

The Evaluation of Incentive-Disincentive System in Tourism Development: A Case Study of Lake Linow Development, Tomohon, North Sulawesi

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Abstract

The aim of the research is to evaluate the implementation of incentive-disincentive system which area implemented in Lake Linow in term of tourism development. This result confirm that there gaps between incentive and disincentive system. Based on the calculation, it is clear that the highest satisfaction index was found about direct funding support. Direct funding support policy is become the most preferred form of incentive systems. The second satisfaction was physical development. The highest problems and gaps related tourism development related to the social service. Stakeholder argues that social service of tourism planning and implementation facing problems, including service in legal permission in administration aspect to program implementation in the field. The development of tourism in Lake Linow potentially affects land use changes and therefore tourism development should be managed properly. The incentive-disincentive system is one of the instruments to maintain natural resources use in sustainable manner.

Keywords: Lake Ecosystem, Land Uses Changes, Sustainable Tourism, Tourism Satisfaction.

INTRODUCTION

Tourism development in developing countries is facing challenges of environmental conservation issues. It is particularly important in the sustainable development agendas which are implemented globally, including in developing countries. Scholars point out that tourism growth has significant impact on environment. The uses of natural resources as tourism attractions have been identified contribute to the decline of environmental quality. It encompasses soil and water pollution, wildlife extinction, forest degradation and rapid land uses changes. Sustainable tourism seeks a formula which is able to integrated economic benefit, environmental conservation and social welfare objectives into development. Sustainable tourism development therefore becomes the crucial issues in local sustainable development [1,2,3].

In Indonesia, rapid tourism development in areas which are endowed by spectacular landscape and biodiversity grows significantly [4]. Mountain, river, savanna, tropical forest, cave, lake and other natural ecosystem recently widely explored as new natural tourism object and attraction. It is especially related to the recent trend of global nature-based tourism grows. The growth of tourism in natural environments should be viewed as local economic develop-

ment opportunities, but it is also potential contributor to the environmental degradation. Changes of land uses are the common problems in tourism destination area [5]. There are often conflict between tourism, agriculture, open space, and forest conservation in land resources usage. Land is critical resources in tourism development. In Indonesia, Governmental Law No. 26 of 2007 provides a legal document for spatial and land management, including area with highest value of biodiversity [6].

There are two concept namely incentive and disincentive system in order to control and manage land uses and space management. In such document, incentive is an instrument which is established to support development to meet basic principles of sustainable land uses. It encompasses decrease of tax, compensation, support of infrastructure, provides credit for any activities and rewards to the community that support sustainable development practices. Disincentive was established as a punishment instrument to countermeasure environmental degradation due to land use changes as an impact of rapid development. It encompasses applying high tax and limiting infrastructure grows and development.

Indonesian government argues that incentive-disincentive system will become the important key to manage development and land uses changes, and therefore contributes to the environmental conservation. It is particularly relevant to the recent rapid increase of land

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requirement for numerous tourism infrastructure and attraction development.

Recently, tourism is one of the important businesses in North Sulawesi, Indonesia. Tourism development especially addressed to meet local economic growth and providing opportunities for numerous tourism related works. There are also arguments that tourism is the key instrument for environmental conservation [7,8]. The development of Lake Linow in North Sulawesi province and its surrounding area as a nature based tourism has several consequences. One of the important consequences is rapid land uses changes surrounding lake's ecosystem. The need of new infrastructure and facility lead to the changes of numerous ecosystems disturbance, including Lake Linow. As far, tourism development in Lake Linow received a lot of attention from the local government, The Tomohon City. There are numerous incentives and disincentives aspects that have been implemented, but there are lack evaluations. The evaluation of gaps between incentive and disincentive aspect in Lake Linow provides significant information for the tourism planning, especially in term of land and ecosystem management. The aims of the research will evaluate the implementation of incentive and disincentive system in tourism development.

MATERIALS AND METHODS

Study Site

The field survey was conducted at Tomohon City and Lake Linow (Fig.1). This area located at North Sulawesi Province, Tomohon City area located at mountainous regions with some active volcanoes, namely Mt. Lokon and Mt. Mahawu. In North Sulawesi, Tomohon is considered as one of the famous tourism area which was visited by both national and international tourism yearly. There are natural tourism object and cultural festivals which are becomes tourism attraction in Tomohon City. According to National Planning for Tourism Development, this area has been included in National Strategic Area for Tourism Development. Consequently, in past decades this area received political and other national support in order to facilitate tourism grows and development. According to statistic record, tourism increase significantly and its contribution to local government revenue was significant.

