

Analysis of the Influence of Socioeconomic Factors on Local Revenue: An Empirical Study in Metro City (2018–2023)

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ABSTRACT

This study aims to examine the influence of population size, inflation, and poverty rate on the Regional Original Revenue (PAD) of Metro City during the period of 2018–2023. As a primary source of local government financing, PAD plays a vital role in supporting fiscal autonomy and sustainable development. An increase in population is expected to expand the tax and retribution base, while inflation affects price stability and household purchasing power. Conversely, a high poverty rate may limit the community's capacity to contribute to local revenue. The study employs a quantitative approach using multiple linear regression analysis, with the help of E-Views 13 software to process secondary data obtained from the Central Statistics Agency (BPS) of Metro City. The results of the partial t-test reveal that population size exerts the strongest and most significant positive influence on PAD, followed by inflation, which also shows a significant effect but with more variability in direction. Meanwhile, the poverty rate does not have a statistically significant effect on PAD. The F-test results indicate that all three independent variables collectively have a significant impact on PAD. These findings highlight the importance of optimizing PAD by considering demographic dynamics and inflation control, along with strengthening poverty alleviation efforts to establish a more stable and sustainable local revenue base.

Introduction

The framework of economic growth, Local Own-Source Revenue (PAD) is influenced by various variables, including population size, inflation, and poverty levels. Solow–Swan economic growth theory (Solow, 1956), explains that the growth rate of a region is determined by three main factors, namely population size, investment, and technological development. Population growth has the potential to contribute positively to economic growth if accompanied by effective and efficient resource management (Hidayat, at. al., 2025). In relation to PAD, a large population can drive economic activity through the consumption of goods and services, which in turn leads to increased regional revenue. However, according to Keynesian Economics (Keynes, 1936), High inflation can reduce people's purchasing power, weaken business activity, and reduce tax revenues from the trade and service sectors. Meanwhile, the theory of fiscal capacity (Indriawati & Hasmarini, 2025) emphasizes that the fiscal capacity of a region, including its own-source revenue, is

greatly influenced by population size, purchasing power, and poverty levels. Regions with relatively large populations and high levels of purchasing power have greater opportunities to increase their own-source revenue, particularly from local taxes and levies (Dame, Rengga & Meylano, 2025).

Local Own-Source Revenue (PAD) plays a strategic role as one of the main sources of funding for regional development (Cahyani, at., al 2025). With sound management of local revenue, local governments can fund development projects that reduce social inequality and improve quality of life, supporting sustainable and equitable economic development throughout Indonesia (Febriana & Galuh, 2025; Hasanah, at., al 2025; Putri & Asmara, 2025). High PAD can reduce regional dependence on transfers from the central government, providing more freedom in designing local development policies (Purba & Manurung, 2023). As one of the cities in Lampung Province, Metro City faces various challenges in its efforts to optimize Local Own-Source Revenue (PAD) as the main source of regional development financing and public service delivery.

Table 1. Realization of Metro City's Local Revenue 2018–2023

No	Year	Realization of Metro City Government Revenue According to PAD (Thousand Rupiah)				
		Local Taxes	Local Levies	Separated Local Assets	Other Legitimate Local Revenue	Total
1	2018	21.731.062,46	5.604.726,99	4.342.620,32	100.523.866,25	132.202.276,03
2	2019	27.205.358,06	5.631.840,65	4.894.552,26	138.467.573,20	176.119.324,17
3	2020	28.845.377,14	7.036.397,90	5.562.613,44	180.201.312,58	221.645.701,09
4	2021	33.105.926,63	7.879.918,10	7.340.250,54	225.517.952,87	273.844.048,14
5	2022	36.716.010,32	7.793.234,27	6.733.816,46	188.593.803,85	239.836.864,91
6	2023	41.299.877,12	7.942.159,85	6.663.816,27	228.357.103,70	284.262.956,96

Source: Metro City Statistics Agency, 2023.

Population size is one of the variables that affects the amount of Local Own-Source Revenue (PAD). Economic activities carried out by the community are a source of revenue for local governments, whether through taxes, levies, or other types of income. High levels of economic activity among the population have a positive impact on regional economic development and ultimately contribute to an increase in PAD.

