

Paradox: Regional expenditure and GRDP in Sumatra Island 2017-2022

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Abstract

Economic growth is an important role of government in a region through appropriate fiscal policy. Fiscal policy is part of government spending, namely in the form of the APBN and APBD budgets. This study aims to see how the influence of Employee Expenditure, Goods and Services Expenditure, and Capital Expenditure on GRDP on the island of Sumatra. The data used in this study are secondary data, while the analysis method used is the panel data regression method from 2017-2022 in Sumatra Island Province. This study uses dependent variables and independent variables. The dependent variable used is Gross Regional Domestic Product (GRDP) and the independent variables include Employee Expenditure, Goods and Services Expenditure, and Capital Expenditure. The results showed that employee expenditure and capital expenditure had a positive and significant effect on GRDP on the island of Sumatra, while goods expenditure had a negative and significant effect on GRDP on the island of Sumatra.

Keywords: personnel expenditure, goods and services expenditure, capital expenditure, GRDP

INTRODUCTION

Economic growth is a long-standing macroeconomic problem (Wahyudi et al., 2022). Economic growth is an indicator of development progress by measuring a country's ability to increase output based on its population growth rate. Higher economic growth in a region will indicate an increase in economic activity in the region (Pananrangi, 2012). The existence of productivity improvement initiatives is part of the economic development



process, which seeks to improve the current social welfare conditions (Yuliawan et al., 2020)

The economy shows the extent of economic activity that increases regional income over time (Rori et al., 2016). Of the production component, the community can anticipate an increase in their income along with economic growth (Husin, 2022)

The process of economic growth on the islands in Indonesia is actively carrying out gradual and planned development, as well as on the island of Sumatra, which has carried out development in all fields. According to the Central Badan of Statistics (2022), Sumatra Island is an island with relatively low economic growth compared to other islands. So far, economic activity has been centered on the island of Java, so there is an imbalance between Java and outside Java.

The high GDP obtained by a country is one of the indicators of a country's welfare, which is indeed inseparable from the factors that influence it (Wahyudi, 2024). The main indicator to measure the economic growth of a region is the gross domestic product (GDP). The development of a region today is often measured through economic indicators that can show an increase or decrease in the economy. While at the regional level such as provinces, districts/cities and even sub-districts, it is known as the Gross Regional Domestic Product (Tumaleno et al., 2022)

The percentage increase and decrease in GRDP can reflect a growing economy and illustrate the ability of a region to manage natural resources. The amount of GRDP produced by a region is highly dependent on the potential of the region's natural resources and production factors (Alvaro, 2022)

Indonesia's economic growth in 2022 can be said to be conducive due to the increase in activities carried out by the community after the COVID-19 pandemic. However, the economic growth of Sumatra Island is in the last position compared to other islands. Sumatra Island has an economic growth value of 4.69 percent. Maluku and Papua Islands have the highest economic growth of 8.65 percent, followed by Sulawesi Island at 7.05 percent, Java Island at 5.31 percent, Bali Island, and NTT at 5.08 percent.

The system of allocating regional expenditure that is not evenly distributed and targeted can be an indicator of low GRDP in a region compared to other provinces. Regional expenditure is expenditure made by local governments in the regional revenue and expenditure budget (APBD), which consists of expenditure and financing used to finance government activities in increasing economic growth (Deswantoro et al., 2017). The government has a very important role in implementing public policy. Public Policy is



needed to improve people's welfare through the provision of public goods and consumer goods consumption goods (Ardianto & Usman, 2022)

Personnel expenditure is one of the major components of local government expenditure. Personnel expenditure has a direct impact on GRDP and regional economic production, namely on the income received by employees used for the consumption of goods and services (RAHMAWATI, 2019). Increased government spending will increase economic growth of a region. One aspect that can encourage economic growth is community income. Increased individual income will create an improved economy; this can be indicated by increased purchasing power, thus creating demand for goods and services (Dein, 2023). Goods and services expenditures are used by the government to support the smooth running of tasks in providing services to the community, so the higher the demand for goods and services expenditures, the more it will affect economic growth.

Increasing the allocation of expenditure in the form of fixed assets, which include infrastructure, Therefore, capital expenditure is often seen as an important factor in building infrastructure and other fixed assets for long-term benefits (Rambe & Iskandar, 2021)

The success of regional development will be achieved if regional financial management runs well and is right on target (Saraswati & Nurharjanti, 2021).

