ANALYSIS OF THE INFLUENCE OF TOURISM SECTOR AND OPEN UNEMPLOYMENT ON THE ECONOMIC GROWTH OF BALI PROVINCE

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Abstract: Bali is one of the most popular tourist destinations by domestic and foreign tourists in Indonesia. Because many tourists visit, many Balinese people are looking for a livelihood in the tourism sector such as becoming a tour guide, working in the hospitality sector, culinary, travel etc. During the COVID-19 pandemic, many workers in the tourism sector lost their jobs, increasing the open unemployment rate in Bali Province. With a high unemployment rate, people's welfare decreases so that it can affect economic growth in Bali Province. This study aims to see the Influence of Tourism Sector and Open Unemployment on Economic Growth of Bali Province. The independent variables of the study were the number of tourists visiting, the number of hotels, the number of travel agencies and the open unemployment rate. While the dependent variable used is the economic growth of the province of Bali. The analysis tool used is the Regression Data Panel, from the test obtained the value of the coefficient of determination \( R^2 \) of 65.80%, this shows the magnitude of the influence of the independent variable on the dependent variable. The results concluded that simultaneously the number of tourists, the number of restaurants, the number of travel agents, and the unemployment rate affect economic growth. This can be seen from the F-statistic prob value of 0.0000. While the results of the t-test show that the results are influential and significant for each independent variable against the dependent variable.

1. INTRODUCTION

Bali Province is one of the most popular tourist destinations by tourists, both domestic and foreign tourists. Tourism potential in Bali Province is quite diverse, there are many interesting tourist attractions to visit, such as beaches, tourist villages etc. In addition, there are several other reasons that become additional reasons for tourists to choose Bali Province as a tourist visit destination, namely comfort and safety, as well as local culture that is still thick and deeply rooted in people's lives to become its own characteristic for cultural tourism. Bali Province has the highest number of tourist visits in Indonesia, namely 8246610 for domestic tourist visits in 2019 and 6275210 for foreign tourist visits in 2019.

The number of tourists is expected to increase production and consumption patterns in the region. Therefore, many people work in the tourism sector in Bali to meet the needs of visiting tourists such as restaurants, hotels, and travel agencies. With so many jobs in the tourism sector, it is expected to reduce unemployment in Bali Province. Unemployment is a state in which a person belonging to the labor force wants to get a job but has not been able
to get one. A person who is not employed, but not actively looking for work is not classified as unemployed. Unemployment can occur due to imbalances in the labor market. This shows that the number of workers who need work exceeds the number of workers demanded by the industry.

The increasing number of unemployed in an area will affect economic growth in the area. In previous studies there was a relationship between unemployment and economic growth, where the relationship between the two variables was negative, which means that if the number of unemployed decreases, then economic growth will rise. Economic growth can be interpreted as a continuous process of change towards a better economic condition of a region. Economic growth is triggered by several factors, including the level of per capita income, the level of national income, the level of welfare of the population, and the unemployment rate. How to calculate economic growth in this study using GDP (Gross Regional Domestic Product), constant GDP is used to determine real economic growth from year to year or economic growth that is not influenced by price factors. GRDP is used to determine the ability of economic resources in the community. With the relationship between Economic Growth and the number of Unemployed, this study will see the relationship between GRDP and the number of unemployed in Bali Province. In addition, unemployment in Bali Province is also related to the tourism sector, considering that the tourism sector is one of the industries that play an important role in Bali Province. So this study also looks at the influence of the tourism sector on the economic growth of Bali Province.

2. LITERATURE REVIEW

2.1. Tourism Theory

Tourism is a journey from one place to another that is temporary and carried out by individuals or groups as an effort to find balance or harmony and happiness with the environment in social, cultural, and scientific dimensions according to [1]. Based on law no. 9 of 1990 concerning tourism, tourism is defined as everything related to tourism including entrepreneurs of tourist attractions and attractions and businesses related therein [2]. According to [3] tourism is a collection of various business fields that jointly produce products and services/services that will be directly or indirectly needed by tourists. Tourism contains three elements, including human elements (human elements as actors of tourism activities), places (physical elements that are actually covered by the activity itself), and time (tempo elements spent on travel and during stays at destinations).

