International Journal of Economics, Management and Accounting

ISSN: 2988-7615 | Volume 2, Issue 1 (2024)
Page **135-142**

Research Article

Rahayu Atmana Putri[1]*, Dr. Dedy Yuliawan, S.E., M.Si.[2]

The Influence of Government Expenditures in the Infrastructure Sector, Number of Tourists, Number of Hotels, and Number of Restaurants on the Tourism GRDP Forming Sector 2015-2019

*Corresponding Author: **Rahayu Atmana Putri:** University of Lampung, Indonesia; rahayu.ap@gemail.com
Dr. Dedy Yuliawan, S.E., M.Si: University of Lampung, Indonesia; dedy.yuliawan@feb.unila.ac.id

Received: June 9, 2024; **Accepted:** June 14, 2024; **Online:** June 20, 2024 | DOI: https://doi.org/10.47353/ijema.v2i1.154

Abstract: *This study aims to determine the effect of government spending on the infrastructure sector, the number of tourists, the number of hotels, and the number of restaurants on the Gross Regional Domestic Product Forming Sector of Tourism in the provinces of East Java, West Java, Central Java, DKI Jakarta, and Bali in 2015-2019. This study uses secondary data obtained from the Central Bureau of Statistics and the Directorate General of Balance. The analysis technique used in this research is panel data regression using the Eviews 10 computer application program. The results of this study indicate that the variables of government spending in the infrastructure sector, the number of tourists, and the number of restaurants have a positive and significant effect on the Tourism Gross Regional Domestic Product Forming Sector while the number of hotels has a negative and significant effect on the Tourism Gross Regional Domestic Product Forming Sector.*

Keywords*: Tourism GDP Forming Sector, Infrastructure Sector Government Expenditure, Number of Tourists, Number of Hotels, Number of Restaurants.*

Introduction

Tourism is an activity that provides accommodation, transportation, food, drinks, recreation and other services. Tourism services trade involves various aspects, including economic, cultural, social, religious, environmental, security and other aspects. The aspect that receives the greatest attention in tourism development is the economic aspect. It is related to this economic aspect that tourism is said to be an industry. Apart from that, tourism is a phenomenon caused by one of the human activities, namely the activity called travel. There are several reasons why people travel, including recreational and educational purposes.As can be seen from the contribution in tourism services to the supporting and revenue sectors, the tourism sector is a leading sector in increasing the country's foreign exchange and is second in number after the industrial and oil and gas sectors (Kemenpar, 2019).

Tourism contributes as a source of foreign exchange income, job creation, production activities and national income (GDP), private sector growth and infrastructure development. This concludes that efforts to develop the tourism sector are one way to encourage economic growth.The successful development of the tourism sector will increase its role in regional revenues and GDP sector revenues, namely through factors such as: Infrastructure, number of tourist attractions offered, number of tourists visiting both local and foreign tourists, number of hotels, and per capita income.In this research, there are 5 provinces with the highest number of tourists, namely East Java Province, West Java Province, Central Java Province, DKI Jakarta Province and Bali Province which have tourist attractions and have different potential in each region according to existing resources. This research uses the years 2015-2019 because after that year Covid-19 occurred which resulted in economic shocks including tourism, so this research only uses the last year 2019.

One of the government's roles in developing and managing tourism is providing infrastructure (not only in physical form), expanding various forms of facilities, coordinating activities between government

This work is licensed under the Creative Commons Attribution 4.0

officials and the private sector, general regulation and promotion to other regions and abroad.Infrastructure is a supporting (physical) means so that the economic development of a country can be realized. In this case, road infrastructure, ports, bridges, tooThis will greatly influence the increase in the number of tourists which will increase the GDP of the tourism sector because with good infrastructure, tourists will feel comfortable when traveling. The contribution of the tourism sector to the tourism GDP forming sector can be influenced by the number of tourists. Tourists are people who carry out tourism activities (Law Number 10 of 2009). According to Lie (2004:3), the development of the tourism industry in an area only depends on the number of tourists who visit. The increase in the number of tourist visits has a big impact on hotels. Where tourists look for a temporary place to stay when traveling or on holiday to a province. A hotel is a place provided for tourists to stay while they are visiting to carry out tourist activities. Apart from that, before carrying out tourism activities, a person needs information about the area they are going to and its facilities. Therefore, the existence of hotels is very necessary.