Naturally, Tomohon area rich in term of natural tourism attractions such as Mt. Mahawu, Mt. Lokon, Tanonang Hills, Lake Tondano, Lake

Linow, Tumimperas Pinaras Waterfall, Tapahan Telu Tinoor Waterfall, Orchids villages in Kakas Kasen, Lahendong forest, Rurukan ecotourism area and others. Lake Linow is very famous natural tourism attraction because its geological phenomena. Lake Linow has high sulfur ingredients. In some part of the lake periphery, there are bubbling mud holes at the edge of the lake. The majority of the lake boundary was dominated by agricultural land. Some of the area has been managed using poly-culture systems. The colors of the water area were green and blue. These interesting phenomena are the interesting object among domestic and international tourist to come to Lake Linow [9,10].

Data Collection

Methods consist of several stages. First, the official document related tourism development policy was collected from Tourism office of Tomohon City. Focus of the document research were addressed to identify the policy related Lake Linow tourism development and its policy. In this stage, the field survey to identify natural phenomena of lakes which are interested as tourism object and attraction was conducted systematically. The natural phenomena were listed and recorded using photograph for further analysis and discussion.

Second, we describe the Customer Satisfaction Index (CSI) and Importance Performance Analysis (IPA). The steps and calculation of importance-performance analysis and the measurement of service quality were evaluated [11]. In such evaluation, we distribute questionnaire to 100 respondents. Three critical aspects in sustainable development concept and issues, namely economic, social, and environmental, were asked to the respondent. The economic value of incentive system was analyzed by incorporating two aspect, namely direct and indirect funding. There are three components to assess social aspect, namely rewards, increase capacity, and social service. In order to assess the environmental factor, physical development and physical maintenance become two aspects which were assessed.

Customer Satisfaction Index (CSI)

The first step to calculate CSI is identifying Mean Importance Score (MIS) and Weight Factors (WF) per variable. It was followed by calculating Mean Satisfaction Score (MSS) of each attributes. These were calculated using standard formula [12].