2.2. Unemployment Theory

Unemployment is a state in which a person belonging to the labor force wants to get a job but has not been able to get one. A person who is not employed, but not actively looking for work is not classified as unemployed. Unemployment can occur due to imbalances in the labor market. This shows that the amount of labor offered exceeds the amount of labor demanded [4]. According to [5] in employment indicators, unemployment is a population who is not working but is looking for work or is preparing for a new business or a resident who is not looking for work because they have been accepted to work but have not started working. According to Mankiw in [6], Unemployment is a macroeconomic problem that affects humans directly and most severely. For most people, losing a job means a decrease in living standards and psychological stress. It's no surprise, then, that unemployment is a frequent topic of political debate and politicians often claim that the policies they offer will help create jobs. Unemployed are people who do not work at all or work less than two days during the week and are trying to get a job, so everyone who does not work cannot be
2.3. Economic Growth Theory

Economic growth is an effort to increase production capacity to achieve additional output, which is measured using Gross Domestic Product (GDP) and Gross Regional Domestic Product (GDP) in a region [9]. Economic growth is one of the indicators of successful development in an economy. The progress of an economy is determined by the magnitude of growth indicated by changes in national output. Changes in output in the economy is a short-term economic analysis. In general, theories about economic growth can be grouped into two, namely the classical theory of economic growth and the theory of modern economic growth [10]. In classical economic growth theory, analysis is based on the trust and effectiveness of free market mechanisms. This theory is a theory derived from classical economists including Adam Smith, David Ricardo. Another theory that explains economic growth is modern economic theory. The Harrod-Domar theory of growth is one of the modern theories of economic growth, emphasizing the importance of investment formation for economic growth. The higher the investment, the better the economy in a region [11].

3. METODHOLOGY

This study uses a quantitative descriptive analysis approach, where the data source used is secondary data. The secondary data used has the nature of panel data, which is data that combines cross section data and periodic series data (time series). The panel data used is cross section data from 7 districts/cities in Bali Province. In this study, the districts used for data processing were only 7 districts out of 9 districts/cities in Bali province, this is because 2 districts in Bali Province had missing data on the observed variables. The time series uses data from 2017-2021, where the data used is annual data. Data obtained from the Central Statistics Agency (BPS) of Bali Province contained in data from BPS Bali Province 2017-2021 [12]–[16]. In addition, tourism sector data was obtained from the Bali Provincial Tourism Office and 2018 Denpasar City Tourism Office data contained in [17], and [18]. The data collection technique carried out is through library study, namely by studying literature related to the problem to be studied later interconnected so that results that will help in answering existing problems are obtained.

3.1. ANALYSIS METHOD

Panel Data Regression Analysis

Panel Data Regression is a combination of cross-sectional data and time series data, where unit cross section measured at different times. So In other words, panel data is data from some of the same individuals observed over a period of time. If we have T time periods \((t = 1, 2, \ldots, T)\) and N number of individuals \((I = 1, 2, \ldots, N)\), then with panel data we
will have a total of observation units as many as NT. If the number of units of time is the same for each individual, then the data is called Balanced Panel. If the number of units of time is different for each individual hence it is called Unbalanced Panel. The data types used in panel data are time series dan cross-section. In the data time series, one or more variables will be observed in one unit of observation within a given period of time. While data cross-section be observations from several observation units at one point in time. Panel data is very useful data because this type of data helps researchers to Dive into activities N not only between individuals but behavior N Cross-time [19]. The Panel Data Regression Equation of this study is as follows:

\[ Y_i = \beta_0 + \beta_1 X_{1i} + \beta_2 X_{2i} + \beta_3 X_{3i} + \beta_4 X_{4i} + e_i \]  

