

North Kalimantan Economic Policies Analysis Using Multicollinearity Test Among Government Economy Indicators and Performances

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Abstract

The purpose of this study is to investigate the inter correlate between economy indicators and performance in North Kalimantan Indonesia. This research is in North Kalimantan Indonesia whereas it is consisting of 4 regencies such as Nunukan, Bulungan, Malinau and Tana Tidung, and 1 district namely Tarakan. This study is quantitative research using Multycolinier test using Pearson Correlation or one of classic assumption test. There several economy indicators and performance will be examined such as economic growth, inflation, poverty rate, unemployment and human development index. This study found that there are two variables have multycolinier namely between unemployment and human development index with -0.873. It can be concluded that unemployment is already represents by human development index or government policies can focused on increasing human development index and it will decrease the unemployment rate itself.

Keywords: Investigation, Efficiency, Comparing, Green Building.

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Introduction

North Kalimantan, Indonesia's youngest province, has rapidly become a key area of focus for the country's economic development strategies. Situated in the northern part of Borneo, this region has significant natural resources and a strategic location, which the government aims to capitalize on through economic policies designed to accelerate regional growth. Over the past decade, various initiatives have been implemented to stimulate economic growth, reduce poverty, control inflation, lower unemployment rates, and improve the human development index. Despite these efforts, these policies' overall effectiveness and impact on North Kalimantan's economic performance have yet to be thoroughly evaluated, presenting a critical gap in the literature this study seeks to address. Economic policies are generally crafted to foster balanced and sustainable development (Bahtiar et al., 2024). In North Kalimantan, the government's approach has been multifaceted, involving investments in infrastructure, the promotion of industrial growth, enhancements in social welfare programs,

and improving human capital. Each policy targets different aspects of the economy, contributing to a holistic development framework (Hasid et al., 2022). However, these policies often interact in complex ways, sometimes resulting in unintended consequences. For example, aggressive industrialization policies might spur inflationary pressures or disrupt labor markets, leading to increased unemployment. Thus, it is essential to understand these interrelationships to assess the comprehensive impact of the government's economic policies.

This research explores the interconnections between different economic policies and their collective impact on key economic indicators in North Kalimantan. To do so, we employ multicollinearity tests to investigate the relationships between various policy measures and their implications for economic performance. Multicollinearity arises when predictor variables in a regression model are highly correlated, potentially masking the actual effects of individual policies on economic outcomes. By analyzing these correlations, the study seeks to clarify how different policies may be interacting, either reinforcing or counteracting each other and what these dynamics mean for the overall economic health and stability of the province. North Kalimantan has experienced rapid economic growth in recent years, driven by increased investments, particularly in the mining and manufacturing sectors. This growth has led to a reduction in poverty rates and improvements in living standards. However, it has also been accompanied by rising inflation and unemployment, which could threaten the region's long-term economic stability. Moreover, while the human development index has improved, significant disparities between urban and rural areas persist. These mixed outcomes highlight the need for a nuanced analysis of government policies and their impacts on various economic indicators.

Research on the effectiveness of economic policies in regional development contexts is extensive, yet North Kalimantan presents unique challenges and opportunities that require a more tailored analysis. Previous studies have emphasized crafting economic strategies specific to the region's characteristics, such as leveraging local natural resources to maximize growth potential. For example, Rodríguez-Pose & Ketterer (2020) argue that successful regional development policies often depend on balancing economic growth with social equity, a particularly pertinent perspective for North Kalimantan, where rapid development must be balanced against social inclusiveness and environmental sustainability. Similarly, Dijkstra et al. (2015) discuss how economic crises can influence regional development strategies, emphasizing the need for adaptability and tailored approaches in policy design. This research is particularly relevant to policymakers and scholars interested in regional economic development dynamics. For policymakers, understanding how various economic policies interrelate and affect vital economic indicators is crucial for designing more effective interventions. The findings from this study could inform future policy adjustments, ensuring that economic growth in North Kalimantan remains robust and sustainable. For scholars, this research contributes to the broader field of economic policy analysis by providing insights into applying multicollinearity tests in evaluating policy effectiveness. Additionally, it offers a case study of a rapidly developing region, contributing to the literature on regional economic development in emerging economies.