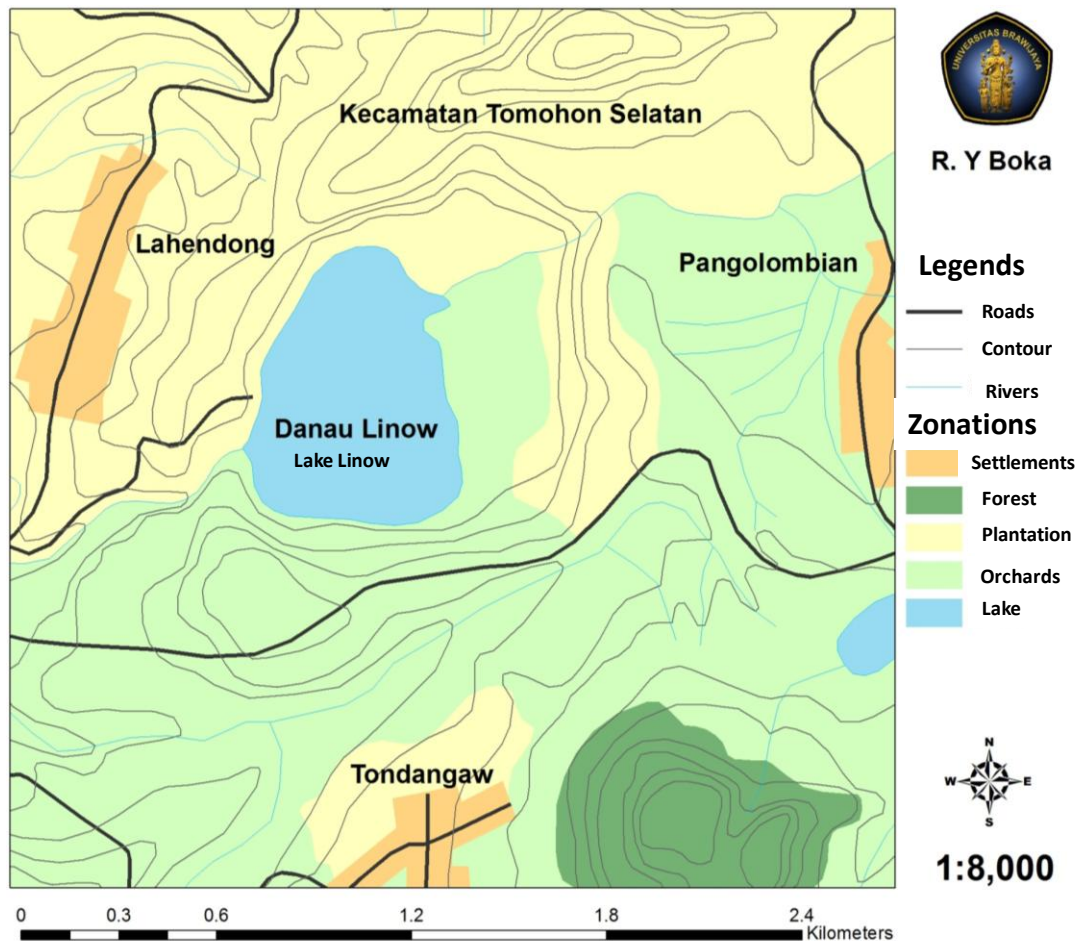


Figure 1. Land Uses Profile of Area Surrounding Lake Linow

$$CSI = \frac{\sum_{k=1}^p WS_k}{HS} \times 100\%$$

Description:

p = Importance attribute p
HS = Highest scale
WSi = WFi x MSS

Importance Performance Analysis

Importance Performance was analyzed using Cartesius diagrams. Importance Performance Matrix is divided into four quadrants based on importance-performance measurement result, namely Quadrant I Concentrate Here (High importance, Low satisfaction), Quadrant II Keep up the good work (High Importance, High Satisfaction), Quadrant III Low Priority (Low Importance, Low Satisfaction) and Quadrant IV Possible Overkill (Low Importance, High Satisfaction). Data was analyzed descriptively.

RESULT AND DISCUSSION

Lake Linow Tourism Attraction

Based on the field survey, it is clear that Lake Linow has abundance natural potential attractions. The main natural tourism object is the beautiful green and blue water with agricultural landscapes as a background. The beauty landscape of Lake Linow is the important driving factor in tourism industry in Lake Linow and its surrounding area. The geological phenomena of Lake Linow, i.e. active sulfur bubbling, become the few natural phenomena which found in North Sulawesi and therefore it is become the interested object to visit. Nowadays, the geological phenomena of the particular area have been promoted as an important tourism attraction to support local development. Throughout the world, the geological phenomena has been received a lot of attention from tourist and it is open opportunities for tourism-based geological phenomena to grows [13,14].

In line with natural phenomena of Lake Linow as a potential nature-based tourism attraction, the local government of Tomohon city released pro-tourism policy and strategy which is become the significant keys in local development. Clearly, the policy for tourism development has been cited in Regional Development planning (RPJMD of Tomohon City). There are several aspect of tourism development were accommodated in regional development planning, including road, city parks, tourism information centre, and city transport terminal. Local government also promotes numerous non-physical development program, including community development, tourism promotion, and human resources training. Increasing human resources and local people capacity related to tourism sectors has expected high, but in reality the implementation of capacity building was low. In this case, the accommodation of tourism development in regional development planning was common in many countries, including Indonesia. Regional development provides important frame work for tourism development in integrated methods, and therefore received a lot of support from related sector [15,16].

Stakeholder Perception

Stakeholder perception to the implementation of incentive-disincentive systems in Lake Linow was given in Table 1. Based on the calculation, it is clear that the highest satisfaction index was found about direct funding support (3.52%). Direct funding support policy is become the most preferred form of incentive systems.

Society argues that direct funding support is important for development. It can be accepted as a general views among local people in developing countries where direct funding support is preferred due to its flexibility in usage. Respondent argues that direct funding support is one of the representations of decentralization policy in development. The second satisfaction was physical development. Based on the field survey, physical development relatively done to complete and support city dwellers live in Tomohon City. In the local budget development (APBD) budget structure, the allocation for infrastructure development is one of the highest budget sector. Totally, it was about 25.72% of the local budget development (APBD) of Tomohon city.

The expectation of respondent was high, but in reality there are problems of tourism facility physical maintenance. Basically, it is the problem of development in developing countries [17,18]. Maintenance infrastructure is part of the long term strategy of sustainability, and therefore has important part in regional development. In many countries, however, it is very hard to get support for physical maintenance. In many developing countries, the problems of infrastructure maintenance was very complicated [19]. In Indonesia, infrastructure budget was limited while number of area which are need infrastructure was very large. The maintenance of infrastructure therefore are facing serious problems. In such a case, however, the contribution and participation of community surrounding tourism destination was important.

