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Comparative Analysis of Tourism in Karo Regency Before and During the Covid-19 Pandemic on the Regional Original Revenue of Karo Regency

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Abstract

This study aims to analyze how far the differences that arise to the tourism sector in Karo Regency, knowing the output produced by business actors in the tourism sector as well as the Karo Regency government can determine effective preventive measures to control the impact of Covid-19 as well as possible. And also the Government as well as the Karo Regency Community can utilize various natural potentials that can be used to expand and enrich the Tourism Sector. In the research I conducted, the type of data used is secondary data obtained from related institutions/agencies such as the Karo Regency Regional Revenue Agency, the Culture, Youth and Sports and Tourism Office of Karo Regency for the period 2017 to 2022. This study uses paired sample data in determining the results of comparative analysis. The results of the research that has been carried out show that the Hospitality Tax variable has a significant positive effect before and at the moment of the Covid-19 Pandemic on the Regional Original Revenue variable, the Number of Tourist Visits variable has a significant positive effect before and at the moment of the Covid-19 Pandemic on the Regional Original Revenue variable, and the Recreation Levy variable has a significant positive effect before the Covid-19 Pandemic on the Regional Original Revenue variable and also the Recreation Levy variable has no significant effect at the moment of the Covid-19 Pandemic on the Regional Original Revenue variable.

Keywords: hotel tax; number of tourist visits; retribution recreation places and regional original revenue

1. Introduction

Indonesia has a constitutional mandate to foster a just and prosperous society as outlined in the 1945 Constitution. Achieving this vision requires efficient and sustainable resource allocation across development sectors. Tourism, as a key driver of economic growth, offers immense potential to improve regional economies, generate employment, and position Indonesia as a global tourist destination [1]. Despite its rapid growth, the tourism sector in Indonesia continues to rely heavily on robust cooperation between government and private stakeholders to optimize its productivity. Studies highlight that it is essential for the stakeholders to focus more on planning and managing facilities and services because it can be more precisely to advance sustainable tourism development [2]. The country's rich cultural heritage and natural diversity further strengthen the tourism sector's capacity to contribute significantly to foreign exchange earnings and regional development. Such attributes, common in developing countries, underscore tourism's vital role in driving future economic growth—a characteristic less pronounced in developed nations [3]. The importance of the tourism sector is reflected in the enactment of Law No. 9 of 1990 on Tourism, which emphasizes its importance in enhancing living standards in destination areas.

Karo Regency, with its unique natural and cultural attractions, represents a microcosm of Indonesia's tourism potential. However, the COVID-19 pandemic significantly disrupted this sector, leading to notable declines in key economic indicators such as hotel taxes, recreation levies, and tourist visits. Between 2017 and 2019, these variables showed steady growth, with hotel tax revenue peaking at Rp 7.14 billion in 2018. However, by 2020, this figure plummeted to Rp 4.59 billion, mirroring a sharp decrease in the Gross Regional Domestic Product (GRDP) growth rate from 4.60% in 2019 to -0.80% in 2020. The pandemic-induced economic downturn similarly impacted the North Sumatra GRDP, which fell from Rp 539,513.85 billion in 2019 to Rp 533,513.85 billion in 2020.

Table 1. Statistical Data on Taxes, Recreation Levy and Number of Tourist visits in 2017 - 2022

Year	Hotel Tax (Rp)	Number of Tourist Visits	Retribution Recreation Places (Rp)	PDRB Karo Regency (%)
2017	5.665.532.999,00	837.476	1.891.028.000,00	7,38
2018	7.148.409.296,00	795.378	1.827.228.000,00	4,55
2019	6.438.000.000,00	727.526	1.832.596.000,00	4,60
2020	4.596.537.981,00	277.812	471.143.000,00	-0,80
2021	5.621.055.781,00	262.260	791.540.000,00	2,25
2022	8.354.882.687,00	500.650	2.184.401.902,00	4,22

Source: Bapenda Kabupaten Karo

The recovery of tourism in Karo Regency depends on addressing these challenges through strategic planning and leveraging its abundant natural and cultural wealth. Studies emphasize the importance of adaptive measures such as promoting domestic tourism, digital marketing, and implementing sustainable tourism practices to improve resilience [4] [5]. Additionally, enhancing collaborations between government and private entities is vital to optimize revenue from hotel taxes and recreation levies. Table 1 illustrates the trends in key economic indicators for Karo Regency from 2017 to 2022, demonstrating the pandemic's effects and highlighting the need for strategic interventions.