This research uses data on the number of star hotels only. Hotels are the sector that gets the most income from tourist expenditure or tourist consumption so that it will automatically add value to regional income, especially GRDP in an area. The number of hotels is a productivity indicator that is commonly used in the tourism industry, the higher the number of hotels and the hotel occupancy rate, the demand for hotel services will increase and automatically the economic activities of these hotels will have an impact on Gross Regional Domestic Product (Afandi and Soesatyo, 2012).

The tourism sector is also inseparable from food and beverage providers (restaurants) in forming tourism GRDP in the food and drink accommodation sector. Restaurants are one of the business sectors that support the development of the tourism sector. According to (Hashim et al. 2011) restaurants have an important role in human lifestyle as part of their social activities with various restaurant atmospheres. Based on the description above, there are 4 factors that will be studied and are thought to have an influence on the tourism GRDP-forming sector, namely government spending in the infrastructure sector, number of tourists, number of hotels and number of restaurants.

Method

Types of Research and Data Sources

This research includes research that uses a quantitative approach, namely a research method that processes and processes data in the form of numbers as a tool used to analyze and conduct research studies. The data used in this research include sectors that form Tourism GRDP, government spending on infrastructure sectors, number of tourists, number of hotels and number of restaurants. Data uses secondary data obtained on the websites of the Central Statistics Agency and the Directorate General of Financial Balance.

Data analysis method

The analytical method used in this research is the Panel Data Regression Analysis method (panel data regression method) with the following analysis model:

$$GRDP\ Bit = \beta 0 + \beta 1X1it + \beta 2X2it + \beta 3X3it + \beta 4X4it + \varepsilon it$$

Information:

GRDP = Shaping Sectortourism GRDP (Eating and Drinking Accommodation)

XI = Government spending on infrastructure sector

X2 = Number of Tourists
X3 = Number of hotels
X4 = Number of Restaurants
I = 1, 2, . . .n, shows cross section data
t = 1, 2, . . .n, shows time series data
β0 = Constant
β1,2,3,4 = Regression coefficient
ε = Error term

Model Estimation Method

Panel data estimation consists of three (3) types of methods, namely the Common Effect Model (CEM), Fixed Effect Model (FEM), and Random Effect Model (REM). Common effect is the simplest technique for estimating panel data which only combines time series and cross section data without looking at differences between time and individuals. The fixed effect model is a regression model that shows differences in the intercept (constant) across cross sections (countries) but the slope (regression coefficient) is constant over time (time series) and between countries. Random Effect Model (REM) estimates panel data where disturbance variables may be interconnected over time and between individuals

In selecting a panel data regression model, there are several tests, namely the Chow test, Hausman test, and LM test. The Chow test is used to choose between the best CEM or FEM. The Hausman test is used to choose between the best FEM or REM. The Lagrange Multiplier test is used to choose between the best REM or CEM. If the selected data model is CEM or FEM, a classic assumption test will be carried out which includes Residual Normality Test, Heteroscedasticity Test, Autocorrelation Test, and Multicollinearity Detection. Meanwhile, to test the regression equation on panel data, a Simultaneous Test (F Test) and a Partial Test (t Test) are required.

Results And Discussion

Panel Regression Test Results

1. Test Chow

Redundant Fixed Effects Tests
Equation: Untitled
Cross-section fixed effects test

Effects Test	Statistics	df	Prob.
Cross-section F	3097.026189	(4.16)	0.0000
Chi-square cross-section	166.329850	4	0.0000

Source: Data processed by E-Views 10, 2024.

Based on the results of the Chow test using E-views 10, it was obtained probability value of 0.0000. This shows that value the probability is smaller than the significance level (0.05) then H0 is for This model is rejected and Ha is accepted, so a better estimate to use is the Fixed Effect Model (FEM) method, then proceed to the Hausman test.

2. Hausman test

Correlated Random Effects - Hausman Test
Equation: Untitled
Cross-section random effects test

Test Summary	Chi-Sq. Statistics	Chi-Sq. df	Prob.
Random cross-section	3.998568	4	0.4062

Source: Data processed by E-Views 10, 2024.

Based on the results of the Hausman test using E-Views 10, it was obtained probability of 0.4062, indicating that the probability value greater than the significance level (0.05) so it can be concluded that H0 for this model is accepted and Ha is rejected. The estimation model The appropriate method to use is the Random Effect Model (REM). Because there are differences in the models used from the results of the Chow and Hausmant tests, it is necessary to carry out a Lagrange Multiplayer test.

