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### **Conference Paper**

# Tourism Development Analysis on Utilization Optimization of Koto Panjang Reservoir in Kampar Regency, Riau Province

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#### **ABSTRACT**

Optimization is a process carried out in order to achieve good results, this is certainly very important in development efforts, one of which is development in the tourism sector. Tourism objects will not attract visitors if the development of their use is not carried out optimally. One of the tourism places that has become a concern in optimizing its benefits is tourism of the Koto Panjang reservoir located in Kampar Regency, Riau Province. This study aims to determine the process of tourism development towards optimizing the utilization of the Koto Panjang reservoir. The research method used in this study is quantitative research, using questionnaires, interviews and observation data collection methods. Analysis of the data used in this study using Structural Equation Modeling (SEM) with the SmartPLS 3.0 tool. The results of the study show that tourism development on utilization optimization shows a negative effect.

Keywords: Optimization, development, tourism and Koto Panjang reservoir

### Introduction

The water area in Indonesia is 2/3 of the total area of the unitary state of Indonesia. This cannot be separated from the fact that Indonesia is one of the largest archipelagic countries in the world. Indonesia as an archipelagic country has a very wide maritime zone, namely 5.8 million  $\rm km^2$  consisting of 2.3 million  $\rm km^2$  of archipelagic waters, 0.8 million  $\rm km^2$  of territorial sea and 2.7 million  $\rm km^2$  of Exclusive Economic Zone waters. With the potential of the waters owned by Indonesia, the waters sector should be a sector that has a big role in increasing the flow of the nation's economy (Departemen Kelautan dan Perikanan, 2009).

One form of waters in Indonesia is inland water which includes: public waters such as lakes, swamps, rivers and lebak. These inland waters are often found in various regions in Indonesia which have their respective functions in the pattern of people's lives. Although the volume of the area cannot be compared with the area of sea waters, it has many benefits for the community. Lakes, swamps, reservoirs and lebak become complementary elements which at a certain point and degree greatly affect the lives of Indonesian people, both in terms of socio-cultural and economic aspects. However, it cannot be denied that so far the functions of all types of inland waters in Indonesia have not been maximized. This is due to various factors that can be detected in the community.

So far, inland waters are only partially used as a water source for agriculture, energy sources and a small part for water tourism activities and aquaculture areas. This of course still reflects how our society has not fully utilized the existence of existing inland water sources. Some cases in the community only use the inland waters with a single function. The existence of lakes, for example, giant ponds formed by nature in several areas in Indonesia are only used as a source of clean water and agricultural water sources only. Though many other functions that can be used for things other than that. This problem is also experienced by other inland waters such as reservoirs.

One of the reservoirs that must be optimized for utilization is the Koto Panjang reservoir located in Kampar Regency, Riau Province. Koto Panjang Reservoir has become a tourist destination, but that does not mean that there are no more efforts to optimize the benefits of the reservoir. As explained by Susantayasa and Budhi (2014) that the Jeem Reservoir Tourism Object in Bangli Regency still requires more optimal management so that the sustainability of the tourism can survive and be maintained. The same thing is also explained by Jurik et al. (2015) that it is necessary to continue to increase reservoir potential and solve existing problems. This shows that it is necessary to continue to make developments that can optimize the use of tourism. Therefore, this study will examine how the analysis of tourism development towards optimizing the utilization of the Koto Panjang reservoir in Riau District.

#### **Literature Review**

### Tourism development

According to Yoeti (1996), development is a process or way of making something advanced, both perfect and useful. Meanwhile, tourism according to Pitana and Gayatri (2005) is a word that has a very broad definition so that it is not easy to be lSimited by one definition and is like a limitation on different subjects. others often do not produce a satisfactory definition for various interests, but in general tourism contains elements of travel (movement of people from one place to another), elements of visite (temporary stay) and elements of the main purpose of the human movement is not to earn a living or work at the destination.

Natural tourism then developed and shifted into special interest tourism patterns and ecological tourism, these two tourism patterns generally rely heavily on the quality of nature so that it will ensure the existence and preservation of nature which is an object and tourist attraction (Sumargo, 2006).

The development concept described by Yoeti shows that tourism will be optimal when there are efforts to continue to develop. In this case, Gunn (1994), suggests that a good and optimally successful tourist area is based on four aspects, namely:

- 1. Maintaining environmental sustainability.
- 2. Improving the welfare of the people in the area.
- 3. Ensuring visitor satisfaction.
- 4. Improving the integration of community development around the area and its development zone.

