Tourism Investment Potential in the North Tapanuli District

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Abstract. Indonesia has abundant resources that provide large capital for the tourism sector. With great potential for natural and cultural tourism, Indonesian tourism is a major foreign exchange earner for the economy. In other words, tourism is promising with such a huge investment amount. Better tourism development and management will increase the economic growth of tourist sites. Economic growth is an indicator to measure the success of development. The variable for tourism investment potential consisted of facilities and infrastructure, information and promotion, and environmental quality and trip optimization indicators as the dependent variable. Data analysis used multiple regression analysis. The findings showed the tourism investment potential in North Tapanuli Regency, North Sumatra Province. The investment will generate income later that will become the regional income of North Tapanuli Regency. Support from the government is certainly needed to achieve this. For that, we suggest the government play a more role active in supporting the development of tourist destinations. The main thing to pay attention to is the road because we found the investment potential in this study.

Keywords: Tourism; investment; trip optimization

1 Introduction

Indonesia is blessed with abundant natural and cultural resources as capital for tourism. Tourism has been a driving force for economic growth. With such great potential for natural and cultural tourism, Indonesian tourism is a major foreign exchange earner for the economy. Thus, is promising with such a huge investment amount. This policy has several implications, including the need for comprehensive reforms in various sectors. However, to make tourism development more efficient and effective, a tourism development effort is needed that is oriented toward current and future global tourism trends. Tourism is closely related to economic development. This is evident where tourism can contribute to the economic development of tourist destinations. More developed tourism will increase the economic growth of the tourist area. Economic growth is an indicator to measure the success of development. However, tourism contributes too little compared to the huge investment the sector receives, with only at the level of 2.2% or IDR 51.2 trillion. For this reason, through the Regional Investment Forum (RIF), the government focuses on marketing potential investment in the tourism sector and its supporting infrastructure. in 2016, investment in the tourism sector was a domestic (PMDN) and foreign

investment (PMA). However, this sector is quite promising because in the last five years, the average growth has reached 18% per year.

Against the background of the above issues, the purpose of this research is analyzing the tourism investment potential of North Tapanuli Regency and analyzing the contribution of tourism investment in North Tapanuli Regency.

2 Literature Review

2.1 Understanding the Potential

In *Kamus Besar Bahasa Indonesia* (KBBI) [1], a potential is an ability with various possibilities to be developed further, whether in the form of strength, power or ability.

A potential refers to a series of capacities, abilities, strengths, or powers that have the potential to be redeveloped into a greater form. The concept of potential is a set of fundamental abilities that each person is capable of developing and optimizing.

Investment is the process of capital accumulation. According to [2], investment can be defined as spending for investors or companies to purchase goods, capital and production equipment to increase production of goods and services in the economy. Thus, investment is:

1. Purchase of various types of means of production, namely machinery and other production equipment, for the establishment of various types of industries and companies.
2. Costs for the construction of residential buildings, office buildings, factories and other buildings.
3. Added value of goods, raw materials, stock of goods not yet in the production process.

Moreover, according to [3], investment is a net addition to the existing capital stock or it can also be called capital accumulation. According to Schumpeter in [3], investment into 2 types:

1. Impact investment, that is, the size of national income, sales, company income, etc. investments that are highly susceptible to change.
2. Autonomous investment, the amount of which does not affect the level of income, but new discoveries, technological developments, etc., investment that is more determined by long-term changes such as

Investment is placing funds today with an expectation of receiving a profit someday. Thus, investment is divided into 2, namely:

1. Investment in financial assets, made in the money market, for example, certificates of deposit, commercial paper, money market securities, or in the capital market, for example, stocks, bonds, warrants, options, and others.
2. Investing in real assets includes buying productive assets, setting up factories, mining and opening plantations, etc. appears in the form of

According to Jhingan [4], the main goal of economic development is to create enough complex equipment to increase labor productivity. In short, the essence of economic development is the creation of "social surplus" and economic capital.

This is possible if the country's capital formation rate is fast enough, that is, if a part of society's income or output is invested in capital equipment. Investment in capital equipment allows not only production, but also jobs.

Capital formation leads to technical advances that support the achievement of economies of scale and increased specialization. Capital formation supplies machinery, tools, and equipment to an ever-increasing labor force.

Direct investment can help developing countries to overcome the problem of savings shortages and shortage of foreign currency and national currency, therefore, from this point of view, foreign and domestic investment will increase the level of investment and further accelerate the rate of economic development [2].