3. LM Test

Lagrange multiplier (LM) test for panel data
Date: 05/05/24 Time: 15:05
Sample: 2015 2019
Total panel observations: 25
Probability in ()

Null (no rand. effect) Alternatives	Cross-section One-sided	Period One-sided	Both
Breusch-Pagan	7.678028 (0.0056)	0.412491 (0.5207)	8.090519 (0.0044)
Honda	2.770925 (0.0028)	-0.642255 (0.7396)	1.505198 (0.0661)
King-Wu	2.770925 (0.0028)	-0.642255 (0.7396)	1.505198 (0.0661)
GHM	-- --	-- --	7.678028 (0.0082)

Source: Data processed by E-Views 10, 2024.

Based on the output results in table 4.4, it is known that the Breusch-Pagan probability value is 0.0056 < 0.05. So H0 is accepted and Ha is rejected, so the appropriate model for the next analysis is the Random Effect Model (REM).

Panel Data Regression Estimation Results

Dependent Variable: PDRBP
Method: Panel EGLS (Cross-section random effects)
Date: 05/05/24 Time: 15:17
Sample: 2015 2019
Periods included: 5
Cross-sections included: 5
Total panel (balanced) observations: 25
Swamy and Arora estimator of component variances

Variables	Coefficient	Std. Error	t-Statistics	Prob.
C	6.515524	0.793542	8.210682	0.0000
GOV	0.396225	0.003975	99.67515	0.0000
WIS	1.163635	0.052600	22.12224	0.0000
HOTEL	-4.786161	0.041917	-114.1808	0.0000
REST	2.018565	0.032778	61.58366	0.0000

Effects Specification

	elementary school	Rho
Random cross-section	3.64E-06	0.0000
Idiosyncratic random	0.068799	1,0000

Weighted Statistics

R-squared	0.775742	Mean dependent var	18.46723
Adjusted R-squared	0.730891	SD dependent var	3.302811
SE of regression	1.713357	Sum squared resid	58.71184
F-statistic	17.29579	Durbin-Watson stat	0.583949
Prob(F-statistic)	0.000003		

Unweighted Statistics

R-squared	0.775742	Mean dependent var	18.46723
Sum squared resid	58.71184	Durbin-Watson stat	0.583949

Based on estimates using the REM model, the following regression equation is obtained.

PDRBP = 6.515524 + 0.396225 GOV + 1.163635 WIS – 4.786161 HOTEL + 2.018565 REST +*e*
t-stat = (8.210682)(99.67515)(22.12224)(-114.1808)(61.58366)
R-Squared = 0.775742
F-Statistics = 17.29579

The results of the regression estimation show that the R2 value is 0.775742, which means that all the independent variables in this research are government spending in the infrastructure sector, number of tourists, number of hotels, number of restaurants, ownershipthe contribution of the independent variable to the dependent variable is equal to73.08%,while the remaining 26.2% (100-73.08) was determined by other factors outside the model which were not detected in this study.

More details regarding the interpretation of each variable are as follows:

1. Coefficient value of the variableInfrastructure Sector Government Expenditures as big as0.39indicates that if there is an increase of 1 billion Rupiah inGovernment expenditure in the infrastructure sectorwill result in an increase of 0.39 billion Rupiah in the forming sectorTourism GRDP assuming other variables are constant.
2. Coefficient valuenumber of tourists as big as1.16indicates that if there is an increase of 1 million people inNumber of touristswill result in an increase of 1.16 billion Rupiah in the forming sectortourism GRDP assuming other variables are constant.
3. Coefficient valuenumber of hotels amounting to -4.78indicates that if there is an increase of 1 hotel unit it will result in a decrease of 4.78 in the tourism GDP forming sector assuming other variables are constant.
4. Coefficient valueNumber of restaurants as big as2.01indicates that if there is an increase of 1 unitrestaurantwill result in an increase of 2.01 in the tourism GRDP-forming sector assuming other variables are constant.

After conducting a regression on the government spending variable in the infrastructure sector, it is known that this variable has a positive and significant influence on the tourism GRDP-forming sector which can be seen from the t-statistical test and its probability. Markcoefficient of the variableInfrastructure Sector Government Expenditures as big as0.39indicates that if there is an increase of 1 billion Rupiah inInfrastructure Sector Government Expenditureswill result in an increase of 0.39 billion Rupiah in the forming sectorTourism GRDP.In accordance with research conducted by Fernanda Arraniry (2018) which states that road length has a positive but not significant effect on local revenue through the tourism sector of West Nusa Tenggara province.

