Jurnal Simki Economic, Volume 8 Issue 1, 2025, Pages 124-132
Available online at: https://jiped.org/index.php/JSE
ISSN (Online) 2599-0748

Analysis of The Effects of Size Population, Unemployment, and Government Expenditures on Poverty Levels in Mimika Regency 2011-2023

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Received: 27 12 2024. Revised: 20 02 2025. Accepted: 03 03 2025.

Abstract : This research aims to determine the influence of size population, unemployment, and government expenditures on poverty levels in Mimika Regency in 2011-2023. The data used in this research uses secondary data sourced from the Mimika Regency Central Statistics Agency and the Directorate General of Financial Balance, Ministry of Finance. This research uses a multiple linear regression analysis method using the OLS (Ordinary Least Square) model. Data processing uses Eviews 10 statistical testing. The results of this study show that size population has a partial positive and insignificant effect on poverty levels. Unemployment has a positive and insignificant effect on poverty levels, and government expenditures have a negative effect on poverty levels. The results of simultaneous statistical tests show that population, unemployment, and government expenditures did not have a significant effect on poverty level in Mimika Regency in 2011-2023.

Keywords : Size Population, Unemployment, Government Expenditures, Poverty.

INTRODUCTION

Poverty remains a persistent and complex issue across developing nations, significantly influencing the overall socio-economic conditions of affected populations. In Indonesia, poverty rates have fluctuated despite consistent efforts by both the government and private sectors to stimulate economic growth and implement welfare programs. While Indonesia has experienced significant economic advancements, the country's poverty rate remains relatively high compared to global standards (Nurwati, 2008). This is particularly evident in areas like Mimika Regency, where economic disparity and poverty continue to challenge sustainable development, even as the region benefits from natural resource wealth.

Various factors contribute to the persistence of poverty in Mimika Regency, including rapid population growth, high unemployment rates, and inefficient allocation of government expenditure. Population growth, although a natural phenomenon, poses challenges when it outpaces the availability of adequate resources and job opportunities, exacerbating poverty levels (Suryawati, 2005). The Malthusian perspective on population growth supports this view,

How to cite: Tutkey, S. B., Santoso, I. R., & Akib, F. H. Y. (2025). Analysis of The Effects of Size Population, Unemployment, and Government Expenditures on Poverty Levels in Mimika Regency 2011-2023. *Jurnal Simki Economic*, 8 (1), 124-132.

suggesting that unchecked population increases could strain resources and hinder economic progress. Additionally, unemployment remains a critical issue, as it not only reduces household income, but also diminishes productivity and economic stability. Government spending, on the other hand, is designed to boost economic activity and reduce poverty, but its effectiveness often depends on the quality and targeting of these expenditures (Scott, 2002). Therefore, understanding how these factors interrelate and influence poverty is crucial for designing effective policy interventions.

Despite various poverty alleviation initiatives, Indonesia still struggles with disparities in income distribution and access to essential services. Mimika Regency, a region marked by its rich mineral resources and economic potential, paradoxically experiences considerable poverty levels. The complex interplay between a growing population, limited employment opportunities, and government expenditure inefficiency demands a closer examination to identify tailored solutions. The national poverty line in Indonesia is also notably lower than international standards, meaning many people live above the official poverty line yet face deprivation in multiple dimensions, such as education, healthcare, and food security (Windia, 2015). Addressing these multi-dimensional poverty issues requires comprehensive strategies that incorporate both economic growth and targeted social welfare policies.

The primary research problem in this study is to determine how population growth, unemployment, and government expenditure affect poverty levels in Mimika Regency. Broadly, conventional solutions to poverty have revolved around improving economic growth, job creation, and optimizing government expenditure to improve living standards. However, these approaches have produced mixed results in developing economies, suggesting a need for more context-specific strategies. Economic theory postulates that government expenditure can stimulate economic activity by creating jobs and providing social services, but if poorly managed, it can fail to address the root causes of poverty. Similarly, demographic and labor market factors must be adequately analyzed to ensure that economic interventions are well-targeted and effective

From previous research, certain theories offer insight into the mechanisms by which these factors impact poverty. The relationship between population growth and poverty has been widely studied. Mudrajad (1997) argues that rapid population growth, without corresponding economic development and employment opportunities, creates a cycle of poverty where resources become insufficient for a larger population. Similarly, studies on unemployment have demonstrated its direct effect on poverty, as jobless individuals often lack the income needed

to support their families and contribute to economic growth (Prayoga, 2019). Moreover, government expenditure aimed at poverty reduction is effective only when properly directed towards essential sectors like healthcare, education, and infrastructure. Sumarsono (2003) highlights that inefficient use of public funds can exacerbate economic disparities rather than alleviate them.

