International Journal of Social and Education (INJOSEDU) e-ISSN: 3047-6151
Vol. 2 No. 7 August 2025, hal., 2120-2139

ANALYSIS OF DETERMINANTS OF GROSS REGIONAL DOMESTIC PRODUCT OF DISTRICTS/CITIES IN THE PROVINCE OF BALI IN 2019-2023

Ni Putu Ari Cipta Dewi [1], Putu Ayu Pramitha Purwanti [2]
[1]Faculty of Economics and Business, Udayana University;
Email: ciptadewi723@gmail.com
[2] Faculty of Economics and Business, Udayana University; E-mail:
***** Corresponding Author : Ni Putu Ari Cipta Dewi

Abstract: Regional economic development is an important foundation in promoting equitable growth in each region. Bali Province as a national leading tourism area has experienced fluctuating economic dynamics, especially during the COVID-19 pandemic which has had a significant impact on strategic sectors. Inequality between districts/cities as well as differences in fiscal capabilities and the quality of human resources are also concerns in the formulation of regional development policies. The purpose of this study is to analyze Investment, Tourism Sector, Human Development Index (HDI), Labor Force Participation Rate (LFPR), and Regional Original Income (ROR) on Regency/City Gross Regional Domestic Product (GDP) in Bali Province in 2019–2023. This study uses secondary data with a quantitative approach and panel data method. The data used consisted of 45 observations covering nine districts/cities over five years. The data analysis techniques used were descriptive statistical analysis and panel data regression with a fixed effect model (FEM) approach based on relevant tests. The results of the study show that: 1) Investment, Tourism Sector, HDI,LFPR, and ROR simultaneously have a significant positive effect on the GDP of Regencies/Cities in Bali Province; 2) Partially, Investment, Tourism Sector, HDI, LFPR and ROR have a positive and significant effect on GDP. The results of this research are expected to be considered for local governments in formulating regional economic development policies based on strategic sectors and improving the quality of human resources to achieve sustainable and inclusive growth.
Keywords: Investment, tourism sector, Human Development Index, Labor Force Participation Rate, Regional Original Income and Gross Regional Domestic Product.

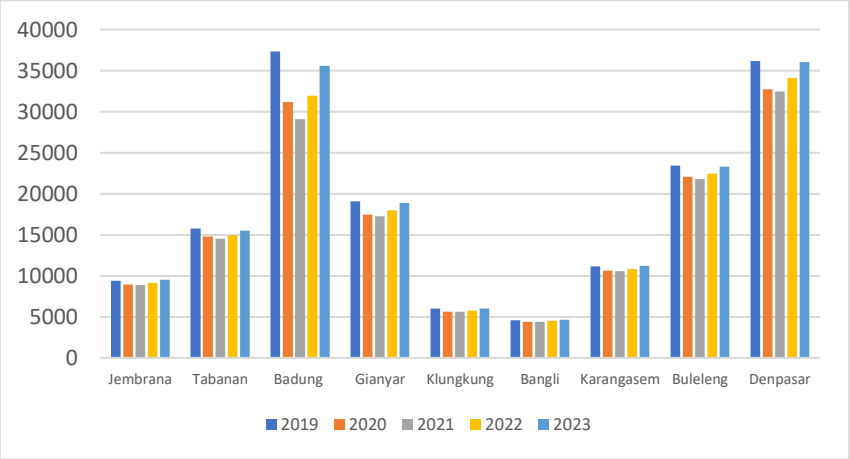
INTRODUCTION

Economic growth is the main indicator in assessing the success of a region's development because it reflects an increase in production capacity through the output of goods and services (Mamudi *et al.,* 2022). However, high economic growth is not always accompanied by an equitable distribution of development results. Inequality between regions is still a structural problem in developing countries such as Indonesia (Siregar *et al.,* 2025), including in Bali Province, where differences in access to resources, infrastructure, and public services have widened economic disparities.

Bali Province is a clear example of regional economic inequality. Although the tourism sector contributes significantly to Bali's GDP, its contribution is still concentrated in areas such as Badung and Denpasar (Ernah *et al.,* 2025). Meanwhile, districts such as Karangasem, Bangli, and Jembrana, which depend on the agricultural sector and small

businesses, are lagging behind in terms of productivity and welfare. This inequality is further exacerbated by the impact of the COVID-19 pandemic, which has pressed regions with a high dependence on tourism more deeply than regions with more diversified economies (Trimurti *et al.*, 2021).

Figure 1 Gross Regional Domestic Product on the Basis of Constant Prices (Billion Rupiah) of Regencies/Cities in Bali Province in 2019-2023



Source: Central Bureau of Statistics of Bali Province (2025)

The data in Table 1.1 shows the GDP inequality between regions in Bali Province for the 2019–2023 period. Badung Regency recorded a GDP of IDR 38,000 billion and Denpasar IDR 36,000 billion in 2019, but it dropped drastically to IDR 30,500 billion and IDR 30,000 billion in 2020 due to the COVID-19 pandemic. On the other hand, agrarian areas such as Bangli and Karangasem experienced a more moderate decline. The economic recovery in 2021–2023 shows that Badung and Denpasar are recovering faster than other districts. This inequality is influenced by economic structures that rely on the tertiary sector, especially tourism, as well as differences in fiscal capacity and infrastructure (Mulyani *et al.*, 2020).

Several economic variables are suspected to play an important role in encouraging or inhibiting economic growth between regions. Investment, as one of the main variables, plays a role in strengthening production capacity and creating jobs, but the impact is highly dependent on the readiness of human resources and the direction of the recipient sector. In addition, the Labor Force Participation Rate (LFPR) and Regional Original Income (ROR) also contribute to the variation in GDP, depending on the quality of the workforce and fiscal governance of each region.

The tourism sector also plays a central role, especially the sub-sector of providing accommodation and food and beverages that directly interact with tourists. However, not all regions have adequate attractiveness or supporting infrastructure, so the value of this sector is uneven. On the other hand, the Human Development Index (HDI) reflects gaps in the quality of education and health that affect labor productivity and, ultimately, the economic growth of the region.

Based on this background, this study aims to analyze the influence of investment, tourism sector, HDI, LFPR, and ROR on the GDP of districts/cities in Bali Province in the 2019–2023 period. This study is expected to provide an empirical understanding of the dynamics of regional economic growth after the pandemic, as well as the basis for the formulation of development policies that are more equitable, inclusive, and based on local potential.

METHOD

This study uses a quantitative approach with an associative design, which aims to determine the relationship between the free variables, namely Domestic Investment (X1), the contribution of the tourism sector to GDP (X2), the Human Development Index (X3), the Labor Force Participation Rate (X4), and Regional Original Income (X5), to the bound variable, namely Gross Regional Domestic Product (Y) in districts/cities of Bali Province. This approach was chosen because it is able to measure and explain the influence between variables objectively and measurably through quantitative data, as well as allowing statistical hypothesis testing. (Sugiyono, 2017; Creswell, 2018). This research was conducted in nine districts/cities in Bali Province with a data coverage of five years (2019–2023), so that panel data was obtained with a total of 45 observations. Panel data allows for a more comprehensive analysis because it combines time series and cross-sectional dimensions, so as to identify dynamics and differences in characteristics between regions in influencing GDP.

