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Analysis of the Influence of the Tourism Sector on Local Original Income in Batu City

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A B S T R A C T

The purpose of this study is to determine the extent to which Batu City's local revenue is impacted by the number of tourists, hotel occupancy rates, and dining establishments throughout the 2011–2023 timeframe. Secondary data using a quantitative methodology was employed in this investigation. The information is in the form of time series data on Batu City's local income, restaurant count, hotel occupancy rates, and tourist visits. SPSS 25 was used to analyze the data and use multiple linear regression analysis techniques. It is possible to draw the conclusion from the study's findings that the number of restaurants, hotel occupancy rate, and tourists all have a major impact on Batu City's initial revenue. For the years 2011–2023, the number of visitors has a major impact on Batu City's initial perception of the area, the hotel occupancy rate has a substantial negative impact, and the number of restaurants has no significant impact.

INTRODUCTION

On January 1, 2001, regional economic policies were formally put into effect. In order to achieve the best outcomes, regions are granted the power to manage their natural resources autonomously under Law Number 32 of 2004 about Regional Government and Law Number 33 of 2004 concerning Financial Balance between the Central and Regional Governments. Each local government is dedicated to using local potential to increase Regional Original Revenue in order to bolster the regional economy (Anggrayini, 2022).

Regional Original Revenue (PAD) is an income stream that is acquired by local governments from their own areas, which funds the establishment of local government, development, and public services. Because of this PAD, regions may manage finances and programs with greater autonomy, so that they are not only dependent on allocations from the central government. The ability of an area to enhance infrastructure development and public services increases with its PAD. PAD must occasionally be modified so that the central government is not always responsible for managing the government.

Indonesia's tourist industry is currently starting to develop and become an attraction for the community. Indonesia has a variety of travel places such as natural tourism, cultural tourism, religious tourism, and culinary tourism that serves a variety of typical dishes from each region. With a variety of cultures, tourism and uniqueness may be a special attraction for visitors, and this potential may be turned into a tourism destination that enhances local community well-being and lowers poverty. Additionally, it can boost regional revenue and economic growth. In the background of the development of the tourist industry, including in the growth of tourism attractions and attractions generally is one of the good plans in improving, improving, and developing the conditions in the area. So that it can produce improvements that are advantageous to the local population, local authorities, and visitors.

The implementation of Law No. 32 of 2004 and Law No. 33 of 2004, which grant local governments more authority to manage their areas, has further reinforced the trend that tourism is one of the industries that can typically be used as a source of income for the region and the surrounding community. This is done in an attempt to encourage regional development, which increases the accountability and responsibilities placed on local governments to investigate and utilize all of the region's potential resources. Local governments now have more freedom to create tourist attractions because to the existence of this law.

A concept in economics known as multiplier theory explains how changes or increases in one economic aspect affect other economic factors. A multiplier is a term used in economics to describe economic activity that, when increased or changed, can result in changes or increases in a number of linked economic variables. As is the case with the tourist industry, tourism may stimulate other industries like the restaurant business, local transit, and other banking sectors, all of which can eventually boost the local economy and the well-being of its citizens.

The multiplier effect process, as defined in the Keyenesian Multiplier Effect idea, is a mechanism via which an increase in expenditure will raise the collective income of the society, which will then affect the growth of national revenue. in order for the rise in revenue to be proportionate to the rise in spending. The multiplier, according to Keynes, is a clear comparison between income and investment and the outcome of a certain simplification between the quantity of labor and the quantity of work involved in direct investment (Keynes, 1936).

The initial regional revenue is subtracted from the money received from local governments that were collected in compliance with laws and regulations and according to regional rules. Stated differently, the first revenue collected by the local government from all sources of the regional economy is known as the original regional income. According to Law No. 33 of 2004, the original regional revenue comes from regional levy taxes, regional wealth management results, regional tax results, and other original revenues. These sources are meant to give each region flexibility so they can look for funding to implement regional autonomy as an expression of the decentralization principle.

According to Article 6 of Law No. 33 of 2004 on the financial balance between the central and regional governments, the initial sources of regional revenue are as follows:

1. Regional Taxes
   To finance the execution of government and regional development, individuals or groups are required to make mandatory payments to the regions without receiving appropriate direct compensation.
2. Regional Levy
   Regional levies are levied by the regional government as payment for services or the issuance of special licenses for the benefit of persons or companies, as stated in Law No. 28 of 2009 about Regional Taxes and Regional Levies.
3. Other Legitimate Regional Revenue
   Other Acceptable Apart from regional levies, regional taxes, and the outcomes of segregated regional wealth management, regional original revenue is referred to as such.