Table 2. Population of Metro City from 2018 to 2023

No	Year	Gender		Total
		Male	Famale	
1	2018	82.494	82.699	165.193
2	2019	165.193	83.815	167.411
3	2020	84.806	83.870	168.676
4	2021	85.307	84.474	169.781
5	2022	86.430	85.570	172.000
6	2023	86.568	85.937	172.505

Source: Metro City Central Statistics Agency, 2023.

Overall, the data shows a trend of increasing population in Metro City from year to year, both for males and females. This population growth has an impact on various development sectors, including an increased need for health services, education, infrastructure, and job availability. According to [Gusti \(2024\)](#) explains that the size of a region's population affects the level of efficiency in resource utilization and production processes. In addition, increased consumption by the community will increase demand for locally produced goods and services, thereby potentially expanding sources of local tax revenue, including hotel tax, restaurant tax, market fees, and entertainment tax ([Priyono & Handayani, 2021](#)).

The next factor that can affect PAD is the poverty rate. This figure is an important indicator in understanding the socio-economic conditions of a region and is used by the government to evaluate the success of poverty alleviation policies.

Table 3. Poverty Rate in Metro City from 2018 to 2023

No	Components of Poverty	Poverty in Metro City					
		2018	2019	2020	2021	2022	2023
1	Number of Poor People (Thousands)	15.06	14.49	14.31	15.32	13.68	12.8
2	Percentage of Poor People	9.14	8.68	8.47	8.93	7.87	7.28
3	Poverty Depth Index (P1)	1.61	1.14	0.94	1.27	0.87	1.12
4	Poverty Severity Index (P2)	0.42	0.22	0.16	0.28	0.16	0.24
5	Poverty Line (Rp/Capita/Month)	360656	371636	406351	417861	449415	480830

Source: Metro City Central Statistics Agency, 2023.

In general, the poverty rate in Metro City shows a continuous downward trend from year to year. This decline is in line with the increase in the poverty line, which indicates an improvement in people's purchasing power. Although various efforts have been made by the central and local governments to reduce poverty, in reality, poverty remains a challenge that has not been fully overcome in Indonesia.

Although Metro City is relatively small, it is developing rapidly and is highly dependent on local revenue as its main source of funding. Therefore, it is important to study the factors that affect local revenue in Metro City. Population size, poverty rate, and inflation are closely related to Metro City's potential to increase local revenue.

Methods

This study uses an associative method with a quantitative approach. The data used is secondary data obtained from historical annual reports available on the official website

Bps.go.id (2024) as well as other official online sources. The analysis applied in this study is multiple linear regression, which aims to test the effect of two or more independent variables on one dependent variable (Sugiyono, 2020). The multiple linear regression equation model used in this study is presented as follows:

$$Y = \alpha + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + e$$

Explanation:

- Y : Local Revenue
- α : Constant
- $\beta_1 \beta_2$: Regression coefficients of each independent variable
- X_1 : Population
- X_2 : Inflation
- X_3 : Poverty Rate
- e : Margin of error

The framework for this study is as follows:

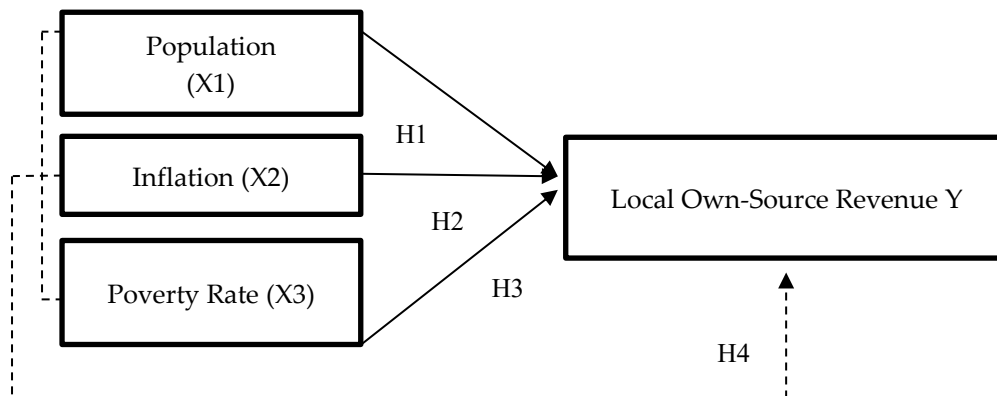


Figure 1. Conceptual Framework
Source: Data processed by researcher, 2024.

