Tourism and Original Local Government Revenue in Indonesia Tourism Provinces: The Java Island Experience

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ABSTRACT

Infrastructure has a significant role in encouraging the sector of tourism. The development of Trans Java toll road enhances connectivity between regions in the island of Java. Provinces in Java that continue to improve the tourism sector are West Java, Central Java, Special Region of Yogyakarta, and East Java. The progress of the tourism sector is managed to contribute to economic growth. The objectives of this research were to determine the consequences of the number of tourists, and the occupancy rate of hotel rooms on Original Local Government Revenue in the Provinces of West Java, Central Java, Special Region of Yogyakarta, and East Java. The method utilized is panel data regression with time-series data for 5 years (2014-2018) and cross-section data of the 4 provinces in Java. Data analysis using EViews software. The results of the analysis found the crucial effect impacted by the number of tourists, and room occupancy rate, on Original Local Government Revenue in the provinces of West Java, Central Java, Special Region of Yogyakarta, and East Java.

INTRODUCTION

Indonesia’s tourism development pattern continues to show improvement. It is supported by infrastructure development, one of which is the construction of the Trans Java toll road. The Trans Java toll road smoothens connectivity between regions in Java and provides an opportunity to support the tourism sector. Provinces in Java that continue to improve the tourism sector are West Java, Central Java, Special Region of Yogyakarta, and East Java. Based on the domestic tourist’s survey regarding the number of trips during 2018, the population of East Java Province is the most travelled to reach around 17.55% of all tourist trips in Indonesia, the inhabitants from West Java became the second-highest contributor around 17.54%, and the and the third position is the population of Central Java Province which attained 14.21% (Statistics Indonesia, 2018). Furthermore, the construction of the Trans Java toll road enticed foreign tourists to do a one-day tour due to the faster travel time. Within the improvement of tourism, infrastructure has a critical part which is to energize the quality of tourism as well as the encompassing environments (Rizkiyani & Suprihardjo, 2013). One category of tourism components is infrastructure including clean water, wastewater, gas, electricity and telephone networks, drainage, highways, railroads, airports, train stations, terminals, resorts, hotels, motels, restaurants, shopping centers, entertainment venues, museums, shops, and other infrastructures (Goeldner & Ritchie, 2011). Tourism is in an interdependent relationship with economic growth and other economic activity (Zhang, 2015). Moreover, being a source of income for countries around the world, tourism is also an industry where the prospects for long-term growth are good (Ennew, 2003). The purpose of developing a region’s tourism directly, and indirectly, affect development in the area, through various tourism infrastructure, facilities, superstructure, and the presence of many tourists (Jovičić, 1980).

Regional financial policies aimed at increasing Original Local Government Revenue can be used to support governance and development in the regions to minimize regional dependence on the Central Government. Either the aim of increasing Original Local Government Revenue is to augment the effectiveness and efficiency of public services and the welfare of the people in the area. The provinces of West Java, Central Java, Special Region of Yogyakarta, and East Java developed the tourism sector mainly to increase the amount of Original Local Government Revenue. Hong (2008) suggested that the local government must understand competitive advantage from every sector contained in its region, for example, the tourism sector. This sector is important to push other sectors to rapid development.

Research conducted by Qaddarrochman (2010) explains that the number of tourists and room occupancy rate has a significant effect on Original Local Government Revenue. The findings of Qaddarrochman (2010) also support that the number of tourists has a positive influence on increasing tax revenue which is one of the main sources of Original Local Government Revenue. While Nugraha (2012) stated that the number of tourists and room occupancy rate has nothing significant to the hotel tax revenue that is a source of Original Local Government Revenue. The results of previous studies that there are differences generated a research gap, therefore differences in the results of these studies need to be clarified again the findings of empirical evidence about the influence of the number of tourists, and room occupancy rate on Original Local Government Revenue.

Based on the above description, the purpose of this research is to determine the effect of the number of tourists, and the occupancy rate of hotel rooms on Original Local Government Revenue in the Provinces of West Java, Central Java, Special Region of Yogyakarta, and East Java. This research is a replication of previous studies, differentiated by the coverage of the area including all original income data, number of tourists, and room occupancy rate in the provinces of West Java, Central Java, Special Region of Yogyakarta, and East Java. 2014-2018.
Original Local Government Revenue

In Law of The Republic of Indonesia Number 33 Year 2004 concerning Fiscal Balance Between the Central Government and Regional Governments, Original Local Government Revenue is the revenue that is obtained by the Region which is collected based on Regional Regulations in accordance with statutory regulations. Original Local Government Revenue is sourced from local taxes, regional levies, wealth management results, and other valid revenue.