2.2 The Concept of Tourism

According to Law No. 10 of 2009, tourism refers to various leisure activities using various facilities and services provided by the community, entrepreneurs, government and local governments. Thus, it is the travel of people to areas other than their place of residence for the purpose of at least one night of travel, not for the purpose of making a living, earning, or earning a living.

Tourists travel for a certain period of time from place to place, not with the intention of trying or earning a living, but only to fulfill various desires [5] .

According to [6], tourism is a travel activity from one's home to certain places for a certain period of time, not for settling down or making a living, but only for the purpose of entertainment, interest fulfillment, leisure time or vacation or other purposes.

But basically, tourism is a symptom of temporary and spontaneous movement of people in order to satisfy certain needs and desires. A tourist destination is a place where all tourist activities are carried out with all the opportunities and tourist attractions for tourists. A tourist destination must meet several requirements, namely: (a) something to see, (b) something to do, (c) something to buy [5].

The successful development of tourism is inseparable from tourists who are consumers of this tourism product. This is due to the nature of the tourism industry, that is, the profit-seeking nature. According to [7], by building a tourist attraction, tourists will not necessarily come.

For this reason, tourism objects must be integrated with other tourism requirements, namely tourism services, transportation, and travel promotion or marketing.
1. Transport network: a tourist attraction is the culmination of a tourist journey and must meet the requirements of accessibility; that is, tourist attractions must be easily accessible and easy to find on their own.
2. Placement: during the tourist attraction, the tourists have things necessary for life (tourist needs).
3. Marketing: tourist attractions are also a venue for tourism marketing. Developing tourist sites based on tourists' demands means an offer that meets the demand of tourists as consumers.

According to [8], developing a tourism object must consider the potential of the object with reference to the success criteria of the development, which include:
1. Financial eligibility: this feasibility study is related to the commercial calculation in developing the tourist area, due to the profit-seeking nature of tourism
2. Regional socio-economic feasibility: this feasibility study is to look at the regional socio-economic impacts resulting from investment in tourism development.
3. Technical feasibility: this feasibility study is related to the development of tourism facilities, which should be taken into account by considering the existing carrying capacity.
4. Environmental suitability: this feasibility study is based on environmental impact analysis, which will be used as a reference for tourism object development.

Tourism will continue to increase due to the periodic increase in population, especially the teenagers and young age groups, and the per capita income will increase purchasing power.

Achievements in the field of transport make future tourism prospects very promising and even provide great opportunities for tourism development.

3 Method

This study is conducted through a scientific approach, using a theoretical framework to generate one or more hypotheses that require qualitative and statistical testing.

We used primary data and secondary data. Primary data were collected from the community and used as a sample of respondents by distributing questionnaires asking questions about the decline in tourist arrivals. Additional data related to this study were obtained from relevant agencies such as Tapanuli North Regency Tourism, Culture Department, BPS and Bapeda Offices of North Tapanuli Regency as well as other relevant agencies.

All respondents were tourists. The sampling of tourists was carried out proportionally to foreign and local tourists, based on the report of the Department of Tourism and Culture of the Northern Tapanuli Region, the number of tourist trips was 715 foreign tourists and 1258 local tourists, so the number of researchers was 1973 people.

Furthermore, defining the pattern using Slovin formula with the following results;

$$n = \frac{N}{N(0.05)+1} = \frac{1973}{1973(0.05)+1} = \frac{1973}{10.865} = 181.59 \text{ – rounded up to } 182.$$

Thus, the research sample consisted of 182 people.

The formulation and research hypothesis, in particular, was done using multiple regression linear analysis, the factors that cause the decrease in the number of tourist trips to optimize tourist trips to Batu Frog, namely: $Y = a + bX_1 + bX_2 + bX_3 + bX_4 + bX_5 +$

The government's efforts to increase tourist visits to North Tapanuli, using descriptive analysis.

4 Findings and Discussion

The respondents' characteristics include age, gender, education, and category of tourists.

4.1 Tourism Potential of North Tapanuli

North Tapanuli has great potential for tourism. North Tapanuli Regency has historical heritage preserved from generation to generation, natural beauty is very charming, it can attract many people to visit. One of them is Muara district, this small district is the only district in North Tapanuli regency that has direct connection with Lake Toba. Not surprisingly, the local administration focuses on developing tourism in this small place. Tourism development is mainly an effort to develop tourism facilities and exploit existing tourism potential, including existing natural wealth, cultural diversity and historical heritage, cultural arts and various handicrafts.

Sibandang Island is the second largest island in Lake Toba after Samosir Island. Sibandang Island is located in Muara District, Tapanuli North State. The island is divided into 3 (three) villages namely Sibandang Village, Papande Village and Sampuran Village. This island is the only island in the waters of North Tapanuli Regency and can be reached by ferry from Muara coast in approximately ± 5 minutes.