Results and Discussion

Based on multicollinearity testing, all variables in the research model have a Variance Inflation Factor (VIF) value below the 10 limit, so it can be concluded that the regression model is free from multicollinearity. The normality test results show a probability value of 0.821, which exceeds the significance level of 0.05, so the residuals in this study can be said to be normally distributed. Furthermore, the heteroscedasticity test produced an Obs*R-squared probability value of 0.1175, which is greater than 0.05, indicating no heteroscedasticity in the regression model. The autocorrelation test was performed using the Durbin-Watson Test (DW Test), and because the DW value was between DU and 4-DU, it can be concluded that the regression model used did not experience autocorrelation.

Table 4. Multiple Linear Regression Analysis Test Results

<i>Dependent Variabel: Y</i>		
<i>Method: Least Squares</i>		
<i>Sample: 2018 2023</i>		
<i>Included observations: 6</i>		
Variabel	Coefficient	Std. Error
C	-6408.185	661.6741
X1	0.037108	0.003474
X2	-2312.727	479.9639
X3	4991.389	1175.771

Source: Data processed by researchers, 2025.

Based on the results of multiple linear regression analysis, the following regression equation was obtained:

$$Y = -6408.185 + 0.037108(X1) - 2312.727(X2) + 4991.389(X3)$$

The regression test results show that the population variable has a positive effect on Local Own-Source Revenue (PAD), indicating that an increase in population is in line with an increase in PAD received. Meanwhile, inflation has been proven to have a negative effect on PAD, meaning that an increase in the inflation rate has the potential to reduce PAD revenue. In addition, the poverty rate shows a positive correlation with PAD, although conceptually this relationship still requires further economic analysis and explanation.

Based on the t-distribution table at a significance level of 0.05, the t-table value obtained is 3.182.

Table 5 Results of the t-test (Partial)

<i>Variabel</i>	<i>Coefficient</i>	<i>Std. Error</i>	<i>t. Statistic</i>	<i>Prob</i>	<i>Hasil</i>
Population	0.037108	0.003474	10.68168	0.0087	Significant
Inflation	-2312.727	479.9639	-4.818544	0.0405	Significant
Poverty					Not
Rate	4991.389	1175.771	4.245205	0.0513	Significant

Source: Data processed by researchers, 2025.

Based on the results presented in the table, the population variable (X1) has a t-value of 10.681.68, which exceeds the t-table value of 3.182. The probability value is 0.0087, which is smaller than the significance level of 0.05, so the first hypothesis (H1) is accepted. Furthermore, the inflation variable (X2) shows a t-value of -4.818544, which is absolutely greater than the t-table ($|-4.818544| > 3.182$). The probability value of 0.0405, which is below 0.05, indicates that the second hypothesis (H2) can be accepted. Meanwhile, the poverty rate variable (X3) obtained a t-value of 4.245205, which is greater than the t-table value of 3.182, but its probability value of 0.0513 slightly exceeds the significance threshold of 0.05. This

condition indicates that the effect of this variable is close to significant, so the third hypothesis (H3) is rejected.

Table 6. F Test Results (Simultaneous)

		Results
<i>F-statistic</i>	65.73664	Significant
<i>Prob (F-statistic)</i>	0.015022	Significant

Source: Data processed by researchers, 2025.

The F test results show that the calculated F value of 65.736.64 significantly exceeds the table F value of 9.55 at degrees of freedom $df_1 = 3$ and $df_2 = 2$ with a significance level of 0.05. In addition, the probability value (Sig-F) obtained is 0.015022, which is less than 0.05, so the fourth hypothesis (H4) is accepted. These findings indicate that the variables of population, inflation, and poverty rate together have a significant effect on the Local Revenue (PAD) of Metro City.