Table 1. Stakeholder Perception to the Implementation of Incentive-Disincentive Systems in Lake Linow

Aspects		Form	Average (%)		
Perception		Form	Aspect	Satisfaction	
Economy	Direct funding	3.52	3.00	2.72	
	Indirect funding	2.48			
Social	Rewards	2.62			
	Increase capacity	2.39	2.34		
	Social service	2.00			
Environment	Physical development	3.14	2.83		
	Physical maintenance	2.51			
Expectation		Form	Aspect	Interest	
Economy	Direct funding	3.64	3.66	3.75	
	Indirect funding	3.68			
Social	Rewards	3.75			
	Increase capacity	3.83	3.80		
	Social service	3.82			
Environment	Physical development	3.77	3.79		
	Physical maintenance	3.80			

Table 2. Tourism Performance Following Customer Satisfaction Index (CSI) Assessment

Incentive	Mean Importance Score	Weight Factors (%)	Mean Satisfaction Score (WF x MSS)	Weight Score	CSI
Direct funding	3.64	13.86	3.52	0.49	0.10
Indirect funding	3.68	13.98	2.48	0.35	0.07
Rewards	3.75	14.25	3.75	0.37	0.07
Increase capacity	3.83	14.57	2.39	0.35	0.07
Social service	3.82	14.51	2.00	0.29	0.06
Physical development	3.77	14.36	3.14	0.45	0.09
Physical maintenance	3.80	14.47	2.51	0.36	0.07
Total	26.28	100			0.53 moderate

The local government of Tomohon should be systematically plan the community based tourism in order to enhance sustainable tourism practices in Lake Linow. Scholar point out that human capacity development is the crucial aspect in tourism destination planning and development [20,21].

Customer Satisfaction Index (CSI)

Overall the Customer Satisfaction Index of Lake Linow tourism implementation was moderate (Table 2). This result is relevant with stakeholder's recommendations that local government should intensively increase quality of tourism infrastructure. In Tomohon, tourism is in the stage of initial development. In the stage of initial development, tourism has been grows but infrastructure support were limited. By far, the most significant triggering factors for the infrastructure development were the development of agribusiness, not tourism sectors. In Tomohon, the important economic and industrial activity is related to the agricultural activity

provide qualified services and attract investors. Local government should be increase social services as an integral strategy for tourism development.

Gap analysis is one of the important instruments in business strategy which allows government and industry to solve weaknesses in order to increase competition [24]. There are crucial issues on physical infrastructure maintenance which are important in sustainable tourism destination issues. In such a case, local government argues that limitation for infrastructure maintenance related to the limited budget to maintain infrastructure. There is widespread believed that the infrastructure maintenance is one of the responsibility of central government. However, the support of central government also limited. Funding for infrastructure maintenance has been a major uncertainty [25]. Other problems related to human capacity development are also important to increase tourism destination competitiveness.

Importance Performance Analysis

Based on the Importance Performance Analysis diagrams, social services (social aspect), physical infrastructure maintenance (environment), and rewards (social aspect) need to be improved significantly. The highest expectation of stakeholder in social service were common aspect in tourism industry. Tourism is industry where it growth and success ultimately depend on the hospitality and standard value of services [26]. The low social service were shown related to the human capacity, i.e. limited number of capable and professional staff, well educated tourism practitioner, capacity and leadership. The low social services also related to the low community involvement and contribution in tourism development. The improvement of such sector is significant in order to create Lake Linow as competitive tourism destination, both in domestic and international tourist (Fig.3).

Gap Analysis

The highest problems and gaps related tourism development is associated to the social service (2.00%) (Fig.2). Stakeholder argues that social service of tourism planning and implementation facing problems in multi sectors, including service of legal permission in administration aspect to program implementation in the field. Social services are the most fundamental problems in development, including in tourism industry. Poor social services is complex phenomena, bringing numerous issues such as poor infrastructure and facility, low capacity of human resources, and administration systems [22,23]. In case of Lake Linow tourism development, the problems of social service can be found in administration related tourism industrial permits. Social services are the mirror of local government capacity, commitment to