It is known that the number of tourists has a positive and significant influence on the tourism GRDP forming sector which can be seen from the t-statistical test and its probability. Markcoefficientnumber of tourists as big as1.16indicates that if there is an increase of 1 million people innumber of touristswill result in an increase of 1.16 billion Rupiah in the forming sectortourism GRDP.This research is in accordance with research conducted by Qadarrochman (2020) which states that the number of tourists has a significant positive effect on regional revenue for the tourism sector in the city of Semarang.

It is known that the number of hotels has a negative and significant influence on the tourism GDP forming sector which can be seen from the t-statistical test and its probability. Markcoefficientnumber of hotels amounting to -4.78indicates that if there is an increase of 1 hotel unit it will result in a decrease of 4.78 in the tourism GDP forming sector.This is not in accordance with the initial research hypothesis.

This research is not in accordance with Waqfah's (2019) research which states that the number of hotels has an effect on local revenue receipts in the Yogyakarta district/city tourism sector. However, this research is supported by research conducted by Widjaya and Djayastra (2014) which states that hotel occupancy levels do not have a significant effect on the original reception of the Denpasar city area. Then this research is also supported by research by Dima Sitara (2013) which states that hotel occupancy levels do not have a significant effect on local revenue in Gianyar district. This result is because the number of hotels used is only star hotels, where tourists usually choose to stay in non-star hotels.

It is known that the number of restaurants has a positive and significant influence on Tourism GRDP which can be seen from the t-statistic test and its probability. Apart from that, the coefficient value of 2.018 means that every 1% increase in the number of tourists will have an impact on increasing Tourism GRDP by 2.018%. This is in accordance with the theory and research hypothesis. This research is in accordance

with research conducted by Adhikrisna Bagus (2016) which states that the number of restaurants has a positive effect on GRDP of districts/cities in East Java and research conducted by Marry Darfarezky (2019) which states that the number of restaurants has a positive but not significant effect on GRDP Palembang city tourism sector.

Conclusion

Based on the results in this research, the following conclusions can be drawn:

1. Government spending in the infrastructure sector has a positive and significant effect on the tourism GRDP forming sector of 0.396. This shows that increasing government spending in the infrastructure sector will increase the Tourism GRDP forming sector.
2. The number of tourists has a positive and significant effect on the tourism GDP forming sector of 1,163. This shows that increasing the number of tourists will increase the tourism GDP forming sector.
3. The number of hotels has a negative and significant effect on the tourism GDP-forming sector of 4,786, indicating that increasing the number of hotels will reduce the tourism GDP-forming sector.
4. The number of restaurants has a positive and significant effect on Tourism GRDP of 2,018. This shows that increasing the number of restaurants will increase the sector that forms Tourism GRDP.

References

Afandi, Akhmad Ghofir dan Soesatyo, Yoyok. 2012. Pengaruh Industri Pengolahan, Perdagangan, Hotel, Dan Restoran, Dan Pertanian Terhadap pdrb Kabupaten Mojokerto. Univestitas Negeri Surabaya

Agus, Sulastiyono. (2011). Manajemen Penyelanggaraan Hotel. Bandung: Alfabeta.

Agus Widarjono. 2018. Ekonometrika Pengantar Dan Aplikasinya Disertai Panduan Eviews. Edisi keli. Yogyakarta: UPP STIM YKPN Yogyakart

Anitasari, M., & Soleh, A. (2015). Pengaruh Pengeluaran Pemerintah Terhadap Pertumbuhan Ekonomi Di Provinsi Bengkulu. Ekombis Review: Jurnal Ilmiah Ekonomi Dan Bisnis, 3(2), 117–127. https://doi.org/10.37676/ekombis.v3i2.139

Arsyad, Lincoln. (2015), "Pengantar Perencanaan Dan Pembangunan Ekonomi Daerah", edisi pertama, BPFE, Yogyakarta.

