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Abstract

This study analyzes the effect of road infrastructure costs and the number of tourist visits on the Gross Regional Domestic Product (GRDP) of the tourism sector in Simalungun Regency. Using a quantitative approach with associative methods, secondary data from the Central Bureau of Statistics of Simalungun Regency and the Directorate General of Fiscal Balance were collected spanning 30 years from 1992 to 2021. Multiple linear regression analysis with Eviews 10 software was employed. Results indicate that both road infrastructure costs and tourist visits have a significant positive effect on the GRDP of the tourism sector in Simalungun Regency, both individually and simultaneously.

Keywords: Gross Regional Domestic Product (GRDP); Tourism Sector; Road Infrastructure Costs; Tourist Visits; Simalungun Regency.

1. Introduction

Simalungun Regency is one of the regencies in North Sumatra that offers natural beauty or tourism to tourists and foreign tourists. Simalungun Regency is a tourism area that has a long history and is an area that is the main destination for traveling to Lake Toba. The main tourism offered by Simalungun Regency is Lake Toba which is a former volcanic explosion lake located in North Sumatra which is now the largest volcanic lake in Indonesia. Indonesia is one of the countries in the world that has abundant natural resources. In addition to its natural wealth, Indonesia's natural charm is also no less beautiful than other countries and makes Indonesia one of the countries dubbed the "Monaco of Asia" which is favored by foreign tourists.

However, there are still many natural charms in Indonesia that have not been utilized to become tourist destinations. In addition, the government continues to focus on improving other tourist areas that are already known to tourists. Tourism is one of the sectors that is highly dependent on national development because tourism can increase national and regional income as well as foreign exchange. and foreign exchange. Tourism also plays a role in creating jobs and reducing unemployment while creating community welfare.

In reality, the tourism sector is used as a tool to normalize a less stable economy. To support the tourism sector, it is necessary to have the participation of the community and the professionalism of the tourism management in accordance with the applicable rules and regulations. In addition, with serious attention from the government to tourism, businesses in the field of tourism in Indonesia are expected to develop well. Lake Toba is one of Indonesia's natural resources found in North Sumatra and is one of the tourist destinations that is worth visiting when in North Sumatra

Table 1 Road Construction Budget

No.	Tahun	Anggaran Pembangunan (M)
1	2017	190.628.739,76
2	2018	204.840.710,89
3	2019	237.987.438,24
4	2020	84.132.654,25
5	2021	57.145.933,81

Source: Directorate General of Fiscal Balance

Table 2 Number of Tourist Visits

No.	Tahun	Jumlah Kunjungan Wisatawan		
		Domestik	Mancanegara	Total Pengunjung
1	2017	284.746	6.087	290.833
2	2018	212.291	5.991	218.282
3	2019	539.647	17.381	557.028
4	2020	369.559	119	369.678
5	2021	396.683	1.651	398.334

Source: BPS Simalungun Region

Table 3 Tourism sector GRDP

No.	Tahun	Tingkat PDRB (Milyar Rupiah)
11	2017	311,39
12	2018	332,38
13	2019	355,38
14	2020	338,56
15	2021	335,35

Source: BPS Simalungun Region

2. Literature Review

2.1. Economic Growth

Economic growth is one of the important indicators in analyzing the level of economic development of a country. Basically, economic growth and economic development have different meanings. In general, economic development is defined as a procedure that increases the real income per capita of citizens in the long run accompanied by institutionalization. With respect to economic growth, it is defined as an increase in GDP or GNP without considering whether the increase is higher or lower than the population growth rate, or whether changes in the structure of the economy are taking place or not.

2.2. Tourism

Tourism can be defined as an activity carried out by two or more people who travel or recreational activities to a predetermined place, in a short or long period of time, not with the aim of earning money or meeting important people, but just for fun.

2.3. Road Infrastructure

Infrastructure is the facilities or facilities needed to support the economy. Examples include energy supply systems, waterways, means of communication, and distribution. as well as. With the availability of adequate physical infrastructure, it will become easier to run the economy, as well as the distribution of products and services produced. Public infrastructure includes bridges, roads, water, airports, harbors, schools, health facilities, power sources, entertainment, security, waste sites, and communication tools.

3. Research Method

1. This research is a form of quantitative research using an associative approach. Quantitative research focuses on testing theories through measuring research variables using numbers and analyzing data with statistical methods.
2. In this study, data measurements of each variable will be carried out so that the relationship of each variable can be explained statistically.
3. This quantitative approach will test the hypothesis of the Effect of Road Infrastructure Costs on the Tourism Sector in Simalungun Regency.
4. The following is the time series data regression estimation model:
5. $\log PDRB = \alpha + {}_1\log BIJ + {}_2\log KW + e$

4. Results and Discussion

- Road infrastructure costs significantly positively impact the GRDP of the tourism sector.
- Tourist visits also significantly positively impact the GRDP of the tourism sector.
- Both factors together have a significant positive impact on the GRDP of the tourism sector in Simalungun Regency.

5. Conclusions

Based on the results of research and discussion conducted by researchers, the following conclusions can be drawn.

1. *Analysis of the Effect of Road Infrastructure Costs on the GRDP of the Simalungun Regency Tourism Sector*

The results showed that Road Infrastructure affects the GRDP of the Simalungun Regency Tourism Sector with a t-statistic value of 2.410 and a Prob. (Significance) value of 0.0230 (<0.05). The results of the study state that Road Infrastructure has a positive effect on the GRDP of the Tourism Sector and is in accordance with existing theory.

The results of this study are in line with research conducted by Ramadan Mazrekaj (2020) which states that infrastructure development plays an important role in tourism development in an area but it is also important to emphasize that the success of tourism destinations depends not only on the road infrastructure itself, but also on accessibility and good transportation organization. Road Infrastructure Development will have an influence on tourist destinations where infrastructure development will facilitate access to tourist destinations and then reduce travel time and increase travel comfort by tourists.

2. *Analysis of the Effect of Tourist Visits on the GRDP of the Simalungun Regency Tourism Sector.*

The results showed that Tourist Visits had a positive effect on the GRDP of the Simalungun Regency Tourism Sector with a t-statistic value of 4.710 and a Prob. (Significance) value of 0.0001 (<0.05). The results of the study state that Tourist Visits have a positive effect on the GRDP of the Simalungun Regency Tourism Sector and are in accordance with existing theory.

The results of this study are supported by research (Dwyer et al., 2004) which argues that tourist visits create income through shopping, accommodation, and food, which contribute to the growth of the tourism sector. Tourist visits can have a positive impact on the tourism sector. These positive impacts include increasing income and employment in the tourism sector, increasing investment in the tourism sector, and increasing economic growth in tourist areas. In addition, tourist visits can also increase local communities' awareness of the importance of maintaining cleanliness and environmental sustainability, as well as promoting local culture.

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