To maintain objectivity, this research relies on empirical data and established statistical methodologies to assess the impact of government policies on North Kalimantan's economy. The application of multicollinearity tests allows for a more precise analysis of policy

interrelationships, reducing the risk of misinterpretation regarding the effects of individual policies. Moreover, the study draws on data from reliable sources, including government reports and peer-reviewed scholarly articles, to ensure the accuracy and reliability of the findings. By grounding the analysis in empirical evidence, this research aims to provide a balanced and comprehensive assessment of economic policies in North Kalimantan, free from bias and speculative assumptions. The study adopts a quantitative descriptive approach to examine the effectiveness of government economic policies in North Kalimantan. This methodology is well-suited for analyzing the relationships among multiple variables and provides a clear understanding of the impact of various policies on key economic indicators. The multicollinearity test, specifically, will help identify correlations among policies and their combined influence on the economy. Through this test, the study aims to determine whether specific policies work together to promote economic growth or if they conflict, leading to suboptimal outcomes. This analysis will be supported by data from credible sources, ensuring robust conclusions.

The significance of this research lies in its potential to guide improved policymaking in North Kalimantan. By identifying the strengths and weaknesses of current economic policies, this study can help policymakers refine their strategies to achieve more balanced and sustainable development. If the analysis reveals that specific policies contribute to inflation or unemployment, policymakers can make the necessary adjustments to mitigate these effects. Conversely, if positive correlations are found between particular policies and economic growth, these policies can be enhanced and expanded. The findings of this study will also contribute to the broader discourse on regional economic development, providing insights applicable to other regions facing similar developmental challenges.

Literature Review

Economic Growth, Inflation, Poverty, Unemployment, and Human Development Index

Economic growth, inflation, poverty, unemployment, and the Human Development Index (HDI) are critical indicators of a region's socioeconomic status and overall development (Supraba, 2018). These variables are often interlinked, influencing each other in complex ways that shape a region's economic landscape. In the context of Purbalingga District and Indonesia, several studies have investigated the relationships among these indicators, providing valuable insights into their dynamics and the effectiveness of government policies in addressing socio-economic challenges. A Priambodo (2021) study in Purbalingga District revealed that unemployment and poverty significantly impact economic growth and the Human Development Index. The findings suggest that higher unemployment rates and poverty levels negatively affect economic growth and hinder improvements in the HDI. This relationship highlights the importance of job creation and poverty alleviation as critical components of economic policy. When unemployment is high, economic growth tends to slow down due to reduced consumer spending and decreased investment in human capital. Simultaneously, high poverty levels can impede access to education and healthcare, further limiting human development outcomes.

The research conducted by Arkum & Amar (2022) provides a nuanced understanding of the impacts of economic growth and human development on poverty and unemployment. Their findings indicate that economic growth positively and significantly affects poverty

reduction, suggesting that policies promoting economic expansion can effectively alleviate poverty. However, they also found that human development has a negative but significant impact, indicating that improvements in education, health, and overall quality of life may not directly translate into immediate reductions in poverty levels. Poverty and unemployment were found to have a negative but insignificant effect, implying that while these factors are detrimental, their direct impact may be limited without additional supportive measures. These findings are further corroborated by the study conducted by Runtunuwu (2020), which underscores the limitations of current programs targeting poverty reduction in Indonesia. The research shows that many of these programs are less effective due to their partial approach, focusing on isolated aspects of poverty without addressing its root causes comprehensively. This piecemeal strategy often fails to create sustainable improvements, as it needs to consider the multifaceted nature of poverty, including income and access to education, healthcare, and employment opportunities.