The determination of variables and their operational definitions is carried out to ensure the clarity of the concepts being analyzed. The GDP variable (Y) is measured on the basis of constant prices (ADHK) in units of billions of rupiah to reflect real economic growth. The investment variable (X1) is measured based on the realization of PMDN and FDI in billions of rupiah per year. The tourism sector variable (X2) is measured through the GDP value of the business field of providing accommodation and food and drink on a constant price basis. The Human Development Index (X3) is expressed on an index scale (0–100) based on BPS data. The Labor Force Participation Rate (X4) is measured in the percentage of the working-age population that is economically active. Regional Original Revenue (X5) is measured based on the realization of ROR in units of one billion rupiah based on data from the Ministry of Finance of the Republic of Indonesia. The analysis technique used in this study is panel data regression with three model approaches, namely Common Effect Model (CEM), Fixed Effect Model (FEM), and Random Effect Model (REM). The selection of the best model was carried out using the Chow Test, Hausman Test, and Lagrange Multiplier (LM) Test. Based on the test results, the most suitable model to be used in this study is the Fixed Effect Model (FEM), because it can capture the fixed effects inherent in each district/city and is able to control the heterogeneity between cross-section units.

Data analysis was carried out with the help of EViews software version 12, which included classical assumption tests such as normality, multicollinearity, and heteroscedasticity tests, as well as F-tests and t-tests to test the significance of the influence of independent variables simultaneously and partially on dependent variables. The use of this method is expected to be able to produce accurate and relevant empirical findings in explaining the determinants of regional economic growth in Bali, as well as being the basis for data-based development policy recommendations. (Ghozali, 2018).

RESULTS AND DISCUSSION

Descriptive Analysis Results

Table 1. Descriptive Statistical Analysis Results

Descriptive statistical analysis was carried out to provide an overview of the data characteristics of each variable used in the study. This information is important to find out the distribution of data and the value trends of each indicator that affects the GDP in the

district/city of Bali Province.

Date: 05/19/25 Time: 11:53 Sample: 2019 2023

	And	X1	X2	X3	X4	X5
Mean	9.532222	13.16600	5238.838	75.17533	76.40422	24.03600
Median	9.560000	13.18000	4051.052	73.58000	75.47000	19.03000
Maximum	10.78000	16.07000	17929.06	84.73000	86.01000	79.43000
Minimum	8.300000	8.050000	704.7251	67.34000	67.36000	10.21000
Std. Dev.	0.646789	1.648610	4852.160	5.239620	4.690752	15.03464
Skewness	0.122226	-0.523302	1.126535	0.375904	0.203257	2.127464
Kurtosis	2.149190	3.789456	3.221598	2.007592	2.122652	7.357134
Jarque-Bera	1.469314	3.222412	9.610177	2.906417	1.753111	69.54194
Probability	0.479670	0.199647	0.008188	0.233819	0.416214	0.000000
Sum	428.9500	592.4700	235747.7	3382.890	3438.190	1081.620
Sum Sq. Dev.	18.40678	119.5883	1035912280.68	1207.959	968.1389	9945.775
Observations	45	45	45	45	45	45

Source: Processed Secondary Data, 2025

Descriptive analysis was conducted on 45 observations covering nine districts/cities in Bali Province during the 2019–2023 period. The results showed that the Gross Regional Domestic Product (Y) variable had an average value of 9.5322 with a standard deviation of 0.6468, reflecting a relatively low variation between regions. The investment variable (X1) shows an average of 13.1660 and a standard deviation of 1.6486, indicating an investment disparity between regions. The tourism sector (X2) has an average contribution of 5,238,838 with a standard deviation of 4,852,160, which shows a fairly high inequality between districts/cities in the sector's contribution to GDP.

Furthermore, HDI (X3) variable has an average of 75.1753 with a standard deviation of 5.2396, indicating the existence of a gap in human development in the research area. The LFPR (X4) variable had an average value of 76.4042 and a standard deviation of 4.6908, indicating moderate fluctuations in labor involvement. Meanwhile, ROR (X5) showed an average of 24.0360 with a standard deviation of 15.0346, which reflects a considerable fiscal inequality between districts/cities in Bali Province.

Table 2. Common Effect Model Data Regression Results

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	9.215778	0.731636	12.59612	0.0000
X1	0.215101	0.018936	11.35912	0.0000
X2	0.000120	0.000010	11.54037	0.0000
X3	0.024146	0.007280	3.316660	0.0020
X4	-0.012874	0.005035	-2.556728	0.0146
X5	0.014352	0.002573	5.577386	0.0000
Root MSE	0.100719	R-squared		0.975200
Mean dependent var	9.532222	Adjusted R-squared		0.972020
S.D. dependent var	0.646789	S.E. of regression		0.108190
Akaike info criterion	-1.486297	Sum squared resid		0.456495
Schwarz criterion	-1.245409	Log likelihood		39.44169
Hannan-Quinn criter.	-1.396496	F-statistic		306.7116
Durbin-Watson stat	0.927516	Prob(F-statistic)		0.000000

Source: Processed Secondary Data, 2025

Based on the results of the estimation using the Common Effect approach, the variables of Investment (X1), tourism sector (X2), Human Development Index (X3), Labor Force Participation Rate (X4), and Regional Original Income (X5) simultaneously had a significant effect on the Gross Regional Domestic Product (GDP) of districts/cities in Bali Province in 2019–2023, with an F-statistical value of 306.7116 and a probability of 0.000000. Partially, X1, X2, X3, and X5 had a significant positive effect, while X4 was also significant but in a negative direction, with an R-square value of 0.9752 indicating that the model was able to explain 97.52% of GDP variations.

Table 3. Fixed Effect Model Panel Data Regression Results

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	9.315787	0.296791	31.38843	0.0000
X1	0.110013	0.003344	32.89578	0.0000
X2	0.000065	0.000002	29.71903	0.0000
X3	0.009847	0.004530	2.173698	0.0375
X4	0.010011	0.000823	12.16152	0.0000
X5	0.002876	0.000617	4.659791	0.0001

Effects Specification

Cross-section fixed (dummy variables)

Root MSE	0.009885	R-squared	0.999761
Mean dependent var	9.532222	Adjusted R-squared	0.999661
S.D. dependent var	0.646789	S.E. of regression	0.011910
Akaike info criterion	-5.773378	Sum squared resid	0.004397
Schwarz criterion	-5.211305	Log likelihood	143.9010
Hannan-Quinn criter.	-5.563843	F-statistic	9979.944
Durbin-Watson stat	1.986444	Prob(F-statistic)	0.000000

Source: Processed Secondary Data, 2025.