Article 1 of Law No. 9 of 2021 on tourism states that tourism is a range of tourism activities and is backed by amenities and services offered by local governments, businesses, fellow travelers, and communities. By attracting visitors from other areas to the tourist area for leisure, tourism primarily serves to increase regional income. Therefore, by promoting entrepreneurship in the tourist industry, it can aid in lowering unemployment in productive labor.

Tourism is essentially a travel activity that involves a single individual or a group of people moving to a different location for a specific amount of time. By satisfying different wants and aspirations, the objective is to enjoy vacations, engage in leisure activities, discover new experiences, and broaden one's knowledge and understanding rather than working or doing business.

The travel and tourism industry is the sector with the largest contribution acting as an engine for the advancement of Regional Original Revenue (PAD). Nowadays, Indonesia has many exotic and interesting tourist destinations. Not only the diversity of natural tourism is prominent, but tourism of culture and history in Indonesia is also very unique and interesting. This is due to the diversity of tribes and cultures throughout Indonesia from Sabang to Marauke.

Various kinds of tourist destinations in Batu City attract tourists to visit several tourist attractions, both natural, artificial, and cultural tourism. Based on information from Batu City's Central Statistics Agency (BPS), there are various types of tourism in Batu City consisting of 60 tourist attractions consisting of 10 natural tourism, 24 cultural tourism, 1 religious tourism and 15 artificial tourism. The many tourism potentials found in Batu City have an impact on regional income. The following is the data on the Original Revenue of the Batu City Region.

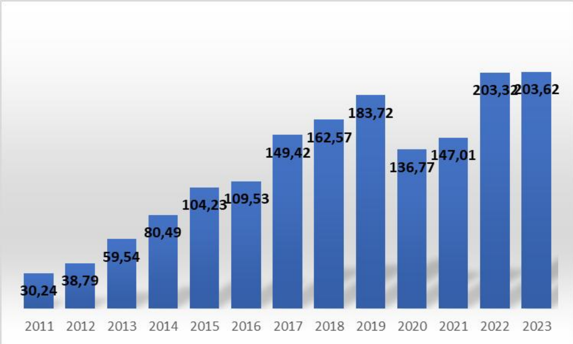

Figure 1 Realization of Original Revenue of Batu City Area in 2011-2023

Source: djpk.kemenkeu.go.id 2011-2023

According to the graph graphic above, the first regional revenue of 183.72 million in 2019 was 504.54% more than the initial regional revenue of 38.24 million in 2011. Due to restrictions imposed by the Covid-19 epidemic, which prevented many areas from engaging in many outdoor activities, it fell by 25.5% to 138.77 million in 2020, which lowers local revenue. The recovery time following the Covid-19 pandemic then increased by 7.8% in 2021 to reach 147.01M. The Batu City administration is working to boost local revenue so that the region's economy may recover to a high standard. It grew by 38.8% to reach 203.32M in 2022 and by another 38.8% to reach 222.28M in 2023.

It is anticipated that Batu City's tourist industry, which is seen as having a lot of promise, would boost local revenue. Regional taxes and levies, which originate from the tourist industry, are among the sources of regional income. In an attempt to capitalize on the potential of the area, visitors to Batu City will be assessed a levy fee. This is identical to what is done in the restaurant and hotel industry. The way that tourism is distributed in Batu City includes features that make mountainous regions unique tourist destinations. Batu City's tourism varies annually according on current events. The number of visitors to Batu City is shown in the figures below.

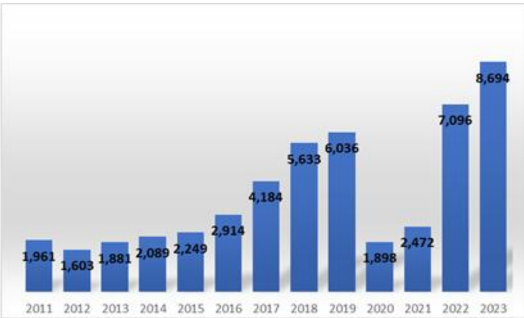

Figure 2 Number of Tourist Visits 2011-2023

According to the above table, Batu City saw 1,603,341 tourists in 2012, a decrease of 18.24% from 2011, and an increase of 6,036,724 tourists in 2019, a 220.79% increase from the 1,881,446 tourists in 2013. Due to the COVID-19 pandemic, which restricted the activities of all Indonesians, the tourist industry was also impacted in 2020, resulting in a 68.55% drop. In 2021, there were 2,472,923 more tourists, however this growth was relatively modest since the country was still recovering from the COVID-19 pandemic. There was a notable rise of 7,096,034 individuals in 2022. After that, it will rise by 8,964,430 in 2023. Thus, there has been a fluctuating growth in the number of tourist visits from 2011 to 2023.

