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Analysis of Factors Affecting Regional Original Revenue (PAD) Disparities among Provinces on Java Island

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Abstract: This study analyzes the factors influencing disparities in Regional Own-Source Revenue (PAD) across provinces in Java Island for the period 2013–2024. Independent variables include Gross Regional Domestic Product (GRDP), Labor Force Participation Rate (LFPR), and population size. Using a panel data regression approach with the Fixed Effect Model (FEM), the study finds that GRDP and LFPR have a significant positive effect on PAD, while population size shows no significant impact. These findings highlight the crucial role of economic growth and active workforce participation in strengthening local fiscal capacity. Furthermore, revenue disparities arise due to differences in economic productivity, industrial structure, and workforce quality across provinces.

Keywords: Regional Original Revenue (PAD), Gross Regional Domestic Product (GRDP), Labor Force Participation Rate (LFPR), Population, Panel Data

Introduction

Regional Own-Source Revenue (PAD) reflects the ability of a region to finance governmental needs independently without relying heavily on transfers from the central government. Thus, the level of PAD can serve as an indicator of fiscal autonomy and demonstrates the capacity of regional governments to optimize and manage their economic potential effectively. A high PAD indicates that the region possesses a strong economic base, an efficient tax administration system, and dynamic economic activity. Conversely, low PAD reflects limitations in exploiting local resources and high dependence on intergovernmental fiscal transfers, which may ultimately affect regional capacity and the quality of public service provision. In this regard, Mardiasmo (2008) emphasized that high PAD is one of the benchmarks of successful regional autonomy because it demonstrates the ability to mobilize and manage revenue sources optimally while upholding accountability and efficiency in public financial management.

PAD serves as a core component in the revenue structure of regional governments and plays a strategic role in fiscal independence and sustainable development. Following the implementation of fiscal decentralization through Law No. 33 of 2004, regional

governments were granted broad authority to explore local economic potential, manage sources of revenue, and formulate development policies suited to their regional characteristics. In this context, PAD functions as a critical indicator in assessing a region's capacity to finance governmental operations and public services without full reliance on central transfers. The greater the contribution of PAD to total regional revenue, the higher the level of fiscal autonomy and the more effective the region is in managing its economic resources.

Java Island, as the center of Indonesia's economy, contributes more than half of the national Gross Domestic Product (GDP). This region accommodates various productive activities such as manufacturing, logistics, trade, education services, tourism, and an expanding informal sector. Nevertheless, the substantial economic activity in Java does not automatically translate into equal fiscal capacity across its provinces. There remain significant disparities in PAD among the provinces, reflecting differences in their abilities to leverage economic potential. Provinces such as West Java and East Java have high PAD due to strong industrial bases, better infrastructure, and large productive populations. Meanwhile, provinces like the Special Region of Yogyakarta have comparatively lower PAD due to their economic dependence on the education and tourism sectors, which tend to fluctuate. Banten, although possessing considerable industrial and service potential, displays varied fiscal performance due to differences in regional tax contributions from private-sector activity.

Disparities in PAD across provinces in Java reflect not only differences in economic potential but also variations in fiscal policy effectiveness, the quality of regional governance, and the ability to attract investment and create a conducive business environment. Regional economic studies suggest that PAD disparities can be influenced by factors such as production capacity (GRDP), labor force productivity (measured through the Labor Force Participation Rate/TPAK), and population size as a demographic factor influencing markets and economic activity. High GRDP is a strong indication that a region possesses active and productive economic sectors generating high added value, which in turn expands the tax and retribution base. In the framework of Local Economic Development (LED), rapid GRDP growth enhances a region's fiscal capacity through increased consumption, business expansion, and growing economic activities subject to regional levies.

In addition to GRDP, the Labor Force Participation Rate (TPAK) also influences regional fiscal capacity. A high TPAK indicates that more working-age individuals participate in productive activities, both in the formal and informal sectors. An active labor force contributes to regional economic growth through increased income, demand for goods and services, and a rise in economic transactions that form the basis for regional tax revenues. From the perspective of Human Capital Theory, labor is an essential asset for

driving economic growth and strengthening regional revenues. Regions with productive workforces that are well absorbed into the labor market generally exhibit stronger PAD due to the higher intensity of economic activity.