The results of the analysis show that all independent investment variables, the tourism sector, HDI, LFPR, and ROR have a significant effect on the GDP of districts/cities in Bali during 2019–2023. This is supported by the probability value of each variable which is all below 0.05. In addition, the Fixed Effect model proved to be more robust with an R-squared value of 0.999761, much higher than the Common Effect model.

1) Chow Test

Table 4. Chow Test Results

Redundant Fixed Effects
Tests Equation: Untitled
Test cross-section fixed effects

Effects Test	Statistic	d.f.	Prob.
Cross-section F	398.418579	(8,31)	0.0000
Cross-section Chi-square	208.918640	8	0.0000

Source: Processed Secondary Data, 2025

The results of Chow's test showed that the Fixed Effect model was more accurate than the Common Effect, indicated by a p-value of 0.0000. However, the Fixed

Effect model also needs to be compared with the random effect model to ensure the most accurate model in describing the relationships between variables.

Table 5. Random Effect Model Panel Data Regression Results

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	8.495672	0.238705	35.59067	0.0000
X1	0.109336	0.003306	33.07024	0.0000
X2	0.000069	0.000002	33.17972	0.0000
X3	0.002745	0.003578	0.767080	0.4477
X4	-0.011509	0.000762	-15.10184	0.0000
X5	-0.003826	0.000586	-6.531138	0.0000
Effects Specification				
		S.D.		Rho
Cross-section random			0.087581	0.9818
Idiosyncratic random			0.011910	0.0182
Weighted Statistics				
Root MSE	0.016260	R-squared		0.977973
lean dependent var	0.578630	Adjusted R-squared		0.975149
S.D. dependent var	0.110794	S.E. of regression		0.017466
Sum squared resid	0.011897	F-statistic		346.3161
Durbin-Watson stat	0.843126	Prob(F-statistic)		0.000000
R-squared	0.909228	Mean dependent var		9.532222
Sum squared resid	1.670829	Durbin-Watson stat		0.006003

Source: Processed Secondary Data, 2025

Information:

Y = Gross Regional Domestic Product

X1 = Investment

X2 = Tourism Sector

X3 = Human Development Index

X4 = Labor Force Participation Rate

X5 = Original District Revenue

Based on Table 5, it can be seen that using the *Random Effect model,* the variables Investment (X1), Tourism Sector (X2), Labor Force Participation Rate (X4), and Regional Original Income (X5) have a significant effect on the Gross Regional Domestic Product (GDP) in districts/cities in Bali Province in 2019-2023, because the probability value is less than 0.05. Meanwhile, the Human Development Index (X3) variable did not have a significant effect on the Gross Regional Domestic Product (GDP) because the probability value was greater than 0.05.

However, the validation quality of *the Fixed Effect* model compared to *the Random Effect* model decreased, which can be seen from the R-squared value which decreased from 0.999761 in the *Fixed Effect* model to 0.977973 in the *Random Effect* model. Based on these conditions, it is necessary to carry out further testing to determine which model is statistically more suitable for use, namely through the

Hausman test.

2) Hausman Test

Table 6. Hausman Test Results

Correlated Random Effects - Hausman Test Equation: Untitled

Test cross-section random effects			
Test SummaryChi-Sq. Statistic	Chi-Sq.	d.f.	Prob.
Cross-section random	49.875559	5	0.0000

Source: Processed Secondary Data, 2025

Based on Table 6, a probability value (p-value) of 0.0000 was obtained, which is smaller than the significance level of 5 percent. Thus, the decision taken is to reject the zero (H_0) hypothesis, so it can be concluded that the *Fixed Effect* model is more feasible than the *Random Effect model.* Therefore, the panel data regression model used in this study refers to the *Fixed Effect approach.*

Persamaan Regresi Model Fixed Effect

Corn	= 9,3157	+ 0,11001 $X1_{it}$	+ 0,000065 $X2_{it}$	+ 0,009847 $X3_{it}$
	+ 0,010011 $X4_{it}$	+ 0,002876 $X5_{it}$		
Sb	= (0,29679)	(0,00334)	(0,000002)	(0,00453)
	(0,00082)	(0,00061)		
t	= (31,3884)	(32,8958)	(29,7190)	(2,1737)
	(12,1652)	(4,6598)		
Prob	= (0,0000)	(0,0000)	(0,0000)	(0,0375)
	(0,0000)	(0,0001)		

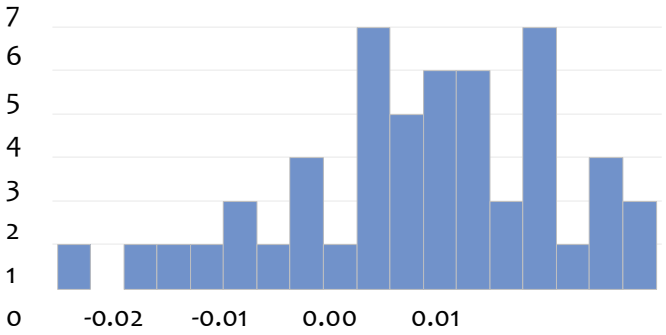
R-squared = 0,999761 F = 9979,944 Prob F = 0,000000

Based on the results of the fixed effect model regression equation estimation, it shows that if all independent variables are zero, then the value of the Gross Regional Domestic Product (GDP) is estimated at 9.3157 billion rupiah. The investment variable (X1) has a coefficient of 0.11001 which indicates that every increase in investment of 1 billion rupiah will increase the Gross Regional Domestic Product (GDP) by 0.11001 billion rupiah. The Tourism Sector variable (X2) has a coefficient of 0.000065, which means that every increase in the sector's contribution of 1 billion rupiah will increase the Gross Regional Domestic Product (GDP) by 0.000065 billion rupiah.

Furthermore, the Human Development Index (X3) variable has a coefficient of 0.009847, which shows that every increase in the HDI value by 1 index point will increase GDP by 0.009847 billion rupiah. The variable of the Labor Force Participation Rate (X4) has a coefficient of 0.010011, so that every increase in LFPR by 1 percent will increase the GDP by 0.010011 billion rupiah. Finally, the variable of Regional Original Revenue (X5) with a coefficient of 0.002876 shows that every increase in ROR of 1 billion rupiah will provide an addition to the GDP of 0.002876 billion rupiah. Thus, all independent variables in this model show a positive relationship to the GDP of districts/cities in Bali Province during the 2019-2023 period.