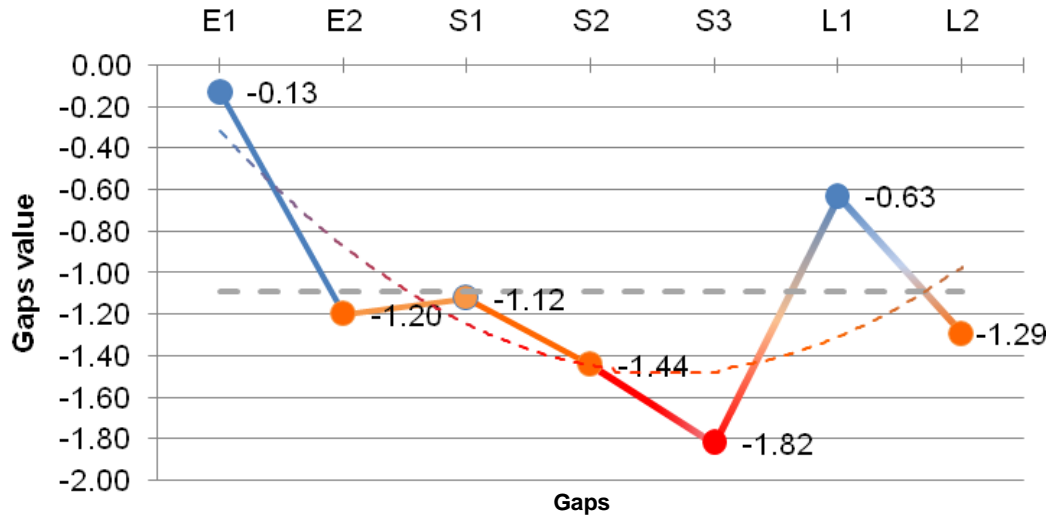


Figure 2. Gap Analysis between Perception and Expectation among Economy (E1, E2), Social (S1, S2, S3) and Environment (L1, L2) in Lake Linow

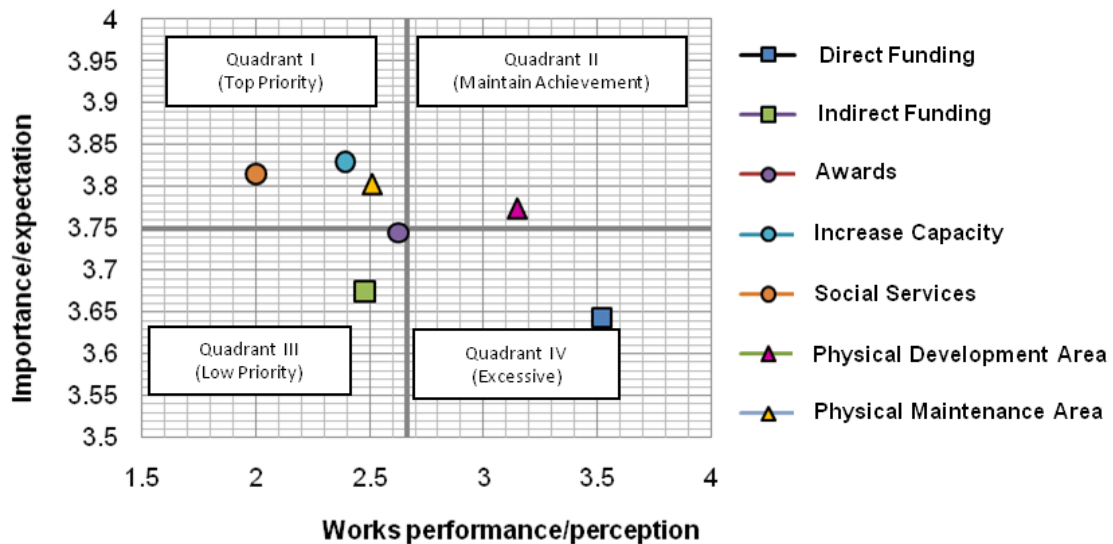


Figure 3. Importance Performance Analysis (IPA) of Tourism Development in Lake Linow

Overall, this study shows that there are gap between tourism planning and implementation in Lake Linow. In many developing countries, it is common as a result of complex problems, namely funding support, policy for sustainable development, human resources capacity, available technology, and lack of local community participation. The development of Lake Linow as a competitive and sustainable tourism destination has been received widespread support, especially from local government. The contribution of local people however, should be promoted intensively.

CONCLUSION

The development of tourism in Lake Linow potentially affects land use changes and therefore tourism development should be managed properly. The incentive-disincentive system is one of the instruments to maintain natural resources use in sustainable manner. The highest problems and gaps related tourism development related to the social service. There is high expectation in social services, but low in perception. The highest expectation of stakeholder in social service was common aspect in tourism industry. Tourism is industry where it growth and success ultimately depends on the on hospitality and standard value of services.

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