(1)

where:
- \( Y_i \) = Economic Growth / GDP
- \( \beta_0 \) = Constant
- \( \beta_1 - \beta_4 \) = Regression coefficient
- \( X_1 \) = Tourist Visit
- \( X_2 \) = Number of Hotels
- \( X_3 \) = Number of Travel Agents
- \( X_4 \) = Number of unemployed

Panel Data Estimation

The data analysis method used in this study is panel data regression analysis. Data Panel is a combination of time series and cross section data[20]. The use of panel data methods has several advantages, among others these advantages do not have to test classical assumptions into panel data models [21]. In the process of data processing, a tool in the form of statistical software (statistical software) known as Stata version 16 is used. Some models of Data Analysis Panel by [22], as follows:

1. Common Effect Model (CEM)
   This approach is also known as pooled least square (PLS). Common Effect Model is a model that combines all-time series data with cross section, then model estimation is carried out using OLS (Ordinary Least Square). This model assumes that the intercept and slope of each variable are the same for each object of observation. This model is the simplest model compared to the other two models.

2. Fixed Effect Model (FEM)
   In the Fixed Effect Model, the panel model has intercepts that may change for each individual and time, where each cross-section unit is fixed in time series. One of the difficulties of panel data procedures is that consistent intercept and slope assumptions are difficult to meet. To overcome this, what is done in the panel data is to enter a dummy variable to allow different parameter values to occur, both cross-section and time series. This model, in addition to being called the fixed effect model, is also called the Least Square Dummy Variable (LSDV).

3. Random Effect Model (REM)
   Differences between time and between individuals in the Random Effect Model are accommodated through errors. Errors in this model are divided into errors for individual components, time component errors, and combined errors. The advantage of the random
effect model compared to the fixed effect model is that in terms of degrees of freedom, there is no need to estimate cross-sectional N intercepts.

Model Selection In determining the best model, the first thing to do is to do a test to choose which method is the best among these methods, among others, is done with the Chow Test and Hausman Test. The Chow Test is conducted to test between the common effect model method and the fixed effect model, while the Hausman Test is carried out to test whether the data is analyzed using a fixed effect model or random effect model.

3.2. TEST METHODS

For panel data regression analysis there are several methods used for testing as follows [23]:

Simultaneous Test (Test F)

The F test is carried out with the aim of determining whether the independent variable simultaneously affects the dependent variable. This test can be done by comparing alpha values at a rate of 5%. If the probability value of the test results is less than 5%, then the model is accepted and there is a significant influence of the independent variable on the dependent variable, and vice versa.

Partial Test (t-Statistical Test)

Partial Test is a test that aims to see partially whether each independent variable has a significant influence or not on the dependent variable. This test can be done by comparing alpha values at a rate of 5%. If the probability value of the test results is less than 5%, then the model is accepted and there is a significant influence of the independent variable on the dependent variable, and vice versa.

Coefficient of Determination (R-squared)

The coefficient of determination (R-squared) indicates how much percentage of variation in the dependent variable can be explained by variation in the independent variable. The R-squared value ranges between 0 and 1, if the value is close to 1, then the greater the variation in the independent variable and the stronger the model in this study.

4. RESULTS AND DISCUSSION

4.1. Overview of Research Scope

Before discussing the results of the study, an overview of the scope of research will be presented. Bali Province is one of 34 provinces in Indonesia located in central Indonesia, which is geographically positioned at 8°25′23" South Latitude and 115°14′55" East Longitude which makes it tropical like the entire territory of Indonesia. The area of Bali Province is 5,636.66 km² or 0.29% of the area of the Unitary State of the Republic of Indonesia. Administratively, Bali Province is divided into 8 regencies, 1 municipality, 55 sub-districts, and 701 villages. Bali is the prima donna of Indonesian tourism that is famous throughout the world. Besides being famous for its natural beauty, especially its beaches, Bali is also famous for its unique and interesting art and culture. The tourism industry is centered in South Bali and in several other areas. The main tourist locations are Kuta and surrounding areas such as Legian and Seminyak, eastern areas of the city such as Sanur, city centers such as Ubud, and in the southern regions such as Jimbaran, Nusa Dua and Pecatu. In this study, the districts used for data processing were only 7 districts out of 9 districts in Bali province, this is because 2 districts in Bali Province had missing data on the observed variables [24].