In this case, regional development and community services require a relatively large amount of funding, which needs to be supported by increasing and strengthening regional fiscal capacity. Regional economic development is still the key to the success of every country and every part of a country to continue turning the wheels of the economy. wheel of the economy (Ratih & Gurnita, 2019)

METHODOLOGY

This research used is quantitative research with the method used is panel data. Panel data is data that has been collected from several objects and research times obtained from a combination of time series and object data at one time (cross section).

In this study was used to examine the effect of Employee Expenditure (X1) Goods and Services Expenditure (X2), Capital Expenditure (X3), and Gross Regional Domestic Product (GRDP) (Y) on the island of Sumatra from 2018-2022. The source of data obtained by the author is secondary data, which is obtained from agencies, libraries, and other parties. In this study, secondary data were obtained from the Central Bureau of Statistics and the Directorate General of Taxation and Finance. Before multiple regression analysis is carried out, panel data research models are first determined using

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estimation techniques such as the Common Effect Model (CEM), Fixed Effect Model (FEM), and Random Effect Model (REM). Model determination is used as an accurate estimation technique selection by conducting.

The equation model can be written as follows:

$$PDRB_{it} = \beta_0 + \beta_1 BP_{it} + \beta_2 BB_{it} + \beta_3 BM_{it} + \varepsilon_{it}$$

Description :

Y : Gross Regional Domestic Product (Rupiah)

BP : Employee Expenditure (Rupiah)

BB : Goods Service Expenditure (Rupiah)

BM : Capital Expenditure (Rupiah)

β_0 : Constanta

$\beta_1, \beta_2, \beta_3$: Independent Variable Coefficient

i : 1,2,...,n, displays cross section data

t : 1.2,...,n displays time series data

ε : error

RESULT AND DISCUSSION

Model Specifications Test

Chow Test

This test is conducted to select the fixed effect or common effect model that should be used in the research. used in the study. The fixed effect model is used if the p-value for the Chow test is less than 0.05. Meanwhile, the common effect model is used if the p-value is significant > 0.05.

Effects Test	Statistic	d.f.	Prob.
Cross-section F	887.183968	(9,47)	0.0000
Cross-section Chi-square	308.459902	9	0.0000



The Chow test shows that the fixed effect model is superior to the common effect model, with a probability value of $0.0000 < 0.05$ obtained from the Chow Test regression data. from the Chow Test regression data.

Hausman Test

The Hausman test is conducted to choose which estimation model is the best in the study. The Hausman test relies on the p-value; if it is less than 0.05, then the Fixed Effect model is applied. Fixed Effect model is applied. Conversely, the Random Effect model is used if the p-value is not significant > 0.05

Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	2.616522	3	0.4546

Obtained a chi-square statistical value of 13.377218 and a probability value of $0.4546 > 0.05$ obtained from the Hausman Test regression above, it can be concluded that the random effect model is better than the random effect model.

Lagrange Multiplier Test

The lagrange multiplier test was conducted of determine the best model between the random effect model and the common effect model. In the test, the random effect model can be used if the Breusch-Pagan probability of $0.0000 < 0.05$.

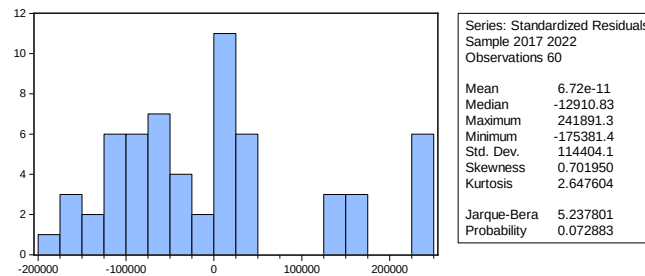
	Cross-section	Time	Both
Breusch-Pagan	141.7738	2.658834	144.4327
	(0.0000)	(0.1030)	(0.0000)

The best model used according to the Lagrange Multiplier test is the random effect model. test is the random effect model.

Normality Test

The normality test aims to test whether in the in a regression model, confounding or residual variables have a normal distribution or not.





The probability value is 0.072883 greater than alpha 0.05, the hypothesis is accepted or the residuals are normally distributed.

Panel Data Regression Results

Based on the results of the Chow Test, Hausman Test, and Lagrange Multiplier Test. The best model for analyzing the data in this study is random effect model.