By understanding the interplay between GRDP, hotel tax revenues, and tourist visits, this study aims to provide actionable insights for policymakers to strengthen tourism's role as a pillar of regional economic recovery and growth. The findings emphasize the urgent need for sustainable and innovative approaches to harness tourism's potential, ensuring its long-term contribution to regional and national development.

2. Literature Review

2.1. Gross Regional Domestic Product

According to [6] (in Tourism Economics, 1995: 4), tourism is a general concept whose history goes back to 1811, or earlier, and its definition continues to change. The term tourism includes people who travel away from home and companies that serve them or make it more enjoyable. According to the Indonesian Ministry of Tourism and Creative Economy, tourism is all travel activities carried out by a person or group with the aim of traveling, vacationing, conducting business activities, or other interests related to travel.

2.2. Gross Regional Domestic Product

Gross Regional Domestic Product at market prices is the sum of gross value-added arising from all sectors of the economy in a region. According to [7], GRDP is the total value of all final outputs produced by an economy at the regional level (both those carried out by regional residents and residents from other regions who reside in the area). One of the important indicators to determine the economic conditions in a region in a certain period is the Gross Regional Domestic Product (GRDP) data, both at current prices and at constant prices.

2.3. Tourism-Led Growth Hypothesis (TLGH)

According to research conducted by [8], Tourism-Led Growth Hypothesis (TLGH) is an idea that states that international tourism has a role as a non-standard form of export. TLGH was developed based on the Export Led Growth Hypothesis (TLGH) theory which explains that a country's economic growth does not only occur through an increase in capital and labor, but also by increasing the number of exports.

2.4. Fiscal Policy

Fiscal policy is one of the policies to control macroeconomic balance. According to [9], various aspects of the economy, including the role of government and fiscal policy, play an important role. Keynes argued that the government has a major role in managing the economy, especially in the face of economic instability and recession.

2.5. Classical Economics Theory

Adam Smith's theory is famous for its theory of value that investigates the factors that determine the value or price of a good. In his work known as "Wealth of Nations", Smith discussed economic growth in the context of a capitalist economy systematically. David Ricardo's theory, proposed by David Ricardo, states that population growth that continues to double at some point will result in an abundance of labor. This excess labor can lead to a decrease in wages, so that wages are only enough to finance the minimum necessities of life.

2.6. Neo Classical Economics Theory

The theory proposed by [10] believes that economic growth is not only determined by demand factors, but is also influenced by other factors that affect overall supply.

3. Research Methods

3.1. Type of Research

Based on the description of the background that has been discussed previously regarding the effect of Hospitality Tax, Number of Tourist Visits, Recreation Levy on Local Revenue. The ultimate goal of conducting research is to test the theory, determine the influence and relationship of the dependent variable and the independent variable, test the initial hypothesis whose results can be seen statistically. So the type of research used is quantitative research.

3.2. Type of Research

The dependent variable used in this study is Local Revenue in Karo Regency. Regional Original Revenue is revenue from sources within the territory of a particular region, which is levied based on applicable laws. Local Revenue data is obtained from the Regional Revenue Agency (BAPENDA) of Karo Regency.

The independent variables used in this study are Hospitality Tax, Number of Tourist Visits, Recreation Levy. Hospitality Tax is a tax levied on services provided by hotels. The object of Hotel Tax is the service provided by the hotel with payment at the hotel including supporting services as hotel equipment. Number of Tourist Visits is the number of people who carry out tourist activities or visits. The number of foreign and local tourists who visit a tourist area. Recreation Place Retribution is a Regional levy on individuals or entities as payment for services providing recreation, tourism and sports services provided, owned and / or managed by the Regional Government. All independent data was obtained from the Regional Original Revenue Agency (BAPENDA) and the Karo Regency Culture, Youth and Sports and Tourism Office of Karo Regency.