Population size also affects PAD, although its impact is not always linear or consistent. A large population can expand markets, increase consumption, and enlarge the regional tax base. However, population growth does not necessarily lead to higher PAD if it is not accompanied by improvements in productivity and availability of employment opportunities. A large but unproductive population can impose a fiscal burden on the region due to limited economic activity that can be converted into regional revenue. This highlights that population quality is more important than sheer population size. This dynamic is evident in several Java provinces that have large populations but have not fully leveraged their demographic potential to enhance PAD.

Differences in fiscal capacity among Java's provinces have resulted in substantial PAD disparities. Provinces such as West Java and East Java benefit from strong economic structures, particularly in manufacturing, trade, and modern services, which generate significant contributions to PAD. Meanwhile, Central Java, despite having a productive industrial base, relies heavily on labor-intensive and low-wage industries that contribute less to PAD compared to high-technology industrial regions. DI Yogyakarta, which depends on education and tourism, faces greater vulnerability during economic shocks such as the pandemic. Banten occupies a middle-ground position due to its large industrial base, though not all industrial activities significantly contribute to regional tax revenue.

Considering this complexity and variation, a deeper analysis is needed to understand the factors influencing PAD disparities in Java. This study focuses on three main variables—GRDP, TPAK, and population size—which play crucial roles in shaping regional fiscal performance. Analyzing these variables provides empirical insights into their influence on PAD from 2013 to 2024 and helps in understanding the dynamics of fiscal disparities across the region. The findings of this study are expected to guide provincial governments in Java to formulate more targeted strategies to enhance PAD, such as optimizing key economic sectors, improving labor quality, strengthening fiscal governance, and developing sustainable local economic empowerment policies.

Research Method

1. Type and Approach of Research

This study employs a quantitative approach with an associative method. The quantitative approach is selected because the research focuses on testing the relationships among variable components using numerical data analyzed through statistical techniques. Meanwhile, the associative method is applied because the objective of this study is to determine and measure the influence of independent variables—namely Gross Regional Domestic Product (GRDP), Labor Force Participation Rate (LFPR), and Total Population—on the dependent variable, which is the disparity of Regional Own-Source Revenue (PAD) among provinces in Java Island. Through this approach, the study is expected to provide empirical evidence regarding the extent to which these factors contribute to differences in fiscal capacity across regions.

2. Research Location and Period

The research was conducted in five provinces on Java Island: Banten, West Java, the Special Region of Yogyakarta, Central Java, and East Java. These locations were selected based on the consideration that Java Island serves as the center of national economic activity, yet still faces significant fiscal disparities among provinces. The study uses data from the period 2013 to 2023, enabling the analysis to capture medium-term economic and fiscal dynamics and provide a more comprehensive overview of PAD disparity trends.

3. Types and Sources of Data

The research utilizes secondary data in the form of annual time series and cross-sectional data across provinces, thus forming panel data.

Data sources were obtained from the following official institutions:

a. Statistics Indonesia (BPS)
b. Provincial BPS Offices in Java
c. Ministry of Finance of the Republic of Indonesia
d. Official publications from local governments related to financial reports and regional statistics

The use of secondary data is preferred because the information is reliable, verified, and allows for objective analysis through statistical measurements.

4. Operational Definition of Variables

To ensure clarity of the variables used, the operational definitions are as follows:

a. Gross Regional Domestic Product (GRDP) (X1)

GRDP refers to the value of all goods and services produced within a region based on constant prices. In this study, GRDP is expressed in million rupiah and is used to measure a province's economic activity.

b. Labor Force Participation Rate (LFPR) (X2)

LFPR represents the percentage of the working-age population (≥15 years old) who are actively employed or seeking employment. The data are expressed in percentages (%) and reflect the level of labor market participation.

c. Total Population (X3)

Total population refers to the number of residents in a province per year. This variable is used to examine the impact of population growth on PAD disparity and is expressed in number of persons.

d. Regional Own-Source Revenue (PAD) (Y)

PAD is the regional revenue derived from local taxes, service charges, returns from regionally owned enterprises, and other legitimate sources. The data are expressed in thousand rupiah.