Classic Assumption Test

3) Normality Test



Series: Standardized Residuals	
Sample 2019 2023	
Observations 45	
Mean	1.15e-18
Median	0.000543
Maximum	0.017394
Minimum	-0.025478
Std. Dev.	0.009997
Skewness	-0.479620
Kurtosis	2.823572
Jarque-Bera	1.783628
Probability	0.409912

Figure 1. Normality Test Results

Source: Processed Secondary Data, 2025

Based on Figure 1, it can be seen that the results of the residual normality test using the Jarque-Bera method show a probability value of 0.409912. The probability value is greater than the significance level of 0.05 (0.409912 > 0.05), so it can be concluded that the residual in the regression model is normally distributed. This shows that the estimated regression model has met the classical assumption of normality. With the fulfillment of this assumption, the model used can be considered feasible to be used in the statistical estimation and prediction process.

4) Multicollinearity Test

Table 7. Multicollinearity Test

	X1	X2	X3	X4	X5
X1	1.000000	0.792653	0.789867	-0.598475	0.762996
X2	0.792653	1.000000	0.872405	-0.591283	0.873549
X3	0.789867	0.872405	1.000000	-0.665752	0.713302
X4	-0.598475	-0.591283	-0.665752	1.000000	-0.389490
X5	0.762996	0.873549	0.713302	-0.389490	1.000000

Source: Processed Secondary Data, 2025

Information:

X1 = Investment

X2 = Tourism Sector

X3 = Human Development Index

X4 = Labor Force Participation Rate

X5 = Original District Revenue

Based on table 7 of the results of the multicollinearity test shown through the correlation matrix between independent variables, it can be seen that there are no serious multicollinearity problems in this research model. The highest correlation value occurred between the variables X2 and X5 of 0.873549, followed by the correlation between X2 and X3 of 0.872405, and X1 and X3 of 0.789867. Although some variables show a fairly high correlation (close to 0.8-0.9), these values are still below the critical threshold of 0.95 which is generally used as a dangerous indicator of multicollinearity. A fairly strong negative correlation was also seen between X4 and other variables, in particular with X3 (-

0.665752) and X2 (-0.591283), which showed an inverse relationship between these variables. Overall, although there is a correlation between independent variables, the correlation level is still within acceptable limits so that the regression model can be continued without the need to exclude certain variables from the analysis.

5) Heteroscedasticity Test

Table 8. Heteroscedasticity Test Results

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.002492	0.003493	0.713417	0.4809
X1	0.000014	0.000039	0.349470	0.7291
X2	0.000000	0.000000	0.251912	0.8028
X3	-0.000027	0.000053	-0.501380	0.6196
X4	-0.000008	0.000010	-0.867855	0.3921
X5	0.000002	0.000007	0.242669	0.8099
Effects Specification				
Cross-section fixed (dummy variables)				
Root MSE	0.000116	R-squared		0.222734
Mean dependent var	0.000098	Adjusted R-squared		-0.103216
S.D. dependent var	0.000133	S.E. of regression		0.000140
Akaike info criterion	-14.65803	Sum squared resid		0.000001
Schwarz criterion	-14.09596	Log likelihood		343.8057
Hannan-Quinn criter.	-14.44850	F-statistic		0.683339
Durbin-Watson stat	3.031137	Prob(F-statistic)		0.763809

Source: Processed Secondary Data, 2025

Information:

Y = Gross Regional Domestic Product

X1 = Investment

X2 = Tourism Sector

X3 = Human Development Index

X4 = Labor Force Participation Rate

X5 = Original District Revenue

Based on table 8 of the results of the heteroscedasticity test conducted using the Breusch-Pagan Test method, it can be concluded that the regression model in this study does not experience heteroscedasticity problems. This is shown by the F-statistical probability value of 0.683339 which is greater than the significance level of $\alpha = 0.05$ (0.683339 > 0.05), so that the null hypothesis that there is no heteroscedasticity in the model is acceptable. In addition, the R-squared value of 0.222734 indicates that the residual variability of the squared that can be explained by independent variables is relatively low, which also indicates the absence of a systematic heteroscedasticity pattern. Thus, the assumption of homogeneity in the linear regression model is fulfilled, which means that the residual variance is *constant across all levels of the independent variables*, so that the results of parameter estimation are reliable and efficient for the purposes of analysis and conclusion of the study.

Results of the Simultaneous Influence of Investment, Tourism Contribution, Human Development Index, Labor Force Participation Rate, Regional Original Income on Gross Regional Domestic Product

Table 9. Simultaneous Test Results (F Test)

Root MSE	0.009885	R-squared	0.999761
Mean dependent var	9.532222	Adjusted R-squared	0.999661
S.D. dependent var	0.646789	S.E. of regression	0.011910
Akaike info criterion	-5.773378	Sum squared resid	0.004397
Schwarz criterion	-5.211305	Log likelihood	143.9010
Hannan-Quinn criter.	-5.563843	F-statistic	9979.944
Durbin-Watson stat	1.986444	Prob(F-statistic)	0.000000

Source: Processed Secondary Data, 2025

Based on the results of panel data processing shown in Table 9, it is known that the F-statistic value is 9979.944 with a Prob(F-statistic) value of 0.000000. At a significance level of 5 percent (α = 0.05), and with degrees of freedom df1 = k = 5 and df2 = n – k = 117 – 5 = 112, a Ftable value of 2.30 (obtained from the distribution F) is obtained. Since the value of Fcal (9979.944) > Ftable (2.30) and probability value (0.000000) < 0.05, it can be concluded that H_0 is rejected and H_1 is accepted. This means that simultaneously the variables of Investment, Tourism Sector, Human Development Index, Labor Force Participation Rate, and Regional Original Income have a significant effect on the Gross Regional Domestic Product in Regencies/Cities of Bali Province during 2019-2023.

Furthermore, the value of the determination coefficient (R-squared) of 0.999761 shows that 99.98 percent variation of the Gross Regional Domestic Product (GDP) variable can be explained by the five independent variables in the model. While the remaining 0.02 percent is explained by other factors outside the model. The Adjusted R-squared value of 0.999661 also shows that the model remains robust despite adjusting for the number of variables and observations. Thus, this regression model can be said to be good and statistically significant overall, and is able to explain the relationship between the variables studied on the Gross Regional Domestic Product (GDP).

Results of the Partial Influence Test of Investment, Tourism Sector, Human Development Index, Labor Force Participation Rate, Regional Original Income on Gross Regional Domestic Product

Partial tests in the panel data regression analysis were used to determine how much influence each independent variable, namely Investment, Tourism Sector, Human Development Index (HDI), Labor Force Participation Rate (LFPR), and Regional Original Income (ROR) on the dependent variable, namely Gross Regional Domestic Product (GDP), individually. The test was carried out using a statistical t-test at a significance level of 5% (α = 0.05). The calculated t value of each variable is compared to the t table, which is obtained based on the degree of freedom (df) according to the number of observations in the model. This partial test is based on the pre-selected panel data regression model estimate.