Research specifically related to Mimika Regency or similar contexts has revealed varying outcomes. Aiyedogbon & Ohwofasa (2012) found that unemployment significantly affects poverty, while the impact of government expenditure depends on how well funds are allocated and implemented. Similarly, Irhamni (2018) observed that population growth has a mixed impact on poverty levels, emphasizing the need for job creation and resource optimization. Research such as Anggraini et al. (2022) reinforces these conclusions, indicating that although government spending can alleviate poverty, its effectiveness is frequently diminished by execution inefficiencies and the disconnect between public expenditures and genuine community requirements. The complexity of these relationships indicates that a one-size-fits-all solution may not be effective, and more nuanced, region-specific approaches are required.

Although much research has explored the connections between economic variables and poverty, there is still a gap in understanding the simultaneous effects of population growth, unemployment, and government expenditure in specific regions like Mimika Regency. Previous studies provide valuable insights but do not fully address the unique socio-economic dynamics of this area, particularly the influence of local governance and resource management. This research aims to fill that gap by examining these factors using recent data and robust econometric methods, offering a comprehensive analysis of their individual and collective impacts on poverty.

The objective of this study is to empirically analyze the effects of population size, unemployment, and government expenditure on poverty levels in Mimika Regency from 2011 to 2023. The research introduces a novel approach by applying a multiple regression model to assess these variables' interactions and significance. By doing so, it seeks to contribute to the academic discourse on poverty alleviation and provide policymakers with actionable insights. The scope of the study encompasses demographic trends, labor market analysis, and fiscal policy evaluation, aiming to generate findings that are not only theoretically significant but also practically applicable to the region's development efforts. The research's contribution lies in its

ability to offer evidence-based recommendations that could inform better policy frameworks and support sustainable poverty reduction strategies.

RESEARCH METHODS

This chapter outlines the research methodology adopted to analyze the impact of population growth, unemployment, and government expenditure on poverty levels in Mimika Regency from 2011 to 2023. The methodology is structured to ensure a systematic and logical approach to address the research objectives using reliable data and appropriate analytical techniques. The research relies on secondary data, collected from authoritative and reliable sources. The primary sources of data include the Central Statistics Agency of Mimika Regency and the Directorate General of Financial Balance at the Ministry of Finance. Secondary data is crucial in this study as it allows for the analysis of trends and relationships over time, leveraging existing comprehensive datasets that capture economic, demographic, and fiscal variables (Sugiyono, 2009). The data spans from 2011 to 2023, ensuring a robust time series analysis. The variables collected are measured annually, and all datasets are expressed in relevant units, such as population figures in terms of individuals, government expenditure in Indonesian rupiah, and poverty levels also in terms of affected population numbers. Ensuring the validity and reliability of the findings is critical. The use of well-established econometric methods and robust statistical software (Eviews 10) enhances the accuracy of the results.

Data Analysis Techniques. The research employs multiple linear regression analysis using the Ordinary Least Squares (OLS) method. OLS is chosen for its effectiveness in estimating relationships between a dependent variable and multiple independent variables, providing a clear understanding of the strength and nature of these relationships. The analysis is conducted using Eviews 10, a statistical software package that facilitates robust econometric modeling and hypothesis testing. The regression model can be expressed as follows:

$Yt=\beta0+\beta1X1t+\beta2X2t+\beta3X3t+\varepsilon t$

- Yt = Poverty levels in year
- β0 = Contant term
- β1= Coefficents of population size
- β2 = Coefficents of umenployment
- β3 = Coefficents of government expenditure
- X1t = Independent variables of population size in year
- X2t = Independent variables of unemployment in year

- X3t = Independent variables of government expenditure in year
- εt = Error term

RESULTS AND DISCUSSION

The descriptive analysis of the data provides insights into the trends and distribution of the variables over the 13-year study period. Table 1 summarizes the descriptive statistics for population size, unemployment, government expenditure, and poverty levels.

Tabel 1. Descriptive Statistics of Variables (2011-2023)

Variable	Mean	Standard Deviation	Minimum	Maximum
Population Size (X1)	252,547.6	39,120.8	187,779	316,295
Unemployment (X2)	6,646.7	1,485.4	3,930	8,928
Government Expenditure (X3)	2,620,720,000,000	1,325,149,324,803	1,325,149,324,803	5,401,140,000,000

The data show significant fluctuations in population size, unemployment rates, and government expenditure over the years. Population size steadily increased, while unemployment rates exhibited periodic rises and falls. Government expenditure consistently increased, reflecting efforts to address socio-economic issues, including poverty. Despite these trends, poverty levels remained relatively high, indicating potential inefficiencies in policy implementation. The regression analysis provides quantitative estimates of how each independent variable affects poverty levels in Mimika Regency. Table 2 shows the coefficients, standard errors, t-values, and p-values from the OLS regression model.