Table 7. Results of the Coefficient of Determination Test (R2)

		Results
<i>R-squared</i>	0.989960	Very Strong
<i>Adjusted R-squared</i>	0.974901	

Source: Data processed by researchers, 2025.

Based on the results of multiple linear regression analysis, an Adjusted R^2 value of 0.974901 was obtained. This value indicates that 97.49% of the variation in Local Own-Source Revenue (PAD) in Metro City can be explained by population (X1), inflation (X2), and poverty rate (X3). Meanwhile, the remaining 2.51% is explained by other factors not included in this model.

Discussion

Based on the analysis results, it shows that an increase in population has an impact on an increase in PAD, in line with the theory that population growth contributes to an increase in regional income. The larger the population, the greater the economic activity that occurs in a region, so that regional revenue through taxes and levies also increases. These findings are supported by research [Prasetyo et al., \(2022\)](#), which states that the large population contributes to increased regional revenue, particularly through consumption, trade, and regional taxes. In addition, the results of research conducted by [Priyono & Handayani \(2021\)](#) shows that population size has a positive effect on Local Own-Source Revenue (PAD), where population growth drives increased economic activity and consumption levels among the community, which ultimately leads to increased local tax revenue.

In line with these findings, the test results show that an increase in the inflation rate has the potential to significantly reduce Local Own-Source Revenue (PAD). [Almaya et al., \(2021\)](#) explains that high inflation rates can weaken people's purchasing power, thereby impacting economic activity and reducing local tax revenues. Rising prices of goods and services tend to lower consumption levels, reduce business profits, and impact tax and levy payments. These findings are consistent with the results of research [Priyono & Handayani \(2021\)](#), which states that high inflation has a negative impact on local revenue due to a decline in people's purchasing power and a reduction in local tax revenue.

Meanwhile, the analysis shows that poverty levels have no effect on local revenue. [Tallesang \(2024\)](#) It is often stated that high poverty rates should have a negative impact on local revenue, because the more people live in poverty, the lower their purchasing power and the smaller their contribution to local taxes and levies. However, the results of this study show a non-positive relationship, whereby even though poverty rates are high, PAD can still increase because leading sectors such as trade and industry continue to grow, where poverty rates do not significantly affect PAD because regional revenue comes more from taxes and levies on business sectors that are not too dependent on the welfare of the poor, so that increases in PAD are more determined by investment, the number of businesses, and regional fiscal policy ([Tuah & Ompusunggu, 2025](#)).

Based on the findings of the study, it can be stated that the variables of population size, inflation, and poverty rate simultaneously have a significant effect on the Local Revenue (PAD) of Metro City. In light of this, local government policy should focus on utilizing population size as an economic potential, controlling inflation to maintain the stability of people's purchasing power, and implementing poverty alleviation strategies that emphasize increasing productivity and the economic role of low-income communities.

Conclusion

The findings indicate that population size has a positive and significant effect on the Local Own-Source Revenue (PAD) of Metro City. This condition shows that an increase in population has the potential to increase PAD revenue, particularly from local taxes and levies generated through community economic activities. These results are in line with the view in economic growth theory which states that population growth can drive increased economic activity if supported by adequate economic policies.

Meanwhile, inflation has been proven to have a negative and significant impact on local revenue. Rising inflation tends to weaken people's purchasing power, thereby reducing consumption and economic activity, which ultimately leads to a decline in local tax and levy revenue. This finding confirms that price stability and people's purchasing power play an important role in maintaining the sustainability of regional revenue. Therefore, within the

framework of regional fiscal policy, inflation control efforts are a strategic factor in supporting the optimization of PAD.

The results of the study show that poverty levels do not have a significant effect on PAD. Although theoretically high poverty can hamper economic growth and reduce community contributions to PAD, the results of this study show that this relationship is not strong enough. One possible reason for this is that the main sources of PAD come from taxes and business levies, which are more dependent on the economic activities of communities with high purchasing power. In addition, poverty alleviation programs are more consumptive in nature and do not directly increase regional revenue. Although poverty levels have declined, their impact on PAD is still limited compared to the factors of population size and inflation, which play a more significant role in driving economic growth and regional income. Of the three variables studied, population size is the variable that has the most significant impact on PAD.

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