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	83883.37	51600.74	1.625623	0.0196
BP	7.085184	3.781265	1.873760	0.0662
BB	11.58958	1.378351	8.408291	0.0000
BM	-0.096791	0.294373	-0.328803	0.7435
Effects Specification				
			S.D.	Rho
Cross-section random			124505.4	0.9952
Idiosyncratic random			8640.029	0.0048
Weighted Statistics				
R-squared	0.668172	Mean dependent var		6530.638
Adjusted R-squared	0.650395	S.D. dependent var		14562.45
S.E. of regression	8610.396	Sum squared resid		4.15E+09
F-statistic	37.58737	Durbin-Watson stat		1.278981
Prob(F-statistic)	0.000000			

Hypothesis Test

T-Statistic Test

The T-Statistic test aims to show how much influence between the independent variables individually in explaining the related variables by comparing the probability



with the α value of 0.05, it can be seen whether the hypothesis rejects or fails to reject the t test results. The results of the t test in the random effect model table are as follows.

Variable	Coefficient	t-Statistic	Prob.	Description
C	83883.37	1.625623	0.0196	Significant
BP	7.085184	1.873760	0.0662	Significant
BB	11.58958	8.408291	0.0000	Significant
BM	-0.096791	0.328803	0.7435	Insignificant

Based on the t-statistic test results, the probability values are 0.0662, 0.0000, and 0.7453. All these values are less than 0.05, which indicates that all these variables have a significant impact.

F-statistic Test

F test shows whether all independent variables have the same effect on the dependent variable), if $F \text{ count} \geq F \text{ table}$ or $F \text{ significance} \leq 0.05$ ($\alpha = 5\%$), it can be determined that the independent variables affect the dependent variable simultaneously.

F-Statistic	Prob.	Description
37.58737	0.0000	significant

The f-statistic value contained in the random effect model table is 37.58737 with a probability value of $0.0000 < 0.05$. Meaning that variable they are significant to GDRP in Island Sumatra.

R-Squared Test

The coefficient of determination (R^2) is 0. 668172 or 66.81 percent. The indicates that the building GRDP may explained by the employee expenditure, goods service



expenditure, capital expenditure variable 66.81 percent and other variables account for the remaining 33.19 percent.

I.

Employee expenditure on GRDP

Based on the regression results of the random effect model with a coefficient value of 7.085184, the employee expenditure variable has a positive and significant influence on GRDP in Sumatra Island. This means that every one billion increase in personnel expenditure will cause a 7.085184 percent increase in the level of GRDP. These results confirm previous research by (Ayu Mustina, 2023), namely, the employee expenditure variable has a positive and significant effect on the level of GRDP. This means that if employee expenditure increases, it will have an impact on the increase in GRDP on the island of Sumatra.

Goods and service expenditure on GRDP

According to the regression results, with a coefficient value of 11.58958, the goods and services expenditure variable has a positive and significant influence on GRDP on the island of Sumatra. This means that every one-billion increase in goods and services expenditure will cause an increase of 11.58958 percent in the level of GRDP. These results confirm previous research by (Tri & Joko, 2023) namely, the goods and services expenditure variable has a positive and significant effect on the level of GRDP. This means that as the level of expenditure on goods and services increases, it will have an impact on the increase in GRDP on the island of Sumatra.

Capital expenditure on GRDP

According to the regression results, with a coefficient value of -0.096791, the capital expenditure variable has a negative and insignificant influence on GRDP on Sumatra Island. This means that every one-billion increase in capital expenditure will cause a -0.096791 percent decrease in the level of GRDP. These results confirm previous research by that the capital expenditure variable has a negative and significant effect on the level of GRDP. This means that if. As capital expenditure increases, it will have an impact on a decrease in GRDP on the island of Sumatra.

CONCLUSION

Between 2017 and 2022, the variables of personnel spending and expenditure on goods and services have a positive and considerable impact on Sumatra's gross domestic

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product (GRDP). This implies that the GRDP on the island of Sumatra will increase in 2017–2022 if the variables of personnel spending and expenditure on goods and services increase. The GRDP on the island of Sumatra is negatively and negligibly impacted by the capital expenditure variable from 2017 to 2022. This means that if the capital expenditure variable increases, there will be a decrease in GRDP on the island of Sumatra in 2017-2022.

Therefore, the authors suggest that the provincial government on the island of Sumatra is expected to allocate regional expenditure proportionally between consumptive expenditure and productive expenditure, and the government must evaluate a clear and open reporting system on capital expenditure. This is because capital expenditure is part of consumption that significantly contributes to GRDP in a region.

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