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Regression Model Selection

◊ First Test

In the first test, there is a dependent variable, namely the economic growth rate and followed by independent variables, namely hotels, travel agents, the number of tourists, and the unemployment rate. with the following formula:

\[ Y_i = \beta_0 + \beta_1X_{1i} + \beta_2X_{2i} + \beta_3X_{3i} + \beta_4X_{4i} + e_i \]  

(2)

◊ Chow Test

<table>
<thead>
<tr>
<th>Table 1. Chow Test Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fixed effects in regression</td>
</tr>
<tr>
<td>R-Squared In</td>
</tr>
<tr>
<td>Number of Obs</td>
</tr>
<tr>
<td>Number of Groups</td>
</tr>
<tr>
<td>Prob &gt; F</td>
</tr>
</tbody>
</table>

Based on table 1 shows that the P-value (Prob>F) value of Alpha < is 0.05 or significant at the 5% level with a value of 0.036. From the results of these estimates, it can be concluded that the Fixed Effect Model is more appropriate to be used in this study compared to the Common Effect Model in the Chow test. The next step is the Haussman Test to compare whether using a Fixed Effect Model or a Random Effect Model.

◊ Haussman Test

<table>
<thead>
<tr>
<th>Table 2. Haussmann Test Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Random Effect GLS- Regression</td>
</tr>
<tr>
<td>Prob &gt; Chi2</td>
</tr>
</tbody>
</table>

Based on table 2 shows that the P Value (Prob> Chi2) value is 0.441 and the value is greater than 0.05 or significant at the level of 5%. From the results of these estimates, it can be concluded that the Random Effect Model is more appropriate to be used in this study, compared to the Fixed Effect Model in the Hausman test. The next step is the LM Test (Langrange Multiplier Test) to choose whether to use the Random Effect Model or the Common Effect Model.

◊ Lagrange Multiplier Test

<table>
<thead>
<tr>
<th>Table 3. Lagrange Multiplier Test Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Breusch Pagan Lagrangian Multiplier Test</td>
</tr>
<tr>
<td>Prob &gt; Chibar2</td>
</tr>
</tbody>
</table>

Based on table 3 shows that the P Value (Prob>Chibar2) is 0.0000 and the value is smaller than 0.05 or significant at the level of 5%. From the results of the estimation, it can be concluded that the Random Effect Model is more appropriate to be used in this study, compared to the Common Effect Model in the Langrange Multiplier (LM) test. The conclusion based on the three tests that have been carried out, namely the Chow Test, Hausman Test and Langrange Multiplier Test is to use the Random Effect Model.
Panel Data Regression Estimation Results

From the selected model the Random Effect Model, the estimation results for panel data regression are obtained as follows:

<table>
<thead>
<tr>
<th>Variable</th>
<th>Coefficient Value</th>
<th>Standard Error</th>
<th>P-Value of the T-test</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hotel</td>
<td>-0.0129945</td>
<td>0.005854</td>
<td>0.026</td>
</tr>
<tr>
<td>Number of Tourists</td>
<td>7.5607</td>
<td>4.5607</td>
<td>0.0970</td>
</tr>
<tr>
<td>Number of Travel Agents</td>
<td>0.0274225</td>
<td>0.0090219</td>
<td>0.002</td>
</tr>
<tr>
<td>Number of Unemployed</td>
<td>-0.0004648</td>
<td>0.0000837</td>
<td>0.000</td>
</tr>
<tr>
<td>Constant</td>
<td>4.304122</td>
<td>1.335795</td>
<td>0.001</td>
</tr>
</tbody>
</table>

