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The Impact of Tourism Sector, Investment, and Labor on Economic Growth in Lombok Island, West Nusa Tenggara Province

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Abstract:
This study aims to determine the impact of the tourism sector, investment, and labor on economic growth in Lombok Island, West Nusa Tenggara Province. The research method used in this study is panel data from 2013 to 2022 in Regencies/Cities in Lombok Island with the Fixed Effect Model (FEM) method. Data are presented annually obtained from BPS West Nusa Tenggara Province, BPS each Regencies/Cities in Lombok Island, and Dinas Pariwisata each Regencies/Cities in Lombok Island. Based on the result of the partial analysis, the variable of the tourists has a positive and significant effect on economic growth in Lombok Island, which is seen from the probability value which is smaller than 0.05. The variable of the hotels has a negative and significant effect on economic growth in Lombok Island, which is seen from the probability value which is smaller than 0.05. The variables of investment and labor have a negative and insignificant effect on economic growth in Lombok Island, which is seen from the probability value which is larger than 0.05. Simultaneously, all research variables have a significant effect on economic growth and have an influence shown by R^2 of 49.15%, indicating that all research variables can explain the dependent variable, and the remaining 50.85% is explained by other variables outside the study.

Keywords: *Tourism Sector, Hotels, Tourists, Investment, Labor, Economic Growth*

BACKGROUND

Economic development is the main goal of every country and region, and this process aims to improve the quality of life of the community through the optimal, efficient, and sustainable use of resources (Todaro & Smith, 2014). Economic growth is an important aspect of economic development, which shows an increase in people's welfare and greater production of goods and services (Sukirno, 2016).

In Indonesia, economic growth faces major challenges, especially due to the impact of the Covid-19 Pandemic, which caused a decline in economic growth in 2020 (BPS Indonesia, 2021). Some business sectors still managed to grow, but there are regional disparities in economic growth. One region in Indonesia that faces similar challenges is West Nusa Tenggara, especially Lombok Island. The island has great tourism potential, but economic growth in several districts/cities on Lombok Island

still needs to be improved (Wahidin et al., 2022). There are fluctuations in the growth of Gross Regional Domestic Product (GRDP) in various districts/cities, with Mataram City showing stable and positive growth.

Table 1. Economic Growth Rate in Lombok Island 2013-2022 (%)

WILAYAH	TAHUN									
	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Kabupaten Lombok Barat	5.36	5.53	6.39	5.74	6.30	0.57	3.84	-7.03	3.40	3.46
Kabupaten Lombok Tengah	6.25	6.31	5.60	5.70	6.42	3.14	4.04	-6.67	4.03	3.55
Kabupaten Lombok Timur	5.39	4.93	5.93	5.24	6.25	3.40	4.70	-3.12	3.12	3.18
Kabupaten Lombok Utara	4.12	4.56	4.87	5.22	6.08	-0.87	5.86	-7.46	1.38	3.49
Kota Mataram	7.95	8.10	7.96	8.06	8.07	4.95	5.58	-5.52	3.27	3.53

Source: BPS West Nusa Tenggara Province

Based on Table 1.1, the growth rate of the Gross Regional Domestic Product (GRDP) of regencies/cities on Lombok Island, West Nusa Tenggara Province fluctuates. Mataram City has high and stable economic growth, with a Gross Regional Domestic Product (GRDP) growth rate between 7.95% and 8.10% during 2013-2017. However, the growth rate of the Gross Regional Domestic Product (GRDP) of Mataram City decreased in the following years, especially in 2020 (-5.52%) due to the impact of the Covid-19 pandemic. Overall, the growth rate of the Gross Regional Domestic Product (GRDP) of districts/cities on Lombok Island decreased in 2020 due to the pandemic but began to increase again in 2021 and 2022.

The tourism sector on Lombok Island has great potential to improve the regional economy. Tourist attractions such as beaches, mountains, local culture, and underwater natural beauty attract domestic and international tourists. The tourism sector has the potential to make a significant contribution to regional income and job creation. Tourism growth can also stimulate other sectors such as trade, transport, financial services, and creative industries.