Prior studies conducted by Fadhila Pravitasari and colleagues (2025), In the Special Region of Yogyakarta Province (DIY), a number of factors, including as the quantity of tourist attractions, tourists, hotels, and restaurants, demonstrate how the tourism sector impacts local revenue. According to the study's findings, the number of hotels significantly and favorably affects PAD, but the number of tourist attractions significantly and negatively affects it. The number of restaurants and tourists has a favorable but negligible impact. Then, according to research by Pasaribu (2024), the study's findings demonstrated that the number of tourists, the number of tourist attractions, the occupancy rate of hotel rooms, and the hotel and restaurant tax all had a positive and significant impact on PAD. In contrast, the occupancy rate of hotel rooms and the hotel and restaurant tax had no relationship with PAD. The aforementioned definition serves as the foundation for this study, which looks at how the tourism sector impacts the region's initial revenue, particularly in Batu City, where it has grown to its full potential. It also aims to find any shortcomings that can be fixed going forward to enhance the management of the Batu City area's initial revenue, particularly in the tourism sector. Since there is presently a dearth of research on the impact of the tourist industry on Batu City's regional original income for the 2011–2023 timeframe, this study was carried out in order to serve as a guide for future researchers who may like to investigate a related topic.

LITERATURE REVIEW

The Relationship of the Number of Tourists to Regional Original Income

Vacationers that arrive at a tourist destination at a specific time will spend their money on food, hotel, and souvenir purchases. It can generate and promote regional economic activity with these expenditures. Therefore, there is a favorable correlation between visitors' spending and their visit to a tourist location (Sihotang, 2021).

Relationship of Hotel Occupancy Rate to Regional Original Income

The high hotel occupancy rate is a sign of how many visitors are lodging in local hotels. Since hotel visitors spend money on lodging, dining, transportation, and other local activities, this might have a favorable effect on PAD. The hotel industry's revenue rose in tandem with the rise in hotel occupancy rates. The money received from hotel rates, extra services like dining options or spas, and taxes on travel or lodging can all raise PAD (Khaerunnizam & Dzul Fadli, 2025).

The Relationship Between Number of Restaurants and Regional Original Income

An increase in the number of restaurants in a given region will affect the amount of Regional Original Revenue collected through a variety of taxes, including employee taxes, land and building taxes, and restaurant taxes. An area's growth, particularly with regard to the infrastructure required by tourists, might be reflected in the growing number of restaurants in that area. Because they may draw more tourists and encourage them to spend more money in the area, good restaurants can likewise affect the region's original income (Septiana, 2025).

METHODOLOGY

The quantitative method is the method that will be carried out in this study. Where the measurement is based on numbers and processed based on statistics. Secondary data that utilizes time series data, which is the type of data used from the Central Statistics Agency of Indonesia, is available for publication and access there. This research was carried out in the period 2011 – 2023 with a span of 13 years. This research was carried out in Batu City which is a city in East Java Province. Where Batu City has the potential as a tourism city, this is due to its location on the high land. This analysis uses multiple linear regression methods, while the process to process this data uses the SPSS 26 application.

The following equation explains the shape of the regression equation used in this study :

$$Y = \alpha + \beta 1\ X1 + \beta 2\ X2 + \beta 3\ X3 + e$$

Information:

Y : Regional Original Revenue (PAD) Variable
α : Konstanta Regresi
b : Koefisien Regresi
X1 : Number of Tourists
X2 : Hotel occupancy rate
X3 : Number of Restaurants
e : Standard Error

Data Analysis Techniques

The results and discussion section, which is written methodically, presents the study's key findings. Only data or material pertaining to the research's goal is included in this section. The findings of the study are explained in the research article's discussion section.

Table 1. Multiple Linear Regression SPSS Output Results

Coefficients[a]