### Optimizing the use of reservoirs as tourist destination

Basically, the use of reservoirs in Indonesia existed before the Hindu era, where simple irrigation facilities were carried out by piling stones or crevices filled with stones as weir material. Then during the Dutch colonial period, construction began on a larger scale, including the construction of the Glapan dam at the Tluntang River, Central Java in 1852 which was then followed by several other bending both in Java and outside Java. Likewise, in the post-independence period, the construction of weirs as irrigation facilities was also carried out both on a local and national scale (Mawardi & Memed, 2004).

According to the General Planning Procedure standard, the definition of a reservoir or dam is a water structure built across a river or a drain that is intentionally made to raise the water level or to get a waterfall height, so that water can be tapped and flowed by gravity to where it needs it. Reservoirs that can usually be used as water providers for electricity, irrigation purposes or for flood control (Sumargo, 2006), However, with efforts to optimize the benefits of the function of the reservoir itself, tourism development is made from the reservoir itself. In the development of the Koto Panjang reservoir area, the optimization of its utilization can be seen by using 3 main aspects, namely adequate infrastructure (adequateness), qualified human resources (appropriateness), and increased regional income (renevue enhancability).

### **Research hypothesis**

Meanwhile, the hypothesis to be proven through this research is that tourism development has a positive and significant direct effect on the optimization of the utilization of the Koto Panjang Reservoir in Kampar Regency, Riau Province.

### **Material and Methods**

The type of research that will be carried out is quantitative research using the help of quantification of visitor perception data. Thus the processing and interpretation of the results can more easily produce scientific information. The data collection methods used are surveys, observations, interviews, questionnaires and literature studies.

## Results and Discussion Frequency of visitor arrival of koto panjang reservoir

Table 1. Respondents by visit frequency

No	Frequency	Number of Respondents	Percentage (%)
1	Once	182	47.40
2	2 – 3 times	73	19.01
3	4 - 5 times	29	7.55
4	6 - 7 times	0	0.00
5	> 7 times	100	26.04
	Total	384	100.00

Based on Table 1, the majority of visitors only visit the Koto Panjang Reservoir once a year with a presentation of 47.40 percent (182 respondents). This indicates that visitors in general feel that it is enough to visit the Koto Panjang Reservoir just once.

### Stopover Frequency to Koto Panjang Reservoir

Table 2. Respondents based on stopover frequency to koto panjang reservoir

No Frequency		Number of Respondents	Percentage (%)	
1	Once	164	42.71	
2	2 - 3 times	113	29.43	
3	4 - 5 times	11	2.86	
4	6 - 7 times	43	11.20	
5	> 7 times	53	13.80	
	Total	384	100.00	

Based on Table 2, the majority of respondents who stopped when visiting the Koto Panjang Reservoir, Kampar Regency, were 1 time/once with a percentage of 42.71 percent (164 respondents).

## Tourism activities liked by visitors

Table 3. Respondents based on preferred tourism activities

No	Tourism Activities	Number of Respondents	Percentage (%)
1	Enjoying the view	280	72.92
2	Culinary	0	0.00
3	Taking selfies	87	22.66
4	Rest area	0	0.00
5	Water recreation	17	4.43
	Total	384	100.00

Based on Table 3, the majority of respondents stated that their favorite tourist activity was enjoying the scenery in the Koto Panjang Reservoir. This means that the Koto Panjang Reservoir has a highly attractive view for visitors.

## Tourism activities satisfying visitors

Table 4. Respondents based on satisfying tourism activities

No	Tourism Activities	Number of Respondents	Percentage (%)
1	Enjoying the view	175	44.57
2	Culinary	4	1.04
3	Taking selfies	156	40.63
4	Rest area	0	0.00
5	Water recreation	49	12.76
	Total	384	100.00

Based on Table 4, the majority of respondents stated that the most memorable activity at the Koto Panjang Reservoir was enjoying the view.

### Analysis of inner model

Table 5. Direct effects of research variables

Endogenous Variable Exogenous variable	Utilization Optimization	Regional Development	
Tourism Destinations	-0,181		0,444
Utilization Optimization			0,600

Source: Algoritma SmartPLS

Table 5 shows that the development of the Koto Panjang Reservoir as a tourist destination is a highly important element in regional development. The development of these tourist destinations directly increases regional development in the area around the Koto Panjang Reservoir. Unfortunately, the development of these tourist destinations also reduces the perception of optimizing the use of the Koto Panjang Reservoir when viewed from the economic, infrastructure, and environmental aspects. On the other hand, optimizing the utilization of the Koto Reservoir has also an important contribution to regional development.