Sibandang Island has natural beauty, cultural heritage, and regional handicrafts and is known as a mango-producing island--all are potential for tourism. This creates new industries that, if properly managed, will help improve the economy, absorb labor, increase earnings and standards of living, and revive other productive sectors. Tourism also opens oopportunities for classic industries such as souvenirs, accommodation and transport. Sibandang Island is truly an island with abundant natural resources, including fertile land and the stunning natural beauty of Lake Toba. According to the author's first observations, since 5 (five) years ago, the passage to this island, which was previously accessible only to small boats and passenger ships, was opened, and since then, the potential of this island has been noticed. Road communication from one village to another can now be done by motorized vehicles, and agriculture is also easier to access, so the strategy for tourism development in Sibandang Island needs to be discussed, as it still has various weaknesses, which will be discussed in the future.

4.2 Statistical Analysis

Normality Test

The test was performed to check if the data were normally distributed using the Kolmogorov-Smirnov test and PP Plot with the following results:

The residual probability value (asymp. sig. 2-tailed) is 0.200, greater than sig-α (0.05), meaning that data were normally distributed. The following normality PP graphs confirm our findings.
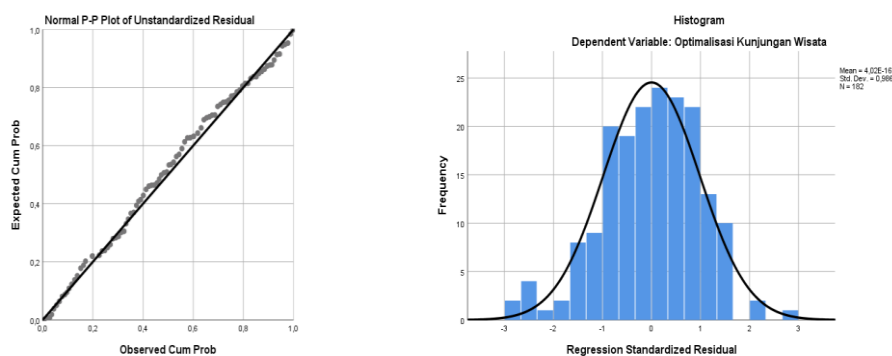

Figure 1. PP Normality Plot of Study Data

Figure 1 and 2 show that the data points are distributed along a diagonal line that forms left and right symmetry, meaning that data are normally distributed.

Multicollinearity Test

The results of multicollinearity are shown in Table 1.

Table 1. Multicollinearity Test Results

		Collinearity statistics	
Model		Tolerance	VIF
1	Tourist attractions	.642	1559
	Facilities and infrastructure	.889	1.125
	Information and advertising	.742	1,347
	Environmental quality	.825	1212
	Service and hospitality	.785	1273

a. Dependent variable: optimization of tourist trips

Table 4.20 shows that the tolerance values for the 5 independent variables are 0.642, 0.889, 0.742, 0.825, and 0.785, all of which are less than 1, and the VIF values for the 5 independent variables are 1.559, 1.137, 1.127, 1.212 and 1.273 are all less than 10, meaning no evidence of multicollinearity in the study data.

Heteroskedastic Test

The heteroskedasticity test is aimed at checking the inequality of variance in the regression model from the residuals of one observation to another observation. A good study's data show no signs of heteroscedasticity. If the variance from the residual of one observation to another observation is the same, then homoscedasticity exists, and if it is otherwise, it is called heteroscedasticity, with the following results:

Table 2. Heteroskedastic Test Results

Model	Unstandardized coefficients		Standardized coefficients		
	B	Std. Wrong	Beta	etc	Sig.
(constant)	1.543	.674		2289	.023
Tourist attractions	-.013	0.028	-.041	-.449	**.654**
Facilities and infrastructure	-.003	0.017	-.016	-.200	**.841**
Information and advertising	-.064	0.030	-.185	-2.168	**.061**
Environmental quality	-.005	.032	-.013	-.164	**.870**
Service and hospitality	.039	.038	.085	1.024	**.307**