Tabel 2. Regression Result

Variable	Coefficient	Standard Error	t-Statistic	p-Value
Constant (β0)	-451.29	1,113.19	-0.405	0.6958
Population Size (X1)	0.0034	0.0300	0.114	0.9118
Unemployment (X2)	0.8509	0.4740	1.795	0.1103
Government Expenditure (X3)	-1.10e-09	2.11e-09	-0.520	0.6171

R^2 = 0.3163

Adjusted R^2 = 0.0600

F-Statistic = 1.234 (p = 0.3593)

The coefficient for population size (0.0034) indicates a positive relationship with poverty levels, but this effect is statistically insignificant (p = 0.9118). This suggests that, over the study period, increases in population size did not have a significant impact on poverty in

Mimika Regency. This finding aligns with the argument made by Mudrajad Kuncoro (1997), who noted that population growth without corresponding economic development can exacerbate poverty. However, the lack of significance may imply that other factors, such as economic policies or migration patterns, mitigate the impact of population growth.

Theoretically, rapid population growth can lead to resource constraints, higher unemployment, and increased demand for public services, which may worsen poverty if economic opportunities are not simultaneously created. However, in Mimika Regency, the growing population might not have exerted significant pressure on available resources, or the region may have experienced mitigating factors, such as temporary economic boosts from mining activities. Further research is needed to explore these dynamics. Previous studies, such as those by Aiyedogbon & Ohwofasa (2012), have shown that unchecked population growth can exacerbate poverty, especially in resource-constrained settings. However, the lack of a significant effect in this study indicates that Mimika Regency may have unique characteristics that buffer against the negative consequences of population growth. For instance, the presence of mining operations might create economic opportunities that partially offset the challenges posed by a growing population.

Unemployment has a positive coefficient (0.8509), suggesting that higher unemployment rates are associated with higher poverty levels. Nevertheless, this relationship is not statistically significant ($p = 0.1103$). Although this finding does not establish a causal link, it supports existing literature that highlights unemployment as a key determinant of poverty (Prayoga, 2019). Joblessness reduces household income and limits access to essential goods and services, perpetuating poverty.

The insignificance of this relationship may be due to several factors. First, some unemployed individuals may receive financial support from family members, thereby reducing the immediate impact of unemployment on poverty. Second, the informal sector might absorb a portion of the workforce, masking the true extent of economic hardship. This nuance suggests that unemployment may still be a critical issue, but requires more refined measurement methods or additional qualitative analysis to fully understand its impact. The positive but insignificant relationship between unemployment and poverty aligns with the findings of (Barika, 2013), who suggested that not all unemployed individuals experience immediate poverty due to varying social and economic safety nets. In regions where informal employment or family support systems are prevalent, the direct impact of unemployment on poverty may be less

pronounced. However, this does not diminish the importance of addressing unemployment through targeted job creation and skill development programs.

Government expenditure has a negative coefficient (-1.10e-09), indicating that higher government spending is associated with lower poverty levels. However, the effect is statistically insignificant ($p = 0.6171$). This result suggests that, although government spending increased substantially over the study period, it may not have been efficiently targeted to reduce poverty effectively. This finding is consistent with Sumarsono (2003), who emphasized that misallocated or poorly managed public funds can diminish the impact of government intervention. These results are also in line with studies from Sudradjat et al. (2024) that poverty reduction is one of the effects of government spending in the consumption sector.

The ineffectiveness of government spending in reducing poverty could stem from several issues, such as corruption, bureaucratic inefficiencies, or spending priorities that do not align with the needs of the poor. For example, large portions of government expenditure may have been allocated to infrastructure projects that do not directly benefit low-income households. Alternatively, social welfare programs may not have been sufficiently comprehensive or well-distributed. Addressing these inefficiencies could enhance the poverty-reducing impact of public spending. The insignificant impact of government expenditure on poverty is a critical finding that underscores potential inefficiencies in public spending. Studies by Irhamni (2018) have similarly highlighted the limited effectiveness of government expenditure in certain contexts, often attributing this to poor targeting and lack of accountability. For Mimika Regency, ensuring that funds are directed toward programs that directly improve living standards, such as education, healthcare, and social protection, could enhance the effectiveness of government interventions.

CONCLUSIONS

The results revealed that none of the independent variables—size population, unemployment, and government expenditure—had a statistically significant effect on poverty levels during the study period. However, the direction of the relationships aligns with theoretical expectations. Population size exhibited a positive but insignificant relationship with poverty, suggesting that while a growing population could put pressure on resources, other mitigating factors may be at play in Mimika Regency. Unemployment also showed a positive yet insignificant impact, indicating that economic safety nets or the informal labor market might buffer the immediate effects of joblessness on poverty. Government expenditure had a negative

coefficient, implying a potential to reduce poverty, but the lack of significance points to possible inefficiencies in the allocation or management of public funds. These findings highlight critical points for policy discussions. First, while population control measures and job creation initiatives remain essential, a more integrated approach is needed to address the root causes of poverty. Second, enhancing the efficiency and targeting of government spending is crucial. The study suggests that resources should be allocated strategically to sectors that directly benefit low-income populations, such as healthcare, education, and social services, to ensure meaningful poverty reduction.

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