Badan Pusat Statistik Jakarta Pusat, 2019. Statistik Indonesia Tahun 2019. Jakarta Pusat: Badan Pusat Statistik

Badan Pusat Statistik Jakarta Pusat, 2022. Statistik Indonesia Tahun 2022. Jakarta Pusat: Badan Pusat Statistik

Badrudin, Rudi, 2001. Menggali Sumber Pendapatan Asli Daerah (PAD) Daerah Istimewa Yogyakarta Melalui Pembangunan Industri Pariwisata, Yogyakarta: Kompak

Bahar, H. dan Marpaung, H. (2002). Pengantar Pariwisata. Bandung: Alfabet.

Grigg, N. 1988, Infrastructure Engineering and Management, John Wiley & Sons.

Gujarati, Damodar, 2003, Ekonometri Dasar. Terjemahan: Sumarno Zain, Jakarta: Erlangga.

Hashim, F. A., Bibon, M. A., and Abdullah, R. P. S. R. (2011). Restaurant's atmospheric elements: what the customer wants. Journal of Asian Behavioral Studies, 1 (2).

Hendrayadi Suryani, 2015. Metode Riset Kuantitatif, Teori, Dan Aplikasi Pada Penelitian Bidang Manajemen Dan Ekonomi Islam, Jakarta: Prenada Media, Hal. 109

Hutasoit, N. (2017), Pengaruh Jumlah Kunjungan Wisatawan Mancanegara dan Jumlah Hunian Hotel terhadap Penerimaan Sub Sektor PDRB Industri Pariwisata di Propinsi Sumatera Utara Tahun 2004 – 2013, JOM, Fekon, Univ Riau, Pekan Baru

Mangkoesoebroto, Guritno. (2002). Ekonomi Publik. Yogyakarta: BPFE.

Munanda, R., dan Amar, Syamsul. (2019). Pengaruh Kunjungan Wisatawan Mancanegara, Rata-Rata Pengeluaran Dan Tingkat Hunian Hotel Terhadap Pendapatan Indonesia Pada Sektor Pariwisata. Jurnal Kajian Ekonomi dan Pembangunan, Vol 1, No 1 (2019)

Musgrave, Richard. A dan Peggy B Musgrave. 1989. Public Finance in Theory and Practise. Fifth Edition, McGraw-Hill Book, International Edition, 1989.

Nizar, Muhammad Afdi. 2011. Pengaruh Pariwisata Terhadap Pertumbuhan Ekonomi di Indonesia, Jurnal.

Pertiwi, Ni Luh; Budhi, I Made; dan Saskara, Ida Ayu. (2017). Pengaruh Jumlah Kunjungan Wisatawan, Tingkat Hunian Kamar, Jumlah Restoran Terhadap Pajak Hotel & Restoran Dan PDRB Kawasan Regional Sarbagita Di Provinsi Bali. Jurnal Buletin Studi Ekonomi Vol. 22, No. 1, Februari 2017.

Rosa, Yenni Del. 2018. Pengaruh Kontribusi Objek Wisata Pantai Gandoriah Pariaman Terhadap Pendapatan Asli Daerah Kabupaten Pariaman. Jurnal Menara Ekonomi. Volume IV No. 2

Saibani, Abdullah (2014), Pedoman Umum Penyelenggaraan Perintah Desa, Jakarta: Media Pustaka

Soediyono. 1989. Ekonomi Makro: Pengantar Analisis Pendapatan Nasional. Yogyakarta: Liberty.

Subardini. (2017). Analisis Kontribusi Sektor Pariwisata terhadap Produk Domestik Regional Bruto Provinsi Jawa Timur. JIABI Vol. 1 No. 2. Tahun 2017

Sukirno, Sadono. 2013. Makroekonomi: Teori Pengantar. Jakarta: PT. Rajagrafindo Persada.

Suparmoko, M., 2004 Ekonomi Publik Untuk Keuangan dan Pembangunan Daerah. Yogyakarta: Penaerbit Andi.

Todaro, Michael P. 2003. Pembangunan Ekonomi Di Dunia Ketiga. Alih Bahasa: Aminuddin dan Drs. Mursid. Jakarta: Ghalia Indonesia.

Vojnovic, Nikola. And Knezevic, Rade. 2013. Economic and Tourism Indicator as a Menas of Monitoring Sustanaible Tourism: The Case Of Inland Istria. UTMS Journal of Economics, 4(2), pp:213-230

Yoeti, O. A. (2008). Ekonomi pariwisata: intrduksi, infromasi, dan implementasi. Jakarta (ID): Kompas.