Based on the results of the Random Effect Model regression above, it can be concluded that the results of the influence of variables on hotels, travel agents, the number of tourists, and the open unemployment rate on economic growth are as follows:

a. If all independent variables are considered to have a constant value or have a zero value, then the magnitude of the economic growth rate in Bali Province is 4.304122.

b. The regression coefficient value of the hotel is -0.0129945 which means that the hotel and economic growth have a negative relationship, so that if the hotel increases by one percent assuming other factors are constant or fixed, then economic growth will decrease by -0.0129945 percent. This may happen because the increase in the number of hotels does not have a big enough impact on Bali's economic growth. In addition, due to the pandemic starting in 2019, many hotels remained open but 70% employees were laid off, so the level of unemployment cannot be explained by the number of hotels and consequently economic growth also cannot be explained by hotel variables.

c. The regression coefficient value of the number of tourists is 7.5067 which means that the number of tourists and economic growth have a positive relationship, so that if the number of tourists increases by one percent by assuming other factors are constant or fixed, then the rate of economic growth will increase by 7.5067 percent.

d. The regression coefficient value of the travel agent is 0.0274225 which means that the travel agent and economic growth have a positive relationship, so that if the travel agent experiences an increase of one percent by assuming other factors are constant or fixed, then the amount of economic growth will increase by 0.0274225 percent.

e. The regression coefficient value of the number of unemployed is -0.0004648 which means that the number of unemployed and economic growth have a negative relationship, so that if the number of unemployed increases by one percent assuming other factors are constant or fixed, then economic growth will decrease by -0.0004648 percent.

Test Methods

Statistical testing in this study can be measured from the goodness of fit regression function. Statistically, it can be measured from the statistical value of t, the statistical value of F and the coefficient of determination.

1. Test Coefficient of Determination ($R^2$)

Based on the results of regression that has been done previously with the Random Effect Model in table 4, it can be seen that the R value is 0.6580 or 65.80%. The results showed
that the variables of hotels, number of tourists, travel agents, and open unemployment were able to explain the variable of economic growth of 65.80% while the rest of the R value of 0.342 or 34.2% was explained through other variables outside the research model.

2. Simultaneous Test (F-Statistical Test)
   From the results of the Random Effect Model regression, it can be seen that the p-value of the F Test is 0.0000. Based on these results, it can be seen that the prob value (F-statistic) is smaller than the alpha value by 0.05 or 5%, meaning that this model is significant at the confidence level of 95%. With these results, it shows that the variables of hotels, the number of tourists, travel agents, and the number of open unemployment together have a significant effect on the variable of economic growth.

3. Partial Test (t-Statistical Test)
   Based on the results of regression that has been carried out through the Random Effect Model in table 4 can be explained by the p-value of the t-statistical test as follows:
   a) For Hotel Variable, the p-value obtained from the t-statistical test results is 0.026. Its value is smaller than the alpha value of 0.05 or in other words significant at the level of 5%. Thus, it can be concluded that hotels have a significant influence on economic growth.
   b) For the Number of tourists variable, the p-value obtained from the t-statistical test results is 0.0970. Its value is smaller than the alpha value of 0.1 or in other words significant at the level of 10%. Thus, it can be concluded that the number of tourists has a significant effect on economic growth.
   c) For Variable The number of travel agents obtained the p-value from the t-statistical test results is 0.002. Its value is smaller than the alpha value of 0.05 or in other words significant at the level of 5%. Thus, it can be concluded that the number of travel agents has a significant effect on economic growth.
   d) For the Variable Number of unemployed obtained p-value from the results of the t-statistical test is table 0.000. Its value is smaller than the alpha value of 0.05 or in other words significant at the level of 5%. Thus, it can be concluded that the number of unemployed has a significant effect on economic growth.