Table 10. Partial Test Results (t-test)

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	9.315787	0.296791	31.38843	0.0000
X1	0.110013	0.003344	32.89578	0.0000
X2	0.000065	0.000002	29.71903	0.0000
X3	0.009847	0.004530	2.173698	0.0375
X4	0.010011	0.000823	12.16152	0.0000
X5	0.002876	0.000617	4.659791	0.0001
Effects Specification				
Cross-section fixed (dummy variables)				
Root MSE	0.009885	R-squared		0.999761
Mean dependent var	9.532222	Adjusted R-squared		0.999661
S.D. dependent var	0.646789	S.E. of regression		0.011910
Akaike info criterion	-5.773378	Sum squared resid		0.004397
Schwarz criterion	-5.211305	Log likelihood		143.9010
Hannan-Quinn criter.	-5.563843	F-statistic		9979.944
Durbin-Watson stat	1.986444	Prob(F-statistic)		0.000000

Source: Processed Secondary Data, 2025

Information:

Y = Gross Regional Domestic Product

X1 = Investment

X2 = Tourism Sector

X3 = Human Development Index

X4 = Labor Force Participation Rate

X5 = Original District Revenue

Based on Table 10, the results of the partial test show that the investment variable has a regression coefficient of 0.110013 with a t-calculated value of 32.89578 > t-table 1.981 and a probability value of 0.000 < 0.05, then H_0 is rejected, so it can be concluded that investment has a positive and significant effect on the Gross Regional Domestic Product (GDP). This means that a real increase in investment is able to increase regional economic growth which is reflected in the value of GDP.

Furthermore, the tourism sector variable has a regression coefficient of 0.000065 with a t-calculated value of 29.71903 > t-table of 1.981 and a probability value of 0.000 < 0.05, then H_0 is rejected, so it can be concluded that the tourism sector has a positive and significant effect on GDP. In other words, the greater the value of the tourism sector, the higher the GDP growth in Regencies/Cities in Bali Province.

The human development index (HDI) variable shows a regression coefficient of 0.009847 with a t-calculated value of 2.173698 > t-table of 1.981 and a probability value of 0.0375 < 0.05, then H_0 is rejected, so it can be concluded that HDI has a positive and significant effect on GDP. This indicates that the higher the quality of human development, the greater its contribution to improving regional economic performance.

The variable labor force participation rate (LFPR) has a regression coefficient of

0.010011 with a t-calculated value of 12.16152 > t-table of 1.981 and a probability value of 0.000 < 0.05, then H_0 is rejected, so it can be concluded that LFPR has a positive and significant effect on GDP. This shows that the greater the participation of labor in economic activities, the higher the value of the region's GDP.

Finally, the variable of regional original income (ROR) shows a regression coefficient of 0.002876 with a t-calculated value of 4.659791 > t-table of 1.981 and a probability value of 0.0001 < 0.05, then H_0 is rejected, so it can be concluded that ROR has a positive and significant effect on GDP. This means that the higher the ROR revenue, the greater the region's ability to finance development and increase economic activities that have an impact on GDP growth.

Results Discussion

The Simultaneous Effect of Investment, Tourism Sector, Human Development Index, Labor Force Participation Rate, Regional Original Income on Gross Regional Domestic Product in Regencies/Cities in Bali Province in 2019-2023.

The first hypothesis in this study states that investment (X1), tourism sector (X2), human development index (X3), labor force participation rate (X4), and local original income (X5) simultaneously affect the Gross Regional Domestic Product (GDP) in Regencies/Cities in Bali Province. Based on the results of the test using the F test, the Fcal value was obtained as 9979.944 with a probability value of 0.000, while the Ftable value at the significance level of 5% was 2.30. Since Fcalculus > Ftable and the probability value < 0.05, it can be concluded that H_0 is rejected. This means that simultaneously the five independent variables have a significant effect on the GDP of Regencies/Cities in Bali Province in the 2019-2023 period.

These results show that the level of Gross Regional Domestic Product (GDP) in a region is not only influenced by one or two factors, but is the result of a combination of several important factors that interact and affect each other. Investment plays a role in increasing production capacity and encouraging the growth of economic sectors. The tourism sector, which is the leading sector in Bali Province, contributes to increasing regional added value through service-based economic activities. The Human Development Index (HDI), as an indicator of the quality of human resources, also contributes to creating a productive workforce and is able to increase economic output.

In addition, the Labor Force Participation Rate (LFPR) reflects the involvement of the working-age population in economic activities, which will further increase the amount of production and the value of GDP. Likewise, Regional Original Revenue (ROR) reflects the region's fiscal capacity in financing development and local economic activities. Therefore, the success of increasing GDP requires the synergy of these variables together, as shown by the results of simultaneous testing.

Partial Effect of Tourism Contribution on Gross Regional Domestic Product in Regencies/Cities in Bali Province in 2019-2023.

The results of the partial regression test showed that the tourism sector variables, which in this context are focused on the sub-sector of providing accommodation and food

and beverages, have a positive and significant influence on the Gross Regional Domestic Product (GDP) of districts/cities in Bali Province. This is shown by the value of the regression coefficient of 0.000065 with a t-calculated value of 29.71903 which far exceeds the t-table value of 1.981. In addition, a probability value of 0.000 < 0.05 reinforces the significance of the relationship. Based on these results, the zero (H_0) hypothesis is rejected and the alternative hypothesis (H_1) is accepted, so it can be concluded that the contribution of this subsector has a significant effect on the increase in GDP during the 2019-2023 period.

The sub-sector of providing accommodation and food and beverages is an important component in the structure of the tourism industry, as it directly serves the basic needs of tourists, both in terms of consumption and temporary housing. Tourists' activities in staying in accommodation and consuming food and beverages in tourist destinations create a high demand for local products and services. This encourages the growth of micro, small, and medium enterprises (MSMEs), strengthens the supply chain of related sectors, and increases the income of business actors in this sector. The economic impact is directly reflected in the increase in regional output, which contributes to the growth of district/city GDP (Amiri *et al.*, (2015).

Partial Effect of the Human Development Index on Gross Regional Domestic Product in Regencies/Cities in Bali Province in 2019-2023.

The results of the partial test showed that the variable human development index (HDI) had a positive and significant effect on the Gross Regional Domestic Product (GDP) in Regencies/Cities in Bali Province. This is shown by the value of the regression coefficient of 0.009847, with a t-calculated value of 2.173698, which is greater than the t-table of 1.981, and a probability value of 0.0375 < 0.05. Thus, the zero (H_0) hypothesis is rejected, and the alternative hypothesis (H_1) is accepted, which means that the human development index has a significant influence on GDP in the 2019-2023 period

Partial Effect of Labor Force Participation Rate on Gross Regional Domestic Product in Regencies/Cities in Bali Province in 2019-2023.

The results of the partial test showed that the variable labor force participation rate (LFPR) had a positive and significant effect on the Gross Regional Domestic Product (GDP) in Regencies/Cities in Bali Province. This is shown by the value of the regression coefficient of 0.010011, with a t-calculation of 12.16152 which is greater than the t-table of 1.981, and a probability value of 0.000 < 0.05. Thus, the zero (H_0) hypothesis is rejected and the alternative hypothesis (H_1) is accepted, which means that LFPR has a significant influence on GDP during the 2019-2023 period.