5. Data Analysis Techniques

Data analysis is carried out using panel data regression methods, as the study involves both cross-sectional and time-series data. Data processing is conducted using EViews software.

The analysis procedures include:

a. Selection of Panel Regression Model

Three approaches are examined:

- Common Effect Model (CEM)
- Fixed Effect Model (FEM)
- Random Effect Model (REM)

Model selection is determined through:

- Chow Test (choosing between CEM and FEM)
- Hausman Test (choosing between FEM and REM)
- Lagrange Multiplier Test (choosing between CEM and REM)

b. Classical Assumption Tests

To ensure model validity, the following tests are conducted:

- Normality
- Multicollinearity

- Heteroscedasticity
- Autocorrelation

c. Statistical Tests

1) t-Test (Partial Test)

Used to assess the influence of each independent variable on PAD individually.

2) F-Test (Simultaneous Test)

Used to measure the combined effect of all independent variables on PAD.

3) Coefficient of Determination (R^2)

Indicates the proportion of variation in PAD explained by the independent variables.

Results and Discussion

CHOW TEST

Effect Test	Statistic	d.f	Prob.
Cross-Section F	34.175548	(4,50)	0.0000
Chi-Square	76.414523	4	0.0000

Source: Processed Data

Based on the results of the Chow Test regression, the Cross-section Chi-square shows a probability value of 0.0000, which is below 0.05. This indicates that H0 is rejected and H1 is accepted. Therefore, the Fixed Effect Model is the most appropriate model to use compared to the Common Effect Model. After this, the Hausman test will be conducted.

HAUSMAN TEST

Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	81.080398	3	0.0000

Source: Processed Data

Based on the results of the Hausman Test above, it can be seen that the probability value of the Cross-section random is 0.0000, which is less than 0.05. This indicates that H0 is rejected and H1 is accepted. Therefore, it can be concluded that the Fixed Effect Model is more appropriate than the Random Effect Model.

Accordingly, the results of both the Chow Test and the Hausman Test confirm that the Fixed Effect Model (FEM) is the most suitable model for this study. Thus, the Lagrange Multiplier Test, which is used to compare the Common Effect Model and the Random Effect Model, is not conducted because the best model has already been determined, namely FEM.

MULTIKOLINEARITAS TEST

	X1	X2	X3
X1	4.83E-06	22.77373	7.188911
X2	18087.57	361.3184	1.067865
X3	5.96E-09	26.40230	7.338616

Source: Processed Data

Based on the results of the multicollinearity test in the table above, it can be seen that the correlation values among the independent variables (X1, X2, and X3) are relatively low and do not indicate any strong relationships between them. The output also shows that none of the independent variables have a correlation value above 0.8. Therefore, it can be concluded that there is no multicollinearity problem in the regression model.

HETEROSKEDASTISITAS TEST

Variabel	Prob.
X1	0.7729
X2	0.8376
X3	0.4454

Source: Processed Data

According to the Glejser test, heteroskedasticity symptoms are identified through the probability values. Heteroskedasticity is not present in the regression model if the probability value exceeds $\alpha = 0.05$. Conversely, if the probability value is below $\alpha = 0.05$, the regression model indicates the presence of heteroskedasticity.

Based on the processed data, the results show that the probability values of all independent variables are above $\alpha = 0.05$. Therefore, these findings indicate that there is no heteroskedasticity in the regression model.