4.2. Discussion of Research Results

The Effect of Hotels on Economic Growth

Hotels have a significant influence on Economic Growth hence the first hypothesis in this study is proven. This research is proven because the number of hotels has a direct influence on Economic Growth in Bali Province. This sector is indeed a business sector that continues to be developed considering that this sector can open a wide workforce because there are many aspects of hospitality that require a lot of labor because the nature of the hotel industry is hospitality management where in producing good services to customers directed from the human resources themselves so that the number of unemployment will decrease and there will be economic growth. This is in line with research conducted by [30] that the number of hotels has a significant effect on economic growth in the tourism sector, the study discusses the number of tourist visits, hotel occupancy rates, length of stay of tourists on the economic growth of South Kalimantan Province. With this effect, hotel development becomes very profitable because it has a socio-economic impact which includes the development of tourism businesses, accommodation, restaurant services, providing
employment and community income. In addition, the community also develops nature-based sustainable tourism to prevent the negative impact of the hospitality industry.

The Effect of the Number of Tourists on Economic Growth

The number of tourists has a significant effect on economic growth and has a positive effect, so the second hypothesis in this study is proven. Tourist consumption is goods and services purchased by tourists in order to meet their needs, desires and expectations during the tourists' stay in the tourist area they visit. The longer tourists stay in a tourist destination, the more money is spent in the area. With the consumptive activities of foreign tourists, it will increase income from the tourism sector of a region. Therefore, the higher the flow of tourist visits, the income of the tourism sector will also increase, which will increase economic growth in the area. This is in line with research that [26] and [27] prove that tourist visits can increase economic growth in Bali Province.

The Influence of Travel Agents on Economic Growth

The number of travel agencies has a significant effect on economic growth and has a positive effect, so the hypothesis in this study is proven. Travel agents offer packages and various tourism products that can attract tourists as a practical vacation solution. The existence of Travel Agents is also important for the tourism sector because in this modern era, many tourists want to take a practical vacation and choose tour packages. Tourists can also save more by using Travel Agents because travel is their expertise so that they can have price offers with vendors that are cheaper and know more about the promo time so as to get more attractive prices, the existence of travel agents can attract tourist visits so that it will increase Economic Growth in the area. This is in line with [28], where in the study there is a conclusion that if the number of travel agents increases, the absorption of labor will increase and the surrounding community will prosper with the existence of travel agents will increase the job opportunities available in the area around the tourism center so that it can encourage economic growth in a tourism area.

The Effect of Unemployment on Economic Growth

The number of installments has a significant effect on economic growth and has a negative effect, so the fourth hypothesis in this study is proven. One of the factors driving economic growth is the large number of people as human resources to produce goods and services. Meanwhile, when unemployment occurs, human resources cannot produce goods and services so that it will hinder economic growth. This is in line with research [29], where unemployment will result in reduced national income from the tax sector and have an impact on economic growth.

5. CONCLUSION

Based on the results of the research that has been done, the following conclusions can be drawn: The model selected in the Panel Data Regression analysis is the Random Effect Model where the variables of the tourism sector and the number of unemployed together have a significant effect on economic growth. Furthermore, for the partial influence of hotel variables, tourist visits, travel agents, and the number of unemployed have a significant effect on economic growth. The hotel variable has a negative influence, meaning that the more hotels there are, the more economic growth will be, meaning that the variable number of hotels cannot represent its influence on economic growth because during the 2019 pandemic,
many hotels continued to open their businesses but laid off 70% of employees so that economic growth decreased but the number of hotels remained. For the variable of tourist visits, it has a positive effect on economic growth, meaning that the more tourists visit, it will increase the economic growth of a region. For the variable of travel agents has a positive effect on economic growth, meaning that the more travel agents, the economic growth will increase. For the variable number of unemployed has a negative effect on economic growth, meaning that the more unemployed, the more it reduces economic growth. For further research, it is expected to develop this research by adding other factors that can affect economic growth. For parties and agencies authorized to publish data, it is expected to further complement data in the tourism sector so that further research data will be easier and more accurate.

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