LFPR reflects the proportion of the working-age population who are actively involved in economic activities, both as workers and job seekers. The higher the level of labor force participation, the greater the number of workers that can be used in the production process of goods and services. This has a direct impact on increasing the economic output of a region which is reflected in the amount of GDP. With the availability of a productive workforce that is well absorbed in the job market, the efficiency and growth of key economic sectors can be further optimized.

According to Boediono (2013), labor is one of the main production factors in economic development. The availability of large and qualified labor will strengthen production capacity and encourage economic growth. The results of this study are consistent with the findings made by Affandi *et al.,* (2015) which stated that the level of labor force participation has a significant effect on GDP in Indonesia. This states that regions with high LFPR tend to have a larger level of GDP, because the involvement of the population in economic activities directly contributes to the added value of economic sectors.

Based on these results, it can be concluded that increasing labor force participation is one of the important elements in encouraging regional economic growth. Therefore, regional economic development strategies need to be supported by employment policies that encourage skill improvement, expansion of employment opportunities, and sustainable empowerment of the workforce in all districts/cities in Bali Province.

Partial Effect of Regional Original Income on Gross Regional Domestic Product in Regencies/Cities in Bali Province in 2019-2023.

The results of the partial test show that the regional original income (ROR) variable has a positive and significant effect on the Gross Regional Domestic Product (GDP) in Regencies/Cities in Bali Province. This is shown by the value of the regression coefficient of 0.002876, with a t-calculated value of 4.659791, which is greater than the t-table of 1.981, and a probability value of 0.0001 < 0.05. Thus, the zero (H_0) hypothesis is rejected, and the alternative hypothesis (H_1) is accepted, which means that ROR has a significant influence on GDP during the 2019-2023 period.

ROR is one of the main sources of financing for local governments in carrying out the functions of development, public services, and economic infrastructure development. The increase in ROR revenue allows local governments to allocate budgets more effectively to productive sectors that can generate economic added value, which is then reflected in the increase in GDP. In other words, high fiscal capacity will strengthen regional capacity to drive sustainable economic growth.

According to Halim (2004), ROR reflects regional fiscal independence in financing development, and the higher the ROR of a region, the greater its contribution to the regional economy. The results of this study are in line with the findings conducted by Devi *et al.,* (2024) which show that ROR has a positive and significant relationship with GDP in East Java Province. Thus, it can be concluded that ROR is an important instrument in regional economic development. Local governments need to increase the potential and optimization of ROR through efficient collection policies and productive budget management to encourage an increase in GDP in Regencies/Cities in Bali Province.

CONCLUSION

Based on the results of the research and discussions that have been carried out, it can be concluded as follows.

1) Simultaneously, the variables of investment, the tourism sector, the Human Development Index (HDI), the Labor Force Participation Rate (LFPR), and Regional Original Income (ROR) have a significant positive effect on the Gross Regional

Domestic Product (GDP) of Regencies/Cities in Bali Province in the 2019-2023 period. These results show that the five variables together are able to explain the variation in changes in GDP significantly.

2) Partially, each variable also has a positive and significant influence on GDP, which is explained as follows.
   a) Investment has a positive and significant effect on GDP. This means that the higher the realization of investment, both from Domestic Investment (PMDN) and Foreign Investment (PMA), the greater the production activities and economic output produced by a region.
   b) The tourism sector has a positive and significant influence on GDP. This shows that tourist consumption activities in the culinary sector actually encourage increased added value and economic growth at the regional level.
   c) The Human Development Index (HDI) has a positive and significant effect on GDP. Improving the quality of human resources through education, health, and people's purchasing power has a positive impact on the productivity and efficiency of the regional economy.
   d) The Labor Force Participation Rate (LFPR) also has a positive and significant effect on GDP. The high proportion of the working-age population who are active in economic activities contributes directly to increasing the output and economic growth of the region.
   e) Regional Original Revenue (ROR) has a positive and significant effect on GDP. This indicates that regional fiscal capacity in exploring and managing local sources of revenue has an important role in supporting regional economic development and improvement.

BIBLIOGRAPHY

Amiri, M. U., Kalangi, J. B., & Walewangko, E. I. (2015). The influence of the trade, hotel, restaurant and service sectors on the gross regional domestic product (GDP) of Manado City. Journal of Scientific Efficiency Periodicals, 15(4)

Aprilianti, I. and Utama, M.S. (2023), "Analysis of Economic Growth of Bali Province during the Covid-19 Pandemic in the Tourism Sector", *E-Journal of Development Economics of Udayana University*, Vol. 13 No. 2, pp. 103–117, doi: 10.24843/eep.2024.v13.i02.p02.

Apriyanti, M.E. and Hatmoko, B.D. (2024), "The Role of Tourism on GDP and Its Impact on Labor Absorption in Bali Province", *Sosio E-Kons*, Vol. 16 No. 2, pp. 135–146.

Ariani, N.M.P. and Utama, M.S. (2024), "Analysis of the Influence of the Tourism Sector and GDP on Regency/City ROR in Bali Province", *E-Journal of Economics and Business, Udayana University*, Vol. 13 No. 03.

Ariesti, A.E. and Asmara, K. (2023), "Analysis of Factors Affecting the Labor Force Participation Rate (LFPR) on the Island of Java", *Economics and Digital Business Review*, Vol. 4 No. 2, pp. 432–438.

Central Statistics Agency. (2023), *Gross Regional Domestic Product of Provinces in Indonesia by Business Field 2019-2023*, Central Statistics Agency, Jakarta.

Central Bureau of Statistics of the Province of Bali. (2025). Tourism sector table: Sub-sector

of accommodation and food and beverage provision in Bali Province in 2025. BPS Bali Province. https://bali.bps.go.id

Central Bureau of Statistics of the Province of Bali. (2025). Bali Province Human Development Index (HDI) in 2025. BPS Bali Province. https://bali.bps.go.id

Central Bureau of Statistics of the Province of Bali. (2025). Bali Province Labor Force Participation Rate (LFPR) in 2025. BPS Bali Province. https://bali.bps.go.id

Ministry of Finance of the Republic of Indonesia. (2025). Regional Original Revenue (ROR) Data in 2025. https://www.kemenkeu.go.id

Central Bureau of Statistics of the Province of Bali. (2025b), *Monthly Report on Socio-Economic Data of Bali Province November 2023*, Denpasar.

Basuki, A.T. (2021), *Panel Data Analysis in Economics and Business Research*, Raja Grafindo Persada, Yogyakarta.

Basuki, A.T. and Prawoto, N. (2017), *Regression Analysis in Economic and Business Research*, Rajawali Pers, Jakarta.