Investment is an important factor in tourism sector development and economic growth. Investment can expand markets, improve service quality, and attract more tourists. In addition, investment can also create new jobs and capital, which contributes to reducing unemployment and poverty. On Lombok Island, various large investment projects such as the Mandalika Special Economic Zones, the construction of the Mount Rinjani cable car, and other projects are expected to boost economic growth and community welfare (Saputra, 2022).

In addition to the tourism and investment sectors, the quality of human resources also affects economic growth on Lombok Island. A productive and qualified workforce can support economic growth through increased productivity and innovation. The number of workers in various districts/cities on Lombok Island also fluctuates, which can affect regional production and output.

In this context, this study aims to understand the influence of the tourism, investment, and labor sectors on economic growth in Lombok Island, West Nusa Tenggara Province. By looking at fluctuations in economic growth data, investment, labor, as well as the potential of the tourism sector, this research will help provide insights into the economic dynamics on Lombok Island and the factors that contribute to sustainable economic growth.

THEORETICAL FRAMEWORK

Economic Growth Theories

• Classical Theory: Economic growth is determined by the accumulation of capital and population growth.

• Neoclassical Theory: Economic growth is driven by the accumulation of capital, labor, and technological progress.

• Schumpeterian Theory: Entrepreneurial innovation and creative destruction contribute to economic growth.

Regional Economic Development
This section explores the factors influencing regional economic development, including natural resources, labor, capital goods, technology, and social factors. Regional economic growth strategies are influenced by both local governance and societal dynamics.

Tourism-Led Growth (TLG) Theory
The TLG theory posits that tourism can act as a catalyst for economic growth through increased tourist spending, heightened investment, and improved environmental quality. The theory underscores the potential of the tourism sector as a driver of economic development.

Conceptual Relationships
The theoretical framework establishes the interconnectedness of various variables:

• Tourists and Economic Growth: Increasing tourists contribute positively to regional income and economic growth.

• Hotels and Economic Growth: The expansion of hotel establishments correlates with enhanced economic prospects through the tourism sector.

• Investment and Economic Growth: Investments fuel economic growth by bolstering production capacities and resource availability.

• Labor and Economic Growth: Population growth and labor dynamics play a pivotal role in driving economic development.

METHOD
In this study, the author used a quantitative descriptive data analysis technique: a technique that aims to describe or explain the phenomenon under study based on numerical data that has been collected (Sugiyono, 2017). Furthermore, this study uses secondary data, which is data that has been previously available and is not obtained by researchers directly (Sugiyono, 2017).

The research method used in this study is panel data from 2013 to 2022 in 5 Regencies/Cities in Lombok Island with the Fixed Effect Model (FEM) method. Data are presented annually obtained
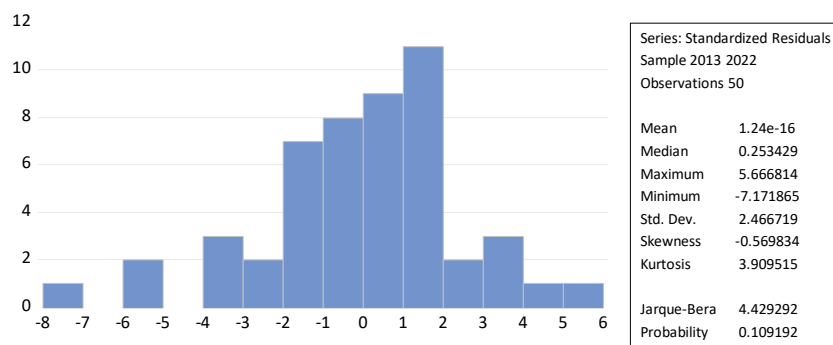
from BPS West Nusa Tenggara Province, BPS each Regencies/Cities in Lombok Island, and Dinas Pariwisata each Regencies/Cities in Lombok Island.