Model		Unstandardized Coefficients B	Unstandardized Coefficients Std. Error	Standardized Coefficients Beta	t	Sig.	Correlations Zero-order	Correlations Partial	Correlations Part	Collinearity Statistics Tolerance	Collinearity Statistics VIF
1	(Constant)	11451.067	3206.871		3.571	.006					
	Jumlah Wis	.003	.000	1.055	5.497	<,001	.846	.878	.725	.472	2.119
	Tingkat H.H	-2.258	.869	-.368	-2.599	.029	-.346	-.655	-.343	.865	1.157
	Jumlah Res	-21.668	13.104	-.332	-1.654	.133	.531	-.483	-.218	.430	2.326

a. Dependent Variable: PAD

Source: SPSS 26 Output

The model of regression using multiple linear models equations is as follows, as shown in Table 1:
District Original Revenue: 11451 + 0.003 – 2,258 – 21,668X_1X_2 X_3
The following is a description based on the mathematical model mentioned above:
〖β0〗_ = A constant value of 11451 indicates that Regional Original Revenue (Y) will rise by 11451 billion if all independent factors are held constant.
β _1 = 0.003 which means that the quantity of visitors (X1) has a favorable impact. It can be interpreted that if you delve into the increase in The Regional Original Income will rise by 0.003 billion if one more tourist arrives.
β _2 = -2.258 which means that the hotel occupancy rate (X2) has a negative effect. If there is an increase in the occupancy rate of 1 unit of hotels, the Regional Original Revenue will decrease by 2.258 billion.
β _3 = -21,668 It indicates that there is a negative impact from the Number of Restaurants (X3). If there is an increase in the number of restaurants of 1 unit, the Regional Original Revenue will decrease by 21.668 billion.

T-test (Partial Test)

The significance of each variable's passive impact is evaluated using the t-test. This test is used to determine how much each independent variable influences the dependent variable on its own. The variable has a considerable impact on variable Y when the value of t_hitung is bigger than the value of t_tabel. Similarly, the variable has no discernible impact on the variable Y if the value of t_hitung is less than t_tabel. The value of t_tabel is known to be as follows based on the test results:
t_tabel = t (a/2 : n-k-1)
a = 5% or 00.05
= t (0.05 / 2; 13-3-1)
= 0.025; 9
So t_tabel is 2,262
The following is an analysis of the T Test findings for each independent and dependent variable:

Variable Number of tourists (X1)

The partial test findings indicated that the Regional Original Income (Y) was significantly impacted by the quantity of tourists (X1). With a significance value of 0.001 and a t-value of 5.497 for the tourist variable—greater than the table's t-value of 2.262—it is evident that the number of visitors has an impact on the region's original location. Thus, it may be said that.

Hotel Occupancy Rate Variable (X2)

The Hotel Occupancy Rate (X2) had a negative and substantial impact on the Regional Original Income (Y), according to the partial test findings. A significant value of 0.029 is less than 0.05, and the value of t computed on the variable of hotel occupancy rate is -2.559 less than the t of table 2.262.

Variable Number of Restaurants (X3)

The partial test findings indicated that there was no significant relationship between the Number of Restaurants (X3) and the Regional Original Income (Y). With a significant value of 0.133 more than 0.04 and a t-value of -1.654 less than 2.262, the variable of the number of restaurants was examined.

Test Anova (F)

With a significant level of 0.001, the F Test result was 16.181. Table F is calculated at 95% confidence with an error rate (α) of 5% = 0.05 using the degrees of freedom (df), i.e., df1 = k (the sum of independent variables are the explanation of k) and df 2 = n – k – 1. Consequently, df1 = 3 and df2 = 13 – 3- 1 = 9 are obtained. The distribution table F indicates that table F has a value of 3.86. The analysis's findings indicated that the number of tourists, hotel occupancy rate, and restaurant count all significantly impacted the Regional Original Income, with the F calculation (16.181) being higher than the F table (3.86), and the significance level being below 0.05.

Determination Coefficient Test R^2

Table 2. SPSS Output Results

Model Summary[b]

					Change Statistics						
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	R Square Change	F Change	df1	df2	Sig. F Change	PRESS	Durbin-Watson
1	.918[a]	.844	.791	2692.72471	.844	16.181	3	9	<,001	5775089874.7	1.273

a. Predictors: (Constant), Jumlah Res, Tingkat H.H, Jumlah Wis

b. Dependent Variable: PAD

According to the test findings in Table 2, the R-Square value is 0.844, meaning that a combination of independent variables—the number of restaurants, hotel occupancy rate, and tourists—describes 84.4% of the variability of Regional Original Income. additional than the model, additional factors account for the remaining 15.6%.

RESEARCH RESULT AND DISCUSSION

The Effect of the Number of Tourists on Regional Original Income

According to the test findings on the variable number of tourists, the region's initial revenue in Batu City for the 2011–2021 period was positively and significantly impacted. With a sig value of 0.001, the variable number of tourists has a value below 0.05. This supports the finding of Gede et al. (2023) that the quantity of visitors has a major impact on the region's initial revenue. Furthermore, study by Lia Ayu Ma et al. (2023) indicates that the quantity of tourists has a favorable and noteworthy impact on the region's initial revenue. This study is consistent with the multiplier effect idea (Keynes, 1936), which uses a single number to quantify the amount that changes in different economic variables cause an increase or reduction in a community's economic revenue. The link between changes in spending and changes in a community's economic revenue in a particular area is reflected in this multiplier number. It also illustrates how the initial investment made by tourists has a beneficial ripple impact on the local economy, even for those who are skeptical of tourism. in order to generate a notable rise in the region's initial revenue.