Becker, G. S. (1993). Human capital: A theoretical and empirical analysis with special reference to education (3rd ed.). Chicago: The University of Chicago Press.

Bulu, Y., Laka, N., Susu, U., Sel, Y., Sakera, G., & Lawalu, T. (2025). The impact of the COVID-19 pandemic on poverty in Kupang City: An analysis of consumption patterns and livelihoods of urban communities in times of crisis. Journal of Education and Economics (JUPEK), 6(2). https://doi.org/10.5281/zenodo.15725487.

Caraka, R.E. and Yasin, H. (2017), *Spatial Data Panel*, Wade Group, Jakarta.

Devi, L.E., Harmono, H., Sisharini, N. and Respati, H. (2024), "The Influence of Regional Revenue on Gross Regional Domestic Product in East Java", *Journal of Management and Entrepreneurship Inspiration Research*, Vol. 8 No. 2, pp. 117–124.

Ernah, Afifah, A. N., Ananda, V. D., Nurhakim, R. R., Rahma, N. F., & Muhammad, I. (2025). A study of regional inequality and economic potential in Badung Regency, Bali Province. Agribusiness Pulpit: Journal of Scientific Community Thought with an Agribusiness Insight, 11(1), 1656–1663.

Faruq, A. (2024). The effect of labor force participation rate on economic growth in Indonesia in 2015–2019. Journal of Economics and Development, 12(1).

Fakhruul, M. (2023). The influence of the tourism sector on economic growth in Bali Province. Journal of Economics and Regional Development, 7(1).

Ghozali, I. (2016), *Application of Multivariete Analysis with IBM SPSS 23 Program*, Diponegoro University, Semarang.

Hanim, A., Hermawan, G.B. and Wilantari, R.N. (2022), "The Effect of Investment and Technology Development on Indonesia's Economic Growth", *Indonesian Journal of Science and Technology Research*, Vol. 1 No. 2, pp. 131–140.

Kartini, N., & Astuti, E. (2024). Analysis of the influence of Regional Original Income, investment level and labor on Gross Regional Domestic Product (GDP) in East Lombok Regency. Journal of Opportunity: Development Economics, 3(1), 65–73.

Kamala, J., Salsa, S. A., Nurilawati, & Pangestoeti, W. (2025). Optimization of regional original revenue (ROR) in improving public services. Scientific Journal of Economics

and Management, 3(7), 120–128. https://doi.org/10.61722/jiem.v3i7.5789
Ministry of Finance. (2024), "Press Release: Realization of the State Budget in Bali Province until November 30, 2024", available at: https://www.djkn.kemenkeu.go.id/kanwil-balinusra/baca-berita/37757/Siaran-Pers-Realisasi-APBN-di-Provinsi-Bali-sd-31-Desember-2024.html.
Keynes, J.M. (1936), *The General Theory of Employment Terest and Money*, Macmillan and Company.
Kuncoro, M. (2021), *Quantitative Methods: Theory and Application for Business & Economics*, 7th ed., UPP STIM YKPN, Yogjakarta.
Liow, M. O., Naukoko, A., & Rompas, W. (2022). The Influence of Population and Investment on Gross Regional Domestic Product (GDP) in North Sulawesi Province. Journal of Scientific Periodic Efficiency, 22(2).
Lubis, E. H., Maulana, J., Fitrawaty, Simanjuntak, Y., & Siahaan, T. E. G. (2025). The influence of monetary and fiscal policy on economic growth in Indonesia: The IS curve approach. JALAKOTEK: Journal of Accounting Law Communication and Technology, 2(1).
Maha Yoga, G. A. D. (2024). Determinants of welfare based on the human development index (HDI) in Bali Province. Equiilnomy: Journal of Development Economics, 6(2). https://doi.org/10.36985/ekuilnomi.v6i2.1164
Manihuruk, F.E., Sitohang, G.S. and Sari, A. (2024), "Analysis of the Influence of PMDN and PMA on GDP in North Sumatra", *Economic and Public Policy Studies*, Vol. 2 No. 2, pp. 69–77.
Mankiw, N. G. (2012). Principles of economics (6th ed.). Mason, OH: South-Western Cengage Learning.
Maisaroh, M., & Risyanto, H. (2021). The Influence of Investment, Government Spending, and Labor on the GDP of Banten Province. EkBis: Journal of Economics and Business, [volume and number not specified]. Sunan Kalijaga State Islamic University, Yogyakarta.
Marta, N., & Sutrisna, I. K. (2014). Analysis of Gross Regional Domestic Product Revenue for the tourism sector in Badung Regency. E-Journal of Development Economics, Udayana University, 3(7), 290–300.
Maulana, B.F., Farhan, M. and Desmawan, D. (2022), "The Effect of the Human Development Index (HDI) on Economic Growth in Banten Province in 2019-2021", *Journal of Economics, Business and Management*, Vol. 1 No. 1, pp. 123–134.
Mulia, D. A., & Saputra, M. H. (2020). Inequality of human development and economic growth in Indonesia: A spatial and regional analysis. Journal of Indonesian Development Economics, 21(2).
Mulyani, S., Rahmawati, D., & Arifin, B. (2020). Regional economic resilience after the pandemic: A case study of the Bali Province region. Journal of Economics and Public Policy, 8(3).
Ningrum, R. D. (2020). The effect of HDI, LFPR, and ROR on GDP in several regions in Indonesia. Journal of Economic Development, 9(3).

Nizar, M., & Wahyuni, S. (2021). The role of investment in regional economic growth and the reduction of inequality. Journal of Economics and Regional Development, 9(1).

Novita, R., & Samsuddin, M. A. (2024). Analysis of the influence of labor force participation rate (LFPR), population and human development index (HDI) on GDP in Bali Province. JEKP: Journal of Public Economics and Finance, 11(2), 195–210. https://ejournal.ipdn.ac.id/JEKP

Oktania, A., Lubis, P.K.D., Syahbana, E. and Akbar, M.A. (2024), "Unveiling the Path to Prosperity in Papua: An Analysis of Human Capital Investment Trends in Education (2018-2023)", *Didaktika: Jurnal Kependidikan*, Institut Agama Islam Negeri (IAIN) Bone, Vol. 18 No. 1, pp. 1–11.

Oktavia, P., & Hidayat, T. (2023). The influence of the accommodation and food and beverage subsector on GDP in Deli Serdang Regency. JIMK: Journal of Management and Entrepreneurship Sciences, 4(2).

Pasalbessy, V.F.F.D. (2024), "Analysis of the Influence of the Processing Industry Sector on Gross Regional Domestic Product (GDP) in Jayapura City", *Journal of Economics and Business*, Vol. 16 No. 2, pp. 160–168.

Central Government. (2014), *Law No. 23 of 2014 concerning Regional Government*, LN.2014/No. 244, TLN No. 5587, LL SETNEG: 212 PP.