RESULT
Classic Assumption Test
Normality Test

Table 2. Normality Test Results

Source: Output Eviews 12

Based on the results of the Normality test, the Jarque-Bera probability value was determined to be 0.109192 > 0.05, indicating that the data is normally distributed.

Multicollinearity Test

Table 3. Multicollinearity Test Results

	LOG(WIS)	LOG(HTL)	LOG(INV)	LOG(TK)	KETERANGAN
LOG(WIS)	1.000000	0.524171	-0.028141	-0.631531	Tidak terjadi multikolinearitas
LOG(HTL)	0.524171	1.000000	0.213837	-0.737292	Tidak terjadi multikolinearitas
LOG(INV)	-0.028141	0.213837	1.000000	0.180250	Tidak terjadi multikolinearitas
LOG(TK)	-0.631531	-0.737292	0.180250	1.000000	Tidak terjadi multikolinearitas

Source: Output Eviews 12

Based on the Multicollinearity test, all correlation coefficients have a value less than 0.8. As a result, it is possible to infer that this study model does not have multicollinearity issues.

Heteroscedasticity Test

Table 4. Heteroscedasticity Test Results

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-3.064470	20.14683	-0.152107	0.8825
LOG(WIS)	-0.878789	0.625065	-1.405915	0.1933
LOG(HTL)	1.252542	1.081960	1.157660	0.2768
LOG(INV)	-0.047993	0.072382	-0.663055	0.5239
LOG(TK)	0.832579	1.346066	0.618527	0.5516

Source: Output Eviews 12

The Glejser test results show that all probabilities > 0.05, which means there is no heteroscedasticity in the regression model. This shows that the regression model has the same variance of residuals between one observation and another.

DISCUSSION
Hypothesis Testing
Panel Data Regression Analysis

The researcher used the panel data regression equation to estimate how the dependent variable changes when the independent variable increases or decreases. The results of the panel data regression using the Fixed Effect Model (FEM) method are presented below by the researcher.

Table 5. Fixed Effect Model (FEM) Test Results

Dependent Variable: PDRB
Method: Panel Least Squares
Date: 08/09/23   Time: 22:15
Sample: 2013 2022
Periods included: 10
Cross-sections included: 5
Total panel (balanced) observations: 50

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	1.462193	26.46188	0.055257	0.9562
LOG(WIS)	3.111112	0.568905	5.468597	0.0000
LOG(HTL)	-5.472273	1.390777	-3.934687	0.0003
LOG(INV)	-0.024352	0.159226	-0.152940	0.8792
LOG(TK)	-0.588743	2.152895	-0.273465	0.7859

Effects Specification

Cross-section fixed (dummy variables)

R-squared	0.574499	Mean dependent var	3.783000
Adjusted R-squared	0.491475	S.D. dependent var	3.781548
S.E. of regression	2.696658	Akaike info criterion	4.983452
Sum squared resid	298.1505	Schwarz criterion	5.327616
Log likelihood	-115.5863	Hannan-Quinn criter.	5.114512
F-statistic	6.919634	Durbin-Watson stat	2.670983
Prob(F-statistic)	0.000010		

Source: Output Eviews 12

Based on the results of data processing, the following results are obtained:
PDRB = 1.462193 + 3.111112LOG(WIS) − 5.472273LOG(HTL) − 0.024352LOG(INV) − 0.588743LOG(TK)

Coefficient of Determination

Table 6. Coefficient of Determination Test Results

R-squared	0.574499
Adjusted R-squared	0.491475

Source: Output Eviews 12

Based on the results, an adjusted R-squared value of 0.491475 was obtained. This means that the variable tourists, hotels, investment, and labor can explain 49.15% of the economic growth variable on Lombok Island. Meanwhile, 50.85% of the economic growth variable is explained by variables outside the model or other factors not included in this study.

t-test

Table 7. t-test Results

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	1.462193	26.46188	0.055257	0.9562
LOG(WIS)	3.111112	0.568905	5.468597	0.0000
LOG(HTL)	-5.472273	1.390777	-3.934687	0.0003
LOG(INV)	-0.024352	0.159226	-0.152940	0.8792
LOG(TK)	-0.588743	2.152895	-0.273465	0.7859

Source: Output Eviews 12

From the t-test results, it can be seen that the independent variables affect the dependent variable as follows:

- Tourists on Economic Growth
  The t-test results show that the tourists variable has a t-value of 3.111112, with a significance value of 0.0000 < 0.050. These results indicate that the number of tourists has a positive and significant effect on economic growth.