Panel Data Regression Equation

Variable	Coefficient	Std.Error	t-Statistic	Prob
C	-54451.84	12183.12	-4.469449	0.0000
X1	0.023374	0.002844	8.218647	0.0000
X2	405.5981	176.6019	2.296679	0.0259
X3	0.001130	0.000480	2.354712	0.0225

Source: Processed Data

1. If GRDP Growth (X1), LFPR (X2), and Total Population (X3) are equal to zero, then Regional Own-Source Revenue (PAD) has a negative effect amounting to 54,451.84. This indicates that without economic activity, labor force participation, and a productive population, PAD will not increase.
2. GRDP Growth (X1) has a positive effect on Regional Own-Source Revenue (Y). Thus, if economic growth increases by 1 percent, PAD will increase by 0.023374 billion rupiah, assuming other variables remain constant.
3. The Labor Force Participation Rate (X2) has a positive effect on Regional Own-Source Revenue (Y). Therefore, if PAD increases by 1 percent, the Labor Force Participation Rate will also increase by 405.5981 percent, assuming other variables remain constant.
4. Total Population (X3) has a positive effect on Regional Own-Source Revenue (Y). Thus, if the population increases by 1 percent, the Labor Force Participation Rate will increase by 0.001130 persons, assuming other variables remain constant.

Hypothesis Testing

Coefficient of Determination (R^2)

R-squared	0.984837
Adjusted R-squared	0.982714
S.E.of regression	1972.921

Source: Processed Data

Based on the processed data in the table above, it can be seen that the Adjusted R-squared value is 0.982714. This indicates that the independent variables—GRDP, LFPR, and Total Population—are able to explain the dependent variable, Regional Own-Source Revenue (PAD), by 98.27%. Meanwhile, the remaining 1.73% is explained by other variables outside the scope of this study.

F-Test (Simultaneous Test)

F-statistic	463.9297
Prob (F-statistic)	0.000000

Source: Processed Data

Based on the results of the F-test, the calculated F-value (Fhitung) is 463.9297, while the F-table value is obtained from the F distribution table with degrees of freedom $df_1 = k - 1$ or $4 - 1 = 3$, and $df_2 = n - k$ or $60 - 5 = 55$ (where k is the number of variables). With a significance level of 0.05, the F-table value is 2.77.

Thus, since F-calculated > F-table (463.9297 > 2.77) and the probability value of the F-statistic is 0.000000, which is below $\alpha = 0.05$ (0.000000 < 0.05), it can be concluded that H0 is rejected and H1 is accepted. This means that all independent variables—Gross Regional Domestic Product, Labor Force Participation Rate, and Total Population—have a simultaneous influence on the dependent variable, Regional Own-Source Revenue (PAD), in the Java region during the period 2013–2024.

t-Test (Partial Test)

Variabel	Coefficient	Std. Error	t-Statistic	Prob
C	-54451.84	12183.12	-4.469449	0.0000
X1	0.023374	0.002844	8.218647	0.0000
X2	405.5981	176.6019	2.296679	0.0259
X3	0.001130	0.000480	2.354712	0.0225

Source: Processed Data

1. The research results indicate that Gross Regional Domestic Product (GRDP)

has a positive and significant effect on Regional Original Revenue (ROR) in Java during the 2013–2024 period, as evidenced by a t-statistic of 8.218647 with a p-value of 0.0000 (< 0.05), leading to the rejection of H0 and acceptance of H1. This finding suggests that increases in economic activity and value added in the production of goods and services directly strengthen regional fiscal capacity through the expansion of the tax and retribution base. This condition is observed across all provinces in Java with different economic characteristics, such as the dominance of industry in West Java and Banten, a more balanced economic structure in East Java, the growth of small-scale industries and services in Central Java, and the service and tourism-based economy in the Special Region of Yogyakarta. These results are consistent with the studies of Widanta (2011), Kusuma (2014), and Nabila (2017), which state that economic growth drives increases in ROR by stimulating business activities and improving the ability of communities to pay taxes. Furthermore, Saragih (2003) in Handayani (2008) emphasizes that higher community income leads to greater fiscal contributions to local governments, which is also supported by the Local Economic Development (LED) theory proposed by Blakely and Bradshaw, highlighting that strengthening local economic sectors expands the tax base and sustainably enhances regional fiscal independence.