Central Government. (2022), *Law (UU) Number 1 of 2022 concerning Financial Relations between the Central Government and Regional Governments*, LN.2022/No.4, TLN No.6757, jdih.setneg.go.id : 100 pp., Indonesia.

Purba, D., Tarigan, I., Simamora, N., & Pardede, N. (2024). The Effect of Labor Force Participation Rate (LFPR) and Education on Economic Growth in North Sumatra Province. Journal of Economics, Business and Engineering (JEBE), 5(2), https://doi.org.

Raihan, M.R., Rasyidi, A.M., Ilmi, M., Zaid, M.N., Aulia, N. and Rahmatul, N. (2020), *Human Capital Theory*.

Rakhmatillo, E., Anvar, K. and Sukhrob, M. (2021), "Foreign Direct Investment, Economic Growth, and Employment: VAR Method for Uzbekistan", *The Journal of Contemporary Issues in Business and Government*, Vol. 27 No. 2, pp. 1757–1769.

Regina, T. (2022), "Analysis of Factors Affecting Economic Growth in Indonesia", *Complexity*, Swadharma Institute of Technology and Business, Vol. 11 No. 1, pp. 36–45.

Rejeki, D.A.S. and Yasa, I.N.M. (2024), "Determinants of Regional Original Income (ROR) of Regencies/Cities in Bali Province", *Economic Studies Bulletin*, Vol. 29 No. 02, doi: 10.24843/BSE.2024.v29.i02.p06.

Ridwan, M. L., Ramadan, F. F., Mubarok, K., Hidayat, F., & Khakim, K. A. (2025). The impact of investment policies on regional economic growth: A case study in Salatiga City. Journal of Economic Research, 1(1).

Riesdi, M.A. (2024), "Analysis of Regional Original Revenue (ROR) to Assess Financial Performance in the West Bandung Regency Government in 2018-2022", *Journal of Global Innovation*, Vol. 2 No. 1, pp. 14–33.

Roydha, M. (2024). Analysis of the influence of the human development index (HDI), hotel

room occupancy rate and inflation on economic growth in Java. Scientific Journal of Educational Vehicles, 10(19), 545–553. https://doi.org/10.2281/zenodo.142/1582

Sandika, R.S., Setiawan, D. and Maulida, Y. (2014), "The Influence of Investment on Labor Absorption in Pelalawan Regency", *Online Journal of Students, Faculty of Economics, University of Riau*, Riau University, Vol. 1 No. 2.

Sari, N.M. and Setyowati, E. (2023), "Analysis of GDP Determinants on the Island of Bali in 2010-2020", *Journal of Business and Management*, Vol. 3 No. 1, pp. 109–119.

Sasea, G., Wurarah, R. N., & Tafalas, M. G. (2020). Analysis of the influence of regional original revenue (ROR) and general allocation funds (DAU) on gross regional domestic product (GDP) in West Papua Province 2014–2018 (Case study of 10 districts and 1 city). Economic Lens, 11(1), 44–59.

Safrina, Y., & Ratna. (2023). The effect of labor force participation rate, population quality, and open unemployment rate on economic growth in North Sumatra Province. Unimal Regional Economic Journal, 6(3). https://ojs.unimal.ac.id/ekonomi_regional

Sekaran, U. (2021), "Methodological and Theoretical Issues and Advancements in Cross-Cultural Research", *Journal of International Business Studies*, Springer, Vol. 14, pp. 61–73.

Setyowati, E. and Khoirudin, R. (2022), "The Influence of DAU, Population, HDI and Capital Expenditure on Economic Growth in North Maluku", *Simantek Scientific Journal*, Vol. 6 No. 1, pp. 83–89.

Sianturi, A. F., Tampubolon, A., Hidayat, N., Nasution, M. D., & Sianturi, R. (2024). The Effect of Labor Force Participation (LFPR) and the Number of Population on Poverty in Medan City (2014–2023). JALAKOTEK: Journal of Accounting Law Communication and Technology, 1(2).

Si'lang, I.L.S., Hasid, Z. and P. (2019), "Analysis of Factors Affecting the Human Development Index", *Growth: Scientific Journal of Development Economics*, Growth, Vol. 1 No. 2, pp. 127–142.

Simamora, J. (2024), *The Effect of Population, Inflation, and Labor Force Participation Rate (LFPR) on Gross Regional Domestic Product in Jambi Province*, University of Jambi.

Strober, M.H. (1990), "Human Capital Theory: Implications for HR Managers", *Industrial Relations: A Journal of Economy and Society*, Wiley Online Library, Vol. 29 No. 2, pp. 214–239.

Sugiyono. (2015), *Mixed Methods of Research*, Alfabeta, Bandung.

Sugiyono. (2019), *Quantitative, Qualitative and R&D Research Methodology*, Alfabeta, Bandung.

Sukirno, S. (2005), *Introduction to Microeconomics*, 3rd ed., Raja Grafindo Persada, Jakarta.

Sunariyah, S.E. (2015), *Introduction to Capital Market Knowledge*, 4th ed., UPP STIM YKPN, Yogyakarta.

Theresia, B.Y., Ivonne, F.L., Anggreni, R. and Putra, A.R. (2024), "Analysis of Factors Affecting Regional Original Income (ROR) of D.I Yogyakarta Province", *Journal of Regional Economic & Financial Studies*, Vol. 9 No. 1, pp. 1–22.

Todaro, M.P. and Smith, S.C. (2020), *Economic Development*, Pearson UK, United Kingdom.

Trimurti, C. P., Adinegara, G. N. J., Ardana, I. M. D. W., & Mertayasa, I. G. (2021). COVID-19: Bali's toughest economic challenge. Proceedings of the National Scientific Seminar on Technology, Science, and Social Humanities (SINTESA), 4.

Ulyati, M., Palupi, R.I., Fauzan, M.N. and Kurniawan, M. (2024), "The Effect of Human Development Index (HDI) and Small Business (Micro) Growth on Economic Growth in Papua in 2014-2023", *Journal of Economics, Accounting, and Taxation*, Vol. 1 No. 3, pp. 59–74.

Wahyuni, D.A.G., Muchtar, M. and Sihombing, P.R. (2023), "Determinants of Gross Domestic Product in Bali Province in 2014-2019", *Indonesian Journal of Economics and Statistics*, Vol. 3 No. 1, pp. 15–26.

Wartono, T. and Firmansyah, F. (2014), "Analysis of Growth and Changes in the Economic Structure of Gross Regional Domestic Product (GDP) of Blitar Regency 2008-2011", *CREATIVE : Scientific Journal of Management Study Program, University of Pamulang*, Vol. 1 No. 2, doi: 10.32493/jk.v1i2.y2014.p%p.

Yulianti, Y., & Qomariah, S. (2025). Human Development Index of science. CENDEKIA: Journal of Social Sciences, Language and Education, 5(1), 190–200. https://doi.org/10.55606/cendikia.v5i1.3512.