This is due to the fact that the connection between the number of tourists and the local income is known to contribute to the receipt of regional original income in several regions, one of which is Batu City due to the numerous tourism destinations and indigenous cultural knowledge that draws visitors to flock to go to these tourist destinations. From the large number of tourists visiting, it will have a positive effect on the economy which is sourced from tourist expenditure so that it can increase local original income through taxes and levies.

The Effect of Hotel Occupancy Rate on Regional Original Income

According to the test, Batu City's initial regional income for the 2011–2023 period was significantly impacted negatively by the changing hotel occupancy rate. since the hotel occupancy rate variable's sig value is 0.029, which is less than 0.05. This is consistent with Aninda et al.'s research from 2022, which found that hotel occupancy significantly and negatively affects the region's initial revenue.

This is because certain hotels—like private villas and homestays—are not formally registered or are not subject to local government oversight, which results in an inefficient tax distribution system. As a result, demand shifts from taxable official hotels to non-taxed alternative motels that are not included in the regional tax system. In addition, the existence of tax evasion and non-transparency of reporting has also resulted in some accommodation managers also having an impact on the lack of direct contribution to the region's original income, even though the results of the residential level value are significant. However, the existence causes the local original income to not increase proportionally to the increasing occupancy rate, so that in the examination of the impact of the hotel occupancy rate on the initial regional revenue, the results are negative.

The Effect of the Number of Restaurants on Regional Original Income

According to the test results, Batu City's initial regional income for the 2011–2023 period was not significantly impacted by the varied number of restaurants. This is because the variable number of restaurants' sig value of 0.133 is higher than the predefined significance level of 0.05. These findings are consistent with studies by Lia Ayu Ma et al. (2023), which found that the number of restaurants had no discernible impact on the region's initial revenue.

This can be caused because not every eatery in Batu City has an official registration and are active tax objects. The number of small to medium-sized restaurants or restaurants managed by those who don't have a company license or file taxes. So even though there are now more eateries than there were before, the contribution of the number of restaurants to the region's original income is not directly channeled, due to the fact that not all restaurant owners pay taxes according to the provisions. In addition, the quantity of restaurants does not always indicate the volume of business or the degree of patronage by locals and visitors. Although the the quantity of eateries is increasing but there aren't many patrons or visits per eatery. it is because of high competition or many travelers decide to consumption outside of official dining establishments, like little booths.

CONCLUSIONS AND RECOMMENDATIONS

Several conclusions about the analysis of the impact of the tourism sector on the Batu City Region's original income may be made based on the findings of the research and the presented discussion.

- The growth of Batu City's local original income (PAD) is significantly impacted by the amount of visitors. This occurs because the more visitors there are, the more economic activity is produced by their spending, which eventually helps PAD through tax and levy procedures..
- The hotel occupancy rate shows a negative and significant influence on the PAD of Batu City. This is due to the fact that there are still hotels that are not officially registered so that they don't give the local government your taxes. Another reason is the lack of transparency in reporting. causes income not to increase in proportion to the occupancy rate
- The initial revenue of the Batu City region is not much impacted by the number of eateries. This is because small to medium-sized eateries, which are often run independently without business licenses or formal tax reporting, predominate. Therefore, even if there are now more eateries, their impact on PAD has not been felt immediately.

ADVANCED RESEARCH

Future research on the impact of the tourism sector on regional original income (PAD) in Batu City should adopt a more advanced and comprehensive approach by integrating spatial economic analysis, digital tax reporting systems, and governance perspectives. Exploring the role of informal tourism-related businesses—such as unregistered hotels, homestays, and small eateries—would provide deeper insights into the hidden economic potential that is not captured in official PAD figures. Furthermore, employing time-series and panel data analysis could reveal the long-term dynamics between tourist arrivals, infrastructure development, and fiscal sustainability. Advanced studies may also assess the effectiveness of regulatory enforcement and the adoption of digital-based taxation mechanisms to increase transparency, improve compliance, and optimize PAD contributions from the tourism sector. This multidimensional research agenda will not only enrich academic literature but also provide practical policy implications for sustainable tourism development and fiscal resilience in Batu City.

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