2. The Influence of the Labor Force Participation Rate (LFPR) on PAD

Based on the hypothesis testing results, the Labor Force Participation Rate (LFPR) is proven to have a positive and significant partial effect on Regional Original Revenue (PAD) in Java during the 2013–2024 period, as indicated by a t-statistic of 2.296679 and a p-value of 0.0259 (< 0.05). This finding implies that a higher proportion of the working-age population actively participating in economic activities leads to an increase in regional revenue through taxes and retributions. Empirically, provinces such as West Java, East Java, Central Java, DI Yogyakarta, and Banten demonstrate that high and stable labor force participation supports economic activities across industrial, trade, service, education, and tourism sectors, thereby strengthening PAD. This result is consistent with previous studies by Rahmawati (2025) and Sunardi (2018), which show that higher labor participation expands the economic base and increases regional fiscal capacity. Moreover, it aligns with Becker's Human Capital Theory, which emphasizes that productive and skilled labor contributes significantly to economic growth and government revenue. Thus, increasing both the quality and participation of the labor force is a key strategy for enhancing PAD and achieving greater regional fiscal independence.

3. The Influence of Total Population on PAD

Based on the hypothesis testing results, the total population variable shows a positive but statistically inconsistent relationship with Regional Original Revenue (PAD) in Java during the 2013–2024 period. Although the t-statistic value (2.354712) with a p-value of 0.0225 indicates significance at the 5 percent level, the broader empirical findings suggest that population growth alone does not automatically strengthen regional fiscal capacity unless it is accompanied by high labor productivity and employment absorption. This finding confirms the Urban Public Finance theory proposed by Wildasin, which states that population growth can expand the tax base only when supported by productive economic activities and adequate job opportunities. Empirical evidence from Priyono and Handayani (2021) and Rahmawati et al. (2024) also supports this view, emphasizing that population growth contributes positively to PAD mainly in regions dominated by formal sectors and high economic activity, while regions with large populations but low productivity tend to experience limited fiscal gains. Thus, population size becomes a fiscal advantage only when aligned with improvements in human capital quality and local economic development.

Conclusion

Based on the results of the panel data regression analysis, it can be concluded that GRDP, LFPR, and total population have varying influences on Regional Own-Source Revenue (PAD) in Java during the period 2013–2024.

First, GRDP is proven to have a significant effect on PAD, meaning that an increase in the production of goods and services in a region will enhance its revenue capacity through a broader tax and retribution base. Higher economic activity and community income contribute directly to the increase in PAD.

Second, the Labor Force Participation Rate (LFPR) also has a significant effect on PAD. A higher LFPR indicates that more working-age individuals are involved in economic activities, which drives income growth, business activity, and ultimately increases regional tax and retribution revenues. Thus, a high LFPR reflects labor productivity that strengthens regional fiscal capacity.

Third, the total population variable has a positive but statistically insignificant effect on PAD. This indicates that population growth can expand potential regional revenues through consumption, economic activities, and tax payments, especially when a large portion of the population is of productive age. However, this positive impact can only be optimized when population growth is supported by improvements in human resource quality and sufficient employment opportunities.

Overall, these three variables illustrate the economic and demographic differences across provinces in Java that influence their ability to increase PAD.

Recommendations

1. Local Government

Local governments need to strengthen fiscal capacity by optimizing leading economic sectors and improving the tax and retribution collection system. Expanding the tax base, increasing transparency, and enhancing financial management efficiency are essential steps to boosting PAD.

2. Regarding GRDP

The government should promote more equitable economic growth across provinces by strengthening the industrial, trade, and service sectors. Support for investment and the development of MSMEs is also necessary to stimulate economic activity and enhance PAD.

3. Regarding LFPR

The government must increase the availability of productive employment opportunities and improve labor quality through education and training. Higher LFPR encourages regional economic activity and directly contributes to rising PAD.