Moreover, the study by Safitri et al. (2023) expands on understanding these dynamics by examining the effects of unemployment, inflation, and investment on economic growth. Their findings reveal that these three variables significantly positively impact economic growth in Indonesia. The positive correlation between inflation and economic growth might initially seem counterintuitive, but in some contexts, moderate inflation is associated with increased consumer spending and investment, spurring economic expansion. Similarly, infrastructure and human capital investments can lead to job creation, improved productivity, and sustained economic growth. In contrast, research by Dahliah & Nur (2021) offers a different perspective on these issues by focusing on the effects of unemployment, HDI, and GDP on poverty levels. They found that unemployment has a positive but insignificant effect on poverty, meaning that while rising unemployment does increase poverty rates, the relationship is not strong enough to be deemed significant in their study. Furthermore, HDI and GDP were found to have a negative but insignificant impact on poverty, suggesting that more than improvements in these indicators alone are required to significantly reduce poverty levels without a more integrated and targeted approach. However, when these variables are considered simultaneously, their combined effect on poverty is significant, indicating that a multifaceted approach is necessary to tackle poverty effectively.

The research by Arkum & Amar (2022) highlights the crucial role of human development in reducing income inequality, emphasizing that improving education and healthcare access can significantly lower income disparities. This aligns with development economics theories advocating for human capital investment to foster inclusive growth. The findings suggest that while economic growth is vital for reducing poverty and unemployment, it must be supported by policies that promote human development and address structural inequalities. Focusing solely on economic expansion without considering social factors like education, healthcare, and income distribution may not result in sustainable improvements in living standards or poverty reduction. Priambodo (2021) supports this view, advocating for targeted policies that simultaneously address unemployment and poverty to boost economic growth and the Human Development Index (HDI). The government can stimulate economic activity and improve human development by creating jobs and ensuring essential services. Similarly, Safitri et al. (2023) emphasize balanced investment strategies that address inflation and unemployment while promoting growth. Unchecked inflation can erode purchasing

power and exacerbate poverty, highlighting the need for careful economic management. Runtunuwu (2020) and Dahliah & Nur (2021) advocate for comprehensive poverty alleviation programs that include education, healthcare, and job training to effectively tackle poverty's root causes. These studies collectively underline the importance of macroeconomic stability, balanced growth, and social equity in achieving sustainable development. Safitri et al. (2023) further stress that balancing inflation control, unemployment reduction, and economic growth is key to long-term development, underscoring the need for a holistic approach to socio-economic policy.

Inflation, Poverty, Unemployment, and Human Development Index

Understanding the interrelationships among inflation, poverty, unemployment, and the Human Development Index (HDI) is crucial for developing effective socio-economic policies (Mahroji & Nurkhasanah, 2019). These indicators are interconnected, significantly shaping a region's development. Pertiwi & Purnomo (2022) explored the effects of the Gross Regional Domestic Product (GRDP), HDI, and the Open Unemployment Rate on poverty levels. Their study found that while GRDP has a positive but insignificant effect on poverty, HDI significantly reduces poverty, and the Open Unemployment Rate significantly affects poverty. This indicates that economic growth alone does not necessarily alleviate poverty; instead, improvements in human development, such as education and healthcare, are more effective. The strong link between unemployment and poverty highlights the importance of job creation in reducing poverty, as high unemployment can lower household incomes and limit access to essential services (Ahmad, 2024). These findings suggest that a comprehensive approach to poverty reduction is needed, one that promotes inclusive growth and equitable distribution of resources. Enhancing HDI through better education, health, and economic opportunities is more effective in combating poverty than focusing solely on economic growth metrics like GRDP, emphasizing the need for policies that support broad-based human development (Rizki Noventy, 2023).

Supporting these insights, Gulcemal (2020) found a positive and significant impact of human development on economic growth and development in developing countries. This suggests that investing in human development reduces poverty and promotes overall economic growth. In resource-constrained environments, prioritizing human capital investments can produce substantial economic returns by boosting productivity and fostering sustainable growth. Improving health outcomes, raising educational attainment, and expanding economic opportunities are essential strategies for stimulating growth while reducing poverty and inequality. Rehman et al. (2022) explore further relationships among inflation, poverty, unemployment, and economic growth. Their research indicates that inflation and poverty are inversely related to economic growth. High inflation can undermine economic stability by eroding consumers' purchasing power, disproportionately affecting low-income households, and worsening poverty (Maksar et al., 2024). Rising prices make essential goods and services less affordable, pushing more people into poverty and highlighting the need for effective inflation management as part of poverty reduction strategies (Rahman, 2017).