To discover the potential sources of Original Local Government Revenue according to Muharomah (2006) there are several matters that need to be known, (1) the initial conditions of an area, the perseverance of the Regional Government to determine fees, and the ability of the community to pay fees applied by the Regional Government, (2) increasing the scope or extensification and intensification of Original Local Government Revenue, (3) real Gross Regional Domestic Product per capita, (4) population growth, (5) inflation rate, (6) tariff adjustments, (7) new developments such as market development, terminal construction, development garbage collection services, etc., (8) new sources of income, and (9) changes in regulations specifically relating to taxes and/or levies.

Number of Tourists

Tourism is a temporary movement of people to destinations outside of their daily residence where they live and work, where they carry out activities in the destination so that various facilities within the destination are required to meet the needs of the tourists (Mathieson & Wall, 1982). A tourist is someone who is making a visit to the main destination outside his/her usual environment for less than a year for any main purpose including holidays, leisure and recreation, business, health, education, or other purposes (UNWTO, 2010). Travel is very elastic for tourists who are price sensitive. Lower prices for holidays to certain tourism destinations will usually create an increase in the number of tourists (Hall & Williams, 2008).

The significant influence of tourist arrivals can in terms of demand and supply. The demand side reflects that tourists need to travel. This influence can be caused by various factors, such as income, price, quality, interests, advertising, opportunities for consumption, population, and another factor (Tribe, 2004). The longer tourists stay in a tourism destination, the more money would spend, leastwise for the purposes of eating, drinking, and lodging while staying in the area. Various kinds of needs during the visits bring consumptive indications for products in tourism destinations. By the consumptive activities of both foreign and domestic tourists, it will increase the income of a region’s tourism sector (Austriana, 2005).

Room Occupancy Rate

The hotel is a public housing facility to travelers by providing room services, food and beverage providers, and accommodation with the payment terms (Lawson, 1976). Tourist expenses classified by a large amount of spending during the trip are for accommodation services, such as hotel payment and other accommodations. The room occupancy rate is the percentage of rooms occupied or rented to guests compared to the total number of rooms for rent estimated in days, monthly, or yearly periods (Damardjati, 2006). There are factors that affect the room occupancy rate according to Yoeti (2008), among others, that the price or room rental rate, competition, and demand. According to Suarthana (2006), factors that need to be considered in increasing room occupancy rate are hotel location, hotel facilities, room service, room rates or room rental rates, and promotions. Room occupancy rates are considered very important for hotel management in general, and the sales department. If the occupancy rate less than hotel capacity means that there are lost sales opportunities, so that hotel revenue is less than optimal (Taha, 2000).

Previous Research Findings

The results of Qaiddarrochman’s research (2010) explained that the number of tourists had a positive and significant effect on the region’s original income. Wijaya and Djayastra (2014) also stated the same results that tourist visits had a positive and significant effect on Original Local Government Revenue. Other studies that number of tourist arrival, and hotel’s room occupancy rate significant influence on regional revenue (Walyuni, Susilo & Mulanjingsih, 2018).

Udayantini, Bagia, and Suwendra (2015) explained that there is a positive influence of room occupancy rate on tourism sector income, where tourism sector revenue is part of the Original Local Government Revenue derived from tourism activities such as tourist attraction fees, hotels, restaurants and those that are the other. Felita (2006) confirmed that room occupancy rate has a significant effect on tourism sector income. Tourists who stay in hotels for a long period will affect regional income (Suastika & Yasa; 2015; and Hascaryo, Subanti & Pangadi; 2013).

METHOD

Panel data is a combination of cross-section data and time-series data. The data used are local income data, the number of tourists, and room occupancy rate in the provinces of West Java, Central Java, Special Region of Yogyakarta, and East Java in 2014-2018. Panel data regression model:

\[ Y_{it} = \alpha_0 + \alpha_1 X_{1t} + \alpha_2 X_{2t} + u_{it} \]

\( Y_{it} \) = Original Local Government Revenue
\( X_{1t} \) = Number of Tourists
\( X_{2t} \) = Room Occupancy Rate
\( \alpha_0, \alpha_1, \alpha_2 \) = Variable Coefficients
\( u_{it} \) = Interrupting Variable