- Hotels on Economic Growth
  The t-test results show that the hotel variable has a t-value of -5.472273, with a significance value of 0.0003 < 0.050. These results indicate that the number of hotels has a negative and significant effect on economic growth.

- Investment on Economic Growth

The t-test results show that the investment variable has a calculated t-value of -0.024352, with a significance value of 0.8792> 0.050. These results indicate that investment has a negative and insignificant effect on economic growth.

- Labor on Economic Growth

The t-test results show that the labor variable has a t-value of -0.588743, with a significance value of 0.7859 > 0.050. These results indicate that labor has a negative and insignificant effect on economic growth.

F Test

Table 8. F Test Results

F-statistic	6.919634
Prob(F-statistic)	0.000010

Source: Output Eviews 12

The statistical test results show the Prob F-statistic value of 0.000010 < 0.05 so that H_o is rejected. This result shows that the independent variables simultaneously affect the dependent variable significantly.

Tourists on Economic Growth

From the results of the analysis, it was found that the number of tourists variable has a positive and significant effect on the economic growth variable with a regression coefficient-value of 3.111112. This shows that every increase in the number of tourists by 1 person, will increase economic growth by 3.111112%. These results support previous research conducted by Fitriana Sholikhah (2021) which states that the number of tourists has a positive and significant effect on economic growth.

Hotels on Economic Growth

From the results of the analysis, it was found that the variable of hotels has a negative and significant effect on the economic growth variable with a regression coefficient of -5.472273. This shows that every increase in the number of hotels by 1 unit, will reduce economic growth by -5.472273%. Vice versa, every decrease in the number of hotels by 1 unit, will increase economic growth by -5.472273%. These results support previous research conducted by I Made Udiyana Putra and Ida Bagus Putu Purbadharmaja (2019) which states that the number of hotels has a negative and significant effect on economic growth.

Investment on Economic Growth

From the results of the analysis, it was found that the investment variable has a negative and insignificant effect on the economic growth variable with a regression coefficient of -0.024352. This shows that every increase in investment by 1 rupiah, will reduce economic growth by -0.024352%. Vice versa, every decrease in investment by 1 rupiah, will increase economic growth by -0.024352%.

These results support previous research conducted by Ikayanti Puspaning Kartini, Theresia Militina, and Aji Sofyan Effendi (2020) which states that investment has a negative and insignificant effect on economic growth.

Labor on Economic Growth

From the analysis, it is found that the labor variable has a negative and insignificant effect on the economic growth variable with a regression coefficient of -0.588743. This shows that every increase in labor by 1 person, will reduce economic growth by -0.588743%. Vice versa, every decrease in labor by 1 person will increase economic growth by -0.588743%. These results support previous research conducted by Janita Sari (2021) which states that labor has a negative and insignificant effect on economic growth.

CONCLUSION

Based on the results of the research, it can be concluded several things, namely:

• There is a positive and significant effect of the number of tourists on the economic growth of Lombok Island with a coefficient of 3.111112 and a probability of 0.0000.

• There is a negative and significant effect of the number of hotels variable on economic growth on Lombok Island with a coefficient of -5.472273 and a probability of 0.0003.

• There is a negative and insignificant effect of the investment variable on economic growth on Lombok Island with a coefficient of -0.024352 and a probability of 0.8792.

• There is a negative and insignificant effect of the labor variable on economic growth on Lombok Island with a coefficient of -0.588743 and a probability of 0.7859.

• Simultaneously, the number of tourists, number of hotels, investment, and labor variables significantly affect economic growth on Lombok Island.

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