3.3. Source and Type of Data

This research uses secondary data sourced from the Regional Original Revenue Agency and the Karo Regency Culture, Youth and Sports and Tourism Office as well as other references from journals, the internet, research results and so on related to this research.

3.4. Data Analysis Method

This study uses multiple linear regression analysis methods and t-tests to make comparisons between paired variables, to measure the effect of independent variables on the dependent variable and also to measure the extent of differences arising from the Covid 19 Pandemic.

4. Results and Discussion

The following are the results of multiple linear regression tests:

Table 2. Result of Paired T-test

	T Statistic	Significance	df
Hospitality Tax Before - After	3.031	0.005	35
Number of Tourist Visits Before - After	5.208	0.000	35
Recreation Retribution Places Before - After	5.521	0.000	35
PAD Before - After	2.713	0.010	35

Source: Researcher Processed Data

Based on the results of the Paired T-test test, the following explanation can be described:

- The Hospitality Tax Variable Before and After Covid- 19 has a t-statistic value of $3.031 > t\text{-table } 2.03693$ with a Significance value of $0.005 < 0.05$, this proves that there is a significant difference in the Hospitality Tax variable Before Covid-19 with the Hospitality Tax After Covid- 19.
- The variable Number of Tourist Visits Before and After Covid- 19 has a t-statistic value of $5.208 > t\text{-table } 2.03693$ with a significance value of $0.000 < 0.05$, this proves that there is a significant difference in the variable Number of Tourist Visits Before Covid-19 with the Number of Tourist Visits After Covid- 19.
- The Hospitality Tax variable Before and After Covid- 19 has a t-statistic value of $5.521 > t\text{-table } 2.03693$ with a significance value of $0.000 < 0.05$, this proves that there is a significant difference in the Hospitality Tax variable Before

Covid-19 with the Hospitality Tax After Covid- 19.

- The Hospitality Tax Before and After Covid- 19 variable has a t-statistic value of $2.713 > t\text{-table } 2.03693$ with a significance value of $0.010 < 0.05$, this proves that there is a significant difference in the Hospitality Tax Before Covid-19 variable with the Hospitality Tax After Covid- 19.

Table 3. Result of Paired T-test

	F Statistic	Significance	df
Before Pandemic Covid- 19	139.326	0.000	35
After Pandemic Covid- 19	393.158	0.000	35

Source: Researcher Processed Data

Based on the results of the Paired T-test test, the following explanation can be described:

It can be explained that the value of F obtained is $139.326 > F\text{-table } 2.901$ besides the significance value is $0.000 < 0.05$. This proves that the independent variables in this study, namely Hospitality Tax Before Covid-19, Number of Tourist Visits Before Covid-19, and Recreation Levy Before Covid-19, have a significant effect on the dependent variable, namely Regional Original Revenue (PAD) together (Simultaneously). and it can be explained that the value of F obtained is $393,158 > F\text{-table } 2,901$ besides that the significance value is $0.000 < 0.05$. This proves that the independent variables in this study, namely Covid- 19 Instantaneous Hospitality Tax, Covid- 19 Instantaneous Tourist Visits, and Covid- 19 Instantaneous Recreation Levy, have a significant effect on the dependent variable, namely Regional Original Revenue (PAD) together (Simultaneously).

5. Conclusions

Based on the results of the discussion in the previous chapter regarding the Comparative Analysis of Karo Regency Tourism Before and After the Covid-19 Pandemic on Regional Original Income of Karo Regency, the following conclusions can be drawn:

1. There was a decrease that greatly impacted the Karo Regency Tourism Sector after being affected by the Covid- 19 Pandemic and there was a huge difference when compared to the Karo Regency tourism sector before the Covid- 19 Pandemic, this can not only be seen from the Research Results it can also be seen based on trends that show that in each variable there was a large decrease in 2020 to 2022 when compared to the previous year.
2. The Tourism Sector has a significant influence on Regional Original Revenue of Karo Regency. However, Recreation Levy does not significantly affect the moment of the Covid- 19 Pandemic, this is due to the lack of management and unintegrated data on tourist attraction data in Karo Regency.

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