In the regression model estimation method using panel data can be done through three approaches, including (1) Common Effect Model (CE) or Pooled Least Square (PLS), this method can use the Ordinary Least Square (OLS) approach; (2) Fixed Effect Model (FE), this model assumes that differences between individuals can be accommodated from differences in their intercepts, and (3) Random Effect Model (RE), this model will estimate panel data where interruption variables may be interconnected between time and between individual. To choose the most appropriate model, several tests that can be done, including (1) Chow Test, to determine whether the Common Effect (CE) model or Fixed Effect (FE) is the most appropriate to be used in estimating panel data; (2) Hausman Test, to choose whether the Fixed Effect (FE) or Random Effect (RE) model is the most appropriate, and (3) the Lagrange Multiplier Test, to find out whether the Random Effect (RE) model is better than the Common Effect (CE).
After knowing the chosen model, a classic assumption test is performed with the following criteria: (1) residual values are normally distributed, (2) there is no multicollinearity between independent variables, (3) there is no heteroscedasticity, and (4) there is no autocorrelation. Panel data regression analysis is based on panel data to observe the relationship between one dependent variable with one or more independent variables. Data analysis using EViews 10 software.

### RESULTS AND DISCUSSION

#### Model Selection

In choosing the most appropriate model, the Chow test, the Hausman test, and the Lagrange Multiplier test, the results are as follows:

<table>
<thead>
<tr>
<th>Test</th>
<th>Prob. Values</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chow Test</td>
<td>0.0000 &lt; 0.05</td>
<td>Fixed Effect</td>
</tr>
<tr>
<td>Hausman Test</td>
<td>0.5541 &gt; 0.05</td>
<td>Random Effect</td>
</tr>
<tr>
<td>Lagrange Multiplier Test</td>
<td>0.0000 &lt; 0.05</td>
<td>Random Effect</td>
</tr>
</tbody>
</table>

Source: Data processing results (2020)

Based on those results, the model chosen is a random effect. After that, a classic assumption test is conducted.

#### The Classic Assumption Test

##### Normality Test

Normality test conducted using a random effect model approach and the results were as follows:

![Figure 1. Normality Test Results](source)

The residual normality test results showed that the Jarque-Bera value was 4.436829 with a p-value of 0.108781 where > 0.05, which means the residuals were normally distributed.

##### Multicollinearity Test

The multicollinearity test was carried out using the approach of the random effect model and the results were as follows:

<table>
<thead>
<tr>
<th>Number of Tourists</th>
<th>Room Occupancy Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>-0.364720</td>
</tr>
</tbody>
</table>

Source: Data processing results (2020)

If the correlation coefficient is smaller than 0.8, then there is no multicollinearity problem. The above results show a correlation coefficient of -0.36 < of 0.8, so there are no multicollinearity problems between independent variables.

##### Heteroscedasticity Test

The heteroscedasticity test was carried out using a random effect model approach, and the results were as follows:

<table>
<thead>
<tr>
<th>Number of Tourists</th>
<th>Room Occupancy Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>-0.364720</td>
</tr>
</tbody>
</table>

Source: Data processing results (2020)
Based on the results obtained, the analysis of the influence of the number of tourists of 0.3213 and room occupancy rate of 0.1459 which all > 0.05, it can be concluded that there was no heteroscedasticity.

**Figure 2. Heteroscedasticity Test Results**

Source: Data processing results (2020)

An autocorrelation test was performed by comparing the Durbin-Watson stat value on the results with the dL and dU values in the Durbin-Watson Table. The number of observations is 20, and the number of independent variables is 2. Based on the output, the Durbin-Watson stat value is 2.515364, the dL value in the table is 1.1004, and dU is 1.5367 because the Durbin-Watson stat value > of the dU value means no autocorrelation.

**Figure 3. Autocorrelation Test Results**

Source: Data processing results (2020)

From these results, it can be seen that the constant value of 26.07 means that if in the 2014-2018 period there were changes in the number of tourists and room occupancy rate, then the Original Local Government Revenue in the provinces of West Java, Central Java, Special Region of Yogyakarta, and East Java would grow by 26.07 percent. The parameter value \( \alpha_1 \) is the number of tourists obtained by 0.07 meaning that if there is an increase of 1 percent, it will increase local original income by 0.07 percent, so the number of tourists has a significant effect on the Original Local Government Revenue variable. The value of \( \alpha_2 \) is the room occupancy rate obtained by 0.67 meaning that if there is an increase of 1 percent, it will increase local original income by 0.67 percent so that the room
occupancy rate has a significant effect on the Original Local Government Revenue variable. To find out the intercept $\alpha_0$ coefficients in each province can be calculated as follows:

**Table 3. Provincial Individual Intercept**

<table>
<thead>
<tr>
<th>Province</th>
<th>Individual Intercept</th>
</tr>
</thead>
<tbody>
<tr>
<td>West Java</td>
<td>0.67 * 26.07 = 26.74</td>
</tr>
<tr>
<td>Central Java</td>
<td>0.38 * 26.70 = 25.45</td>
</tr>
<tr>
<td>Special Region of Yogyakarta</td>
<td>-1.68 * 26.70 = 24.39</td>
</tr>
<tr>
<td>East Java</td>
<td>0.63 * 26.07 = 26.70</td>
</tr>
</tbody>
</table>

Source: Data processing results (2020)

Based on the calculation table, West Java Province has an $\alpha_0$ intercept value of 26.74, which means that the Original Local Government Revenue in West Java Province during the 2014-2018 period influences the number of tourists and the room occupancy rate of 26.74 percent. Central Java Province has an $\alpha_0$ intercept value of 25.44, which means that the original regional income in Central Java Province during the 2014-2018 period influences the number of tourists and the room occupancy rate of 25.44 percent. The Special Region of Yogyakarta Province has an intercept value of $\alpha_0$ of 24.39, which means that the Original Local Government Revenue in the Special Region of Yogyakarta Province during the 2014-2018 period influences the number of tourists and the room occupancy rate of 24.39 percent. East Java Province has an intercept value of $\alpha_0$ of 26.70, which means that the Original Local Government Revenue in East Java Province during the period 2014-2018 influences the number of tourists and the room occupancy rate of 26.70 percent.

This explains that the more number of tourists, the Original Local Government Revenue will increase, on the contrary, if the number of tourists experiences a decline, the Original Local Government Revenue will decrease, which results are in accordance with Austriana (2005) which says that various kinds of tourists needs during a trip will cause consumptive symptoms for products in tourism destinations. With the consumptive activities of both foreign tourists and domestic tourists, it will increase revenue from the tourism sector. The results of this research confirm the results of research from Qaddarrochman (2010) and Wijaya and Djayastra (2014) which states that the number of tourists has a positive and significant effect on Original Local Government Revenue. Data shows that the number of tourists in the provinces of West Java, Central Java, Special Region of Yogyakarta, and East Java experienced an average increase in 2016 to 2018. The results are challenging with several studies found that the effect of tourist numbers on regional income was low because lack of promotion, poor facilities, and safety (Jaya & Widanta, 2014; Fariantin & Amri, 2017; Widyaningsih & Budhi, 2014).

The results of the research also stated that the room occupancy rate had a significant influence on the region's original income. The results of this research support the research of Udayantini, Bagia, and Suwendra (2015) and Felita (2006). Tourists who stay in hotels for a long period will affect regional income (Suastika & Yasa; 2015; and Hascaryo, Subanti & Pangadi; 2013). The average room occupancy rate in the provinces of West Java, Central Java, Special Region of Yogyakarta, and East Java is above 50 percent. Significant influence the room occupancy rate is due to the need for tourists to stay for more days because accommodation is the main industry in tourism. Increasing the number of tourists needs to be balanced with the provision of accommodations both hotels and other accommodations so as not to create a gap between demand and supply for these accommodations. High room occupancy rate will contribute to local taxes which are one of the main sources of Original Local Government Revenue.

**IMPLICATION**

The results of this research imply that the Provincial Governments of West Java, Central Java, Special Region of Yogyakarta, and East Java must increase the number of tourists, and room occupancy rate to rise Original Local Government Revenue. To achieve this, it is necessary to promote tourism destinations and improving the quality of facilities and services at tourism destinations in those four provinces, through intensive investment to develop infrastructural facilities and superstructure services. Particularly during the current pandemic where tourism is in a decreasing situation, tourism destinations must further improve services that prioritize hygiene, health, and safety factors in tourism activities.

**CONCLUSION AND SUGGESTION**

The development of infrastructure in the provinces of Java Island can rise the tourism sector as a major source to Original Local Government Revenue. This study revealed the influence of the number of tourists, and the occupancy rate of the rooms has a significant effect on regional original income in the provinces of West Java, Central Java, Special Region of Yogyakarta, and East Java in 2014-2018. Based on the findings, Provincial Government are expected to give more attention to the effort of promoting and improving tourism destinations. This research has limitations, such as only taking two independent variables, namely the number of tourists and room occupancy rate. The period used in this research is only from 2014 to 2018. Suggestions for further research is to add other variables such as the number of rooms, and the average length of stay of tourists.

**REFERENCES**