Table 6.	Indirect	effects	with	research	variables

Indirect Effect	Indirect Effect
Tourism Destinations à Optimization of Utilization à Regional Development	
	-0,108

Source: SmartPLS

Table 6 shows that the magnitude of the indirect effect of developing tourist destinations in the Koto Reservoir as a form of regional development through utilization optimization shows a negative effect on the total effect exerted. This condition shows that the achievement of utilization optimization plays an important role in supporting tourist destinations as a form of regional development and must apply more attention to managing and developing tourist destinations. Previously it was seen that tourist destinations directly had a positive effect on regional development. Unfortunately, the development of tourist destinations can have a potential negative impact on utilization optimization, for example environmental optimization so that it can reduce the success of developing the area.

Table 7. Total effect of research variables

Total Effect	Total Effect
Tourism Destinations à Utilization Optimization	-0,181
Tourism Destinations à Regional Development	0,336
Utilization Optimization à Regional Development	0,600

Source: SmartPLS

Table 7 shows that the total effect of the research variables increases with the indirect effect. When compared with the direct effect, the evaluation of the mediating variable of utilization optimization resulted in a decrease in the influence exerted by tourist destinations on regional development. The development of tourist destinations can result in a decrease in utilization optimization. However, this practice still increases the success of regional development in terms of human resources, income, and social environment.

### Hypothesis testing

Table 8. Research hypothesis testing

No	Hipotesis	Original Sample (O)	T Statistics ( O/STDEV )	P Val- ues	Conclusion
Н1	Tourism development has a positive and significant impact directly to the optimization of the utilization of the Koto Panjang Reservoir in Kampar Regency, Riau Province.	-0,181	3,209	0,001	Rejected

Table 8 shows that tourism development in the Koto Reservoir area has a negative and significant effect on regional development in Kampar Regency, Riau with a path coefficient of 0.181 and p-value 0.001 < 0.05. Thus the statistics indicate that there is sufficient evidence to state

that the better tourism development in the Koto Panjang Reservoir area, Kampar Regency, Riau, can then reduce the optimization of the utilization of the Koto Panjang Reservoir as a whole. The development of the Koto Panjang Reservoir as a tourist destination can negatively affect the optimization of the utilization of the area in terms of infrastructure, environment, and community economic aspects. This study provides a provisional assumption that tourism development can increase the optimization of the utilization of the KotoPanjang Reservoir area. The results of the study did not prove this conjecture. Thus, the second hypothesis of the study is rejected.

This study provides empirical evidence that there is a negative and significant effect of the construction of the Koto Panjang Reservoir as a tourist destination on the utilization optimization of reservoir in Kampar Regency, Riau (*path coefficient* = -0,181; *p-value* = 0,001). The results of this study indicate that there is an opposite effect between tourism development and optimization of the utilization of the Koto Panjang Reservoir in Kampar Regency, Riau. The development of tourist destinations in the Koto Panjang Reservoir can result in a decrease in the optimization of the utilization of the Koto Panjang Reservoir in terms of social, economic and environmental aspects.

Optimization of the use of the Koto Panjang Reservoir is based on three aspects, namely economically sustainable aspects, socially sustainable aspects, and environmentally sustainable (ecological) aspects. Theoretical studies indicate that good optimization must be beneficial in improving the community's economy, building community empowerment while maintaining optimal environmental conditions. The results of this study indicate that there is a negative perception of the optimization of the use of the Koto Panjang Reservoir as a tourist destination for the initial function of the Koto Panjang Reservoir. In other words, the development of the Koto Panjang Reservoir as a tourist destination invites several elements that contradict the main function of the reservoir. The development of the Koto Panjang Reservoir as a tourist destination, from the visitor's point of view, is seen as a potential decrease in environmental utilization that can increase the function of the reservoir as an object that can maintain aesthetics and environmental existence. The development of the Koto Panjang Reservoir as a tourist destination cannot be separated from the development of areas that reduce environmental functions.

#### **Conclusion**

The conclusion obtained in this study is that the development of the Koto Panjang reservoir as a tourist destination has resistance that triggers a decrease in the optimization of reservoir utilization in general.

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