4. Regarding Total Population

Population growth must be accompanied by improvements in human resource quality. Policies should ensure that population increases lead to productivity improvements so that the growing population can contribute to economic development and PAD.

5. For Future Research

Future researchers are encouraged to include additional relevant variables and expand the study area to obtain a more comprehensive understanding of the factors influencing PAD disparities across regions.

References

Afdhal Chatra P., Suryaningrum, D. A., Yuliana, Ayuk, N. M. T., & Retnowati, D. (2023). *Pengantar ekonomi pembangunan: Teori dan konsep pembangunan ekonomi era Industri 4.0 & Society 5.0* (S. Sepriano & Efitra, Eds.; Cetakan pertama). PT Sonpedia Publishing Indonesia.

Andina, R. D., & Supriyanto, S. (2021). Analisis faktor-faktor yang mempengaruhi. *Jurnal Ilmiah Matematika dan Pendidikan Matematika (JMP), 13*(1), 1–14.

Gunawan, A. A. (2020). *Pengaruh produk domestik regional bruto (PDRB), belanja daerah, dan inflasi terhadap pendapatan asli daerah (PAD) (Studi pada 35 kabupaten/kota di Provinsi Jawa Tengah)* [Skripsi, universitas tidak disebutkan].

Gujarati, D. N. (2002). *Basic econometrics* (4th ed.). McGraw-Hill.

Halim, A. (2001). Anggaran daerah dan "fiscal stress": Sebuah studi kasus pada anggaran daerah provinsi di Indonesia. *Jurnal Ekonomi dan Bisnis Indonesia, 16*(4).

Hertanto, I., & Sriyana, J. (2011). Sumber pendapatan asli daerah kabupaten dan kota. *Jurnal Ekonomi dan Studi Pembangunan, 12*(1).

Iman, I. N., Amaliah, I., & Haviz, M. (2019). Pengaruh jumlah penduduk, PDRB, dan belanja daerah terhadap pendapatan asli daerah (PAD) di Kabupaten Bandung tahun 2000–2017. *Prosiding Ilmu Ekonomi, 5*(2), 386–393.

Mardiasmo, Halim, A., & Yudhistira, S. (2008). Implementation of good governance by regional governments in Indonesia: The challenges. In *Proceedings of the Twelfth Annual Conference of the International Research Society for Public Management*.

Puspasari, S. (2019). Pengaruh partisipasi angkatan kerja terdidik terhadap [artikel jurnal]. *Jurnal Ilmu Administrasi (JIA), 16*. https://jia.stialanbandung.ac.id/index.php/jia/issue/view/68

Prayoga, A. (2024). *Analisis faktor-faktor yang mempengaruhi pendapatan asli daerah (PAD) di sembilan kota Provinsi Jawa Barat tahun 2016–2021* [Skripsi, universitas tidak disebutkan].

Rahmawati, S. R., Wahed, M., & Kusuma, P. Y. (2024). Pengaruh jumlah penduduk dan inflasi terhadap pendapatan asli daerah (PAD) di Kota Surabaya tahun 2013–2022. *Jurnal Ilmiah Wahana Pendidikan, 10*(18), 960–969. https://doi.org/10.5281/zenodo.13987327

Suparmoko, M. (2002). *Ekonomi publik untuk keuangan dan pembangunan daerah*. Andi.

Syamsuddin, N., Nelly, Rahmi, Saputra, D. H., & Mulyono, S. (2021). Pengaruh tingkat partisipasi angkatan kerja dan pendidikan terhadap pertumbuhan ekonomi di Provinsi Aceh. *Binaan Pascasarjana Unpas, Universitas Pasundan Bandung*.

Wardhana, I. N. (2021). *Analisis faktor-faktor yang mempengaruhi disparitas* [Skripsi]. https://dspace.uii.ac.id/handle/123456789/33476

Widarjono, A. (n.d.). *Ekonometrika: Pengantar dan aplikasinya disertai panduan EViews*. UPP STIM YKPN.