a. Dependent variable: ABS_RES_1

Table 4.21 shows that the value of asymp.sig (2-sided) for each variable is 0.694, 0.841, 0.061, 0.870, and 0.307, where the significance value of 5 independent variables is greater than 0.05, so the test results meet the requirements of this calculation for signs of heteroscedasticity. Thus, no signs of heteroscedasticity are found in the data. In other words, there is no strong correlation between the independent variables as illustrated by the following heteroskedasticity plot.
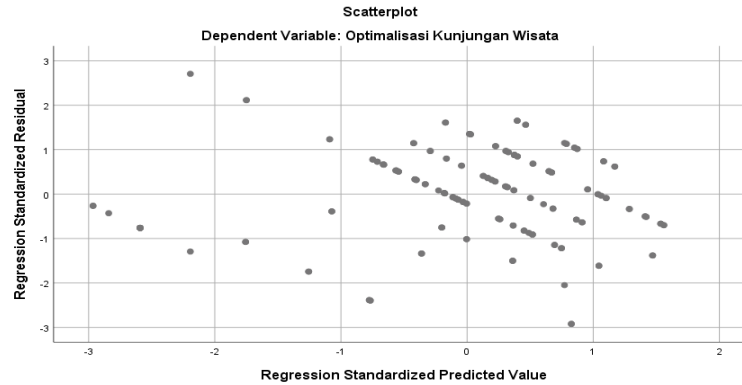
Figure 2. Heteroskedasticity Graph

Results of Hypothesis Testing

Hypothesis testing using multiple linear regression analysis consisted of simultaneous F-test and partial t-test with the following results.

Simultaneous F-test Results

A simultaneous F-test was conducted to determine whether the 5 independent variables of attractiveness (X1), facilities and infrastructure (X2), information and promotion (X3), environmental quality (X4), and service/hospitality had a significant effect on the dependent variable (optimization holiday).

Table 3. Simultaneous F-test Results

	Model	Sum of squares	df	Average square	F	Sig.
			ANOVA [a]			
1	Regression	503 200	5	100 640	64 395	.000 [p]
	Remainder	275.064	176	1.563		
	Everything	778 264	181			

a. Dependent variable: optimization of tourist trips
b. Forecasts: (sustainable), services and hospitality, information and promotion, facilities and infrastructure, environmental quality, tourist attractions

Partial T-test

Table 4. Partial t-test Results

	Coefficients[a]		
No	**Model**	**T** is counting	**Sig**
	(constant)	2374	0.019
1	Tourist attractions	8 624	**,000**
2	Facilities and infrastructure	3 804	**,000**
3	Information and advertising	3 405	**.001**
4	Environmental quality	4,481	**,000**
5	Service and hospitality	3.168	**,002**

The Effect of Attractiveness of Attractions (Y)

Table 4 shows that X1 (Attractiveness) has a t-count value = 8.624 with a significance (p-value) of 0.000, while t-table (N=96 or df=91) 1.97 and significance of 0.05, t-count X1 > t-table (1.97) and p-value (0.000) <0.05. Thus, Ha is accepted, or X1 (Attractions) significantly affects Y (Optimization of Entrances).

Facilities and Infrastructure on Trip Optimization (Y)

Table 4 shows that X2 (facilities and infrastructure) has a t-count value = 3.804 with a significance (p-value) of 0.001. Comparing with the t-table value (N=96 or df=91) 1.97 and significance of 0.05, it can be seen that t-count X2 (3.804) > t-table (1.97) and p-value. (0.002) <0.05. Thus, Ha is accepted, or X2 (Facilities and Infrastructure) significantly affects Y (Optimization of Visits).

Impact of Information and Optimization (Y)

Table 4 shows that X3 (Information and Advertising) has a t-count value = 3.405 with a significance (p-value) of 0.001. Comparing with the t-table value (N=96 or df=91) 1.97 and significance of 0.05, it can be seen that t-count X3 (3.405) > t -table (1.97) and p-value (0.016) <0.05. Thus, Ha is accepted, or X3 (Information and Promotion) significantly affects the dependent variable Y (Optimization of Visits).

Impact of Environmental Quality on Trip (Y)

Table 4 shows that X4 (Environmental Quality) has a t-count value = 4.481 with a significance (p-value) of 0.000. Comparing with the t-table value (N=96 or df=91) 1.97 and significance of 0.05, it can be seen that t-count X4 (4.481) > t-table (1.97) and p-value. (0.035) <0.05. Thus, Ha is accepted, or X4 (Environmental quality) significantly influences the dependent variable Y (Optimization of Visits).

Impact of Environmental Quality on Trip (Y)

Table 4 shows that the t-value of X5 (service and hospitality) = 3.168 with a significance (p-value) of 0.002. Comparing with t -table value (N=96 or df=91) 1.97 and sig-α= 0.05, t- count X5 (3.168) > t- table (1.97) and p-value (0.002) can be seen <0.05. Thus, Ha is accepted, or X5 (service and hospitality) significantly affects dependent variable Y (visit optimization).

