide, agro-ecotourism, souvenirs, hotel and lodge and the last is rafting. Model of economic development in Ngadas implemented through rural tourism development based on agriculture and culture by involving the active participation of government, intellectual (universities), business in accordance with the concept of Triple Helix.

### IMPLICATIONS

The suggestions can be submitted based on the findings of the research so far is as follows: the natural beauty and cultural arts of Ngadas should be preserved because it is a strength and a strong tourist attraction for Ngadas; before the efforts planned and coordinated to address the weaknesses of Ngadas through various programs such as providing business training, improve foreign language skills through training or language courses for service providers guide, improve the skills of the community, especially the ability to master the appropriate technology for the processing of agricultural products to increase the added value, complementary telecommunications facilities, improve tourism promotion by utilizing information technology, facilities and infrastructure development, improvement of infrastructure; The active involvement and the seriousness of the government, businesses and universities in developing the potential of Ngadas so manifest as a tourist village that provides a positive contribution to the economy of the local community in particular and the Malang regency in genera.

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