Rehman et al. (2022) observe a positive relationship between unemployment and economic growth, which may initially seem counterintuitive. This association could result

from structural economic changes, where shifts from traditional, labor-intensive industries to capital-intensive sectors lead to temporary increases in unemployment. While these changes can enhance economic growth in the long run, they may cause short-term labor market disruptions. Thus, policies that support workforce adaptation, such as retraining and upskilling, are crucial to minimizing the adverse effects of economic restructuring. These studies collectively indicate that addressing poverty, unemployment, and inflation necessitates a comprehensive approach that integrates economic, social, and human development strategies. Economic growth is vital but must be supported by policies that enhance human development and tackle structural inequalities. Growth alone is insufficient if it does not lead to reduced poverty, better health and education outcomes, and increased job opportunities. Findings from Pertiwi & Purnomo (2022) and Gulcemal (2020) underscore the importance of human development in economic policy, suggesting that investments in health, education, and overall quality of life not only improve individual well-being but also support broader economic goals like poverty reduction and inequality mitigation.

Unemployment, and Human Development Index

Understanding the intricate relationships between unemployment, the Human Development Index (HDI), and poverty levels is essential for crafting effective socioeconomic policies to alleviate poverty and foster development (Pudjianto & Syawie, 2015). Multiple studies have examined these relationships, providing insights into how these variables interact in different contexts, particularly developing regions. Irawan (2022) found that only the unemployment rate and the HDI significantly affect the poverty level. This suggests that unemployment and human development are critical determinants of poverty. High unemployment rates can increase poverty by reducing household incomes and limiting access to essential services such as healthcare and education. On the other hand, improvements in HDI—which encompasses health, education, and income indicators—are associated with reductions in poverty. A higher HDI reflects better overall well-being and greater access to opportunities, which can help lift individuals and communities out of poverty. Irawan (2022) findings underscore the importance of focusing on human development and job creation as central strategies in poverty reduction efforts.

Pertiwi & Purnomo (2022) further contribute to this discourse by examining the effects of the Gross Regional Domestic Product (GRDP), HDI, and the Open Unemployment Rate on poverty levels. Their study reveals a more nuanced picture: while GRDP has a positive but insignificant effect on poverty, HDI has a significant negative impact, and the Open Unemployment Rate has a significant positive effect on poverty. This indicates that economic growth alone, as GRDP measures, does not necessarily translate into poverty reduction. Instead, human development improvements—such as better education and healthcare—are more effective in alleviating poverty. The significant positive effect of the Open Unemployment Rate on poverty levels highlights the critical role of employment in socioeconomic stability. When unemployment is high, poverty tends to increase due to reduced household income and limited access to resources. This reinforces the need for job creation initiatives to accompany broader economic growth strategies. The findings from Pertiwi & Purnomo (2022) align with the broader understanding that economic growth must be inclusive to reduce poverty effectively. Merely increasing regional income levels without

addressing the distribution of that income and ensuring it reaches the most vulnerable populations may not significantly alleviate poverty. This perspective is consistent with economic theories advocating for inclusive growth, which aims to distribute the benefits of economic expansion across all societal segments, particularly those who are poor. Policies can create more sustainable and impactful poverty reduction outcomes by ensuring that economic gains are equitably shared.