4.3 R Detection Test Results
To determine the magnitude of the effect of the independent variable on the dependent variable Y (sales volume), an R test was conducted with the following results:

Table 5. R Detection Test Results

Sample Summary [b]

Model	R	R square	Adjusted R squared	Std. Evaluation error
1	.804 [a]	.647	.637	1.25014

a. Forecasts: (sustainable), services and hospitality, information and promotion, facilities and infrastructure, environmental quality, tourist attractions and
b. Dependent variable: optimization of tourist trips

Table 5 shows that the adjusted r-$_{squared}$ value = 0.637, meaning that the independent affects the dependent variable Y (visit optimization) by 0.637 x 100% = 63.7%. In other words, 63.7% of visit optimization is explained by attractiveness, facilities and infrastructures, information and promotion, environmental quality, service and hospitality, and the rest (36.3%) isexplained by other unexplored factors.

Regression Equation
The regression equation can be adjusted based on the coefficient values in the following table:

Table 6. Multiple Linear Regression Equation

Model		Unstandardized coefficients	
		B	Std. Wrong
1	(constant)	2728	1.149
	Tourist attractions	.417	0.048
	Facilities and infrastructure	.111	0.029
	Information and advertising	.172	0.050
	Environmental quality	.247	0.055
	Service and hospitality	.207	.065

$Y = a + b1X1 + b2X2 + b3X3 + b4X4 + b5X5 + e$
$Y = 2.728 + 0.417X1 + 0.111X2 + 0.172X3 + 0.247X4 + 0.207X5 + e$

1) **$Y = 2.728 + 0.417X1$**
   The equation means that every 1 point increase in Visibility increases Visit Optimization by **2.728** + 0.417 = 3.1 points. In other words, every increase in Attraction can increase your traffic optimization by 3.1 times.
2) **$Y = 2.728 + 0.111X2$**
   The equation means that every 1 point increase in facilities and infrastructure can increase trip optimization by **2.728** + 0.111X1 = 2.8 points. In other words, every improvement in facilities and infrastructure can increase trip optimization by a factor of 2.8.
3) **$Y = 2.728 + 0.172X3$**
   The equation means that every 1 point increase in information and advertising can increase traffic optimization by 2.728 + **0.172X1** = 2.9 points. In other words, each increase in information and advertisements can increase the optimization of visits by 2.9 times.

4) **Y** = 2.728 + 0.247X4

The equation means that every 1 point increase in environmental quality can increase trip optimization by **2.728** + 0.2247 = 3.0 points. In other words, each improvement in the quality of the environment allows for a 3-fold increase in trip optimization.

5) **Y** = 2.728 + 0.207X5

The equation means that every 1 point increase in hospitality services can increase trip optimization by 2.728 + **0.207X** = 2.9 points. In other words, each increase in hospitality services can increase the optimization of visits by 2.9 times.

5 Conclusion and Recommendation

5.1 Conclusion

The discussion and findings lead to the following conclusions:
1. Attractions, facilities and infrastructure, information and promotion, and environmental quality positively and significantly affect trip optimization. This is indicated by the calculated F-value (64.393) > F-table (3.69) and sig-p (0.000) <0.05.
2. Attraction is semi-positive and has a significant impact on traffic optimization. This is shown by t-count X1 (8.8.624) > t-table (1.97) and p-value (0.000) <0.05.
3. Facilities and infrastructure positively and significantly affect optimization of partial trips. This is shown by the t- count X2 (3.804) > t-table (1.97) and p-value (0.002) <0.05.
4. Information and advertising significantly affect optimization of partial visits. This is shown by t- count X3 (3.405) > t-table (1.97) and p-value (0.016) <0.05.
5. Environmental quality significantly affects the optimization of visits. This is shown by t-count X4 (4.481) > t-table (1.97) and p-value (0.035) <0.05.
6. Service and hospitality play a significant role in optimizing visits. This is shown by t- count X5 (3.168) > t-table (1.97) and p-value (0.002) <0.05.

5.2 Recommendation

The following recommendations are given to the parties responsible for tourism development:
1. North Tapanuli government is advised to pay more attention to aspects related to trip optimization to maximize tourist arrivals.
2. North Tapanuli Tourist Office is recommended to cooperate with several tourist destinations to create visit tourist packages.
3. It is also recommended to clarify the creation of lakeside areas that can be used for the implementation of water sports tourism activities, areas where local communities (fishermen) can fish, as well as areas for holding attractions or underwater tourist attractions. sustainability of natural resources, natural resources and environment

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