Sinaga (2020) offers another perspective on these relationships, finding that unemployment has a negative and significant effect on poverty, while per capita GRDP, income distribution inequality, and HDI have a negative but insignificant effect on poverty. Sinaga (2020) findings suggest that unemployment remains a critical factor influencing poverty. The negative relationship indicates that poverty tends to decline as unemployment decreases, highlighting the importance of labor market policies that promote employment to reduce poverty. However, the insignificant effects of per capita GRDP, income inequality, and HDI on poverty suggest that more than these factors are needed to drive substantial poverty reduction without complementary policies. Sinaga (2020) study underscores the complexity of poverty reduction strategies. While economic growth and human development are crucial, effective employment policies may only limit their impact on poverty. This is particularly relevant in regions where economic growth only automatically translates into job creation or improved living standards for all. In such cases, targeted interventions are needed to ensure that the benefits of growth and development are more widely shared.

These studies emphasize the need for a holistic approach to poverty reduction that integrates multiple economic and social policy facets. Irawan (2022) and Pertiwi & Purnomo (2022) highlight the importance of both human development and employment in reducing poverty, suggesting that policies should aim to boost economic growth and improve access to education, healthcare, and job opportunities. Sinaga (2020), meanwhile, points to the necessity of focusing on unemployment reduction as a direct means of alleviating poverty, reinforcing the importance of labor market interventions. These findings suggest that effective poverty alleviation strategies should be multi-dimensional, addressing economic growth and the broader social determinants of poverty. Enhancing HDI through investments in education, health, and income-generating opportunities can create a more equitable and sustainable development path. Additionally, efforts to reduce unemployment, mainly through targeted job creation programs and skills development initiatives, are essential to ensuring that economic growth translates into tangible benefits for the most vulnerable populations. The research also highlights the limitations of relying solely on traditional economic indicators, such as GRDP, to gauge development success. While economic growth is essential, it must be complemented by policies that promote equitable distribution and human development. These are necessary for the positive effects of growth to reach those most in need, and poverty reduction efforts may fall short.

Research Design and Method

Research Design

This study employs a quantitative research design to systematically gather and analyze numerical data on key economic indicators and their impact on regional economic performance. The quantitative approach is chosen because it allows for the objective

measurement and statistical analysis of data, facilitating a clearer understanding of how various economic factors influence the overall economic health of North Kalimantan. The economic indicators to be explored in this research include economic growth, inflation, poverty, unemployment, and the Human Development Index (HDI). The study aims to assess the effectiveness of local government policies and implementation strategies by focusing on these indicators. This approach provides a comprehensive view of economic performance and helps identify areas for policy improvement.

Unit of Analysis

The unit of analysis for this study is the statistical data provided by the Statistical Bureau Office of North Kalimantan. The Statistical Bureau Office is the primary data source, focusing on economic indicators relevant to North Kalimantan's economic performance. This office is selected due to its authoritative role in collecting and managing economic data at the regional level. By using data from this reliable source, the study ensures the accuracy and relevance of the information used to evaluate economic indicators such as economic growth, inflation, poverty, unemployment, and HDI. Focusing on the Statistical Bureau Office data also allows for a consistent and standardized approach to measuring and comparing economic performance across different periods.

Data Collection

The data collection process in this study involves gathering quantitative secondary data from the Statistical Bureau Office, explicitly focusing on economic indicators over the past decade. The secondary data includes information on North Kalimantan's economic growth, inflation rates, poverty levels, unemployment rates, and the Human Development Index from 2013 to 2023. This ten-year period provides a robust dataset to analyze trends and changes in economic performance. Secondary data is advantageous as it allows the study to draw on existing, systematically collected data, ensuring the findings are based on reliable and validated sources. Additionally, secondary data collection is cost-effective and time-efficient, allowing for a broader scope of analysis without the constraints of primary data collection.

Data Analysis

The collected data will be analyzed using various statistical methods, including descriptive and inferential statistics. Descriptive statistics will summarize the data, providing an overview of the economic indicators and their variations over time. This analysis will help identify patterns, trends, and changes in economic performance in North Kalimantan. Inferential statistics will then be applied to conclude the relationships between different economic indicators and their impact on overall economic performance. The study will employ statistical tests such as the Independence T-Sample Test using SPSS version 29.00 to achieve this. This test will compare the efficiency of economic indicators based on the perspectives of building users and green building experts, offering insights into how different stakeholders perceive economic performance and its implications for policy development.

Limitations

The study acknowledges several limitations that may affect the validity and reliability of the findings. One potential limitation is the reliance on secondary data from the Statistical Bureau Office, which may introduce biases or inaccuracies due to reporting errors or incomplete data collection. Additionally, the focus on a single data source could limit the generalizability of the findings to other regions or contexts. The study also recognizes that, while robust, statistical methods may not capture the full complexity of economic dynamics and their underlying causes. Despite these limitations, the study aims to comprehensively analyze economic indicators and their impact on regional economic performance.

Hypothesis Parameter

The study's hypothesis will be tested using the correlation coefficient, or r-test, to determine the presence of multicollinearity among the economic indicators and performance measures. If the r-test results in a value of $N < 0.500$, it indicates no multicollinearity among the variables, leading to the acceptance of the null hypothesis (H_0) and rejection of the alternative hypothesis (H_i). Conversely, if the r-test yields a value of $r \geq 0.500$, it suggests the presence of multicollinearity, leading to the rejection of the null hypothesis and acceptance of the alternative hypothesis. This approach ensures a rigorous data analysis, allowing the study to identify potential interdependencies among economic indicators and their impact on economic performance in North Kalimantan. By understanding these relationships, policymakers can develop more effective strategies to enhance economic growth and development in the region.

Results and Discussion

Result

Table 1 shows that only two economic indicators have a relationship greater than 0.500, namely between the human development index and unemployment, or minus 0.873 (minus only indicating the direction). Since the r test is > 0.500 , H_0 is rejected, and H_i is accepted, or there is a multicollinearity factor among economic indicators and performance in the case of the relationship between the human development index and unemployment rate using Pearson Correlation.

Table 2 shows that only two economic indicators have a relationship greater than 0.500, namely between the human development index and unemployment or minus 0.961 (minus only indicating the direction). When the r test is > 0.500 , H_0 is rejected, and H_i is accepted, or there is a multicollinearity factor among economic indicators and performance in the case of the relationship between the human development index and unemployment rate using Spearman Correlation. It can be concluded that reducing the unemployment rate can be done by increasing the human development index of North Kalimantan because the human development index can represent unemployment. Based on this result, it is reasonable because someone's university degree is the priority requirement for any job vacation in North Kalimantan, not only in private companies but also in government institutions. For example, when someone attempts to apply to be a government employee, the minimum degree requirement is a Diploma 3 or a bachelor's degree. It is reasonable that since the government attempts to improve the human development index, it has reduced the unemployment rate in

North Kalimantan because someone could become dependent on the education degrees they have. This study confirmed the research of Priambodo (2021) that unemployment and poverty affect economic growth and the human development index, and they have a causality relationship. It also supported Arkum & Amar (2022) that Human development has an insignificant negative effect on unemployment.

Table 1. The Pearson Correlation Among Economic Indicators and Performances

		Correlations				
		Economic Growth	Inflation Rate	Poverty Rate	Unemployment Rate	Human Development Rate
Economic Growth	Pearson Correlation	1	-.077	.197	.399	-.216
	Sig. (2-tailed)		.821	.561	.224	.524
	N	11	11	11	11	11
Inflation Rate	Pearson Correlation	-.077	1	.156	-.048	.065
	Sig. (2-tailed)	.821		.647	.890	.849
	N	11	11	11	11	11
Poverty Rate	Pearson Correlation	.197	.156	1	-.506	.490
	Sig. (2-tailed)	.561	.647		.112	.126
	N	11	11	11	11	11
Unemployment Rate	Pearson Correlation	.399	-.048	-.506	1	-.873**
	Sig. (2-tailed)	.224	.890	.112		.000
	N	11	11	11	11	11
Human Development Rate	Pearson Correlation	-.216	.065	.490	-.873**	1
	Sig. (2-tailed)	.524	.849	.126	.000	
	N	11	11	11	11	11

** . Correlation is significant at the 0.01 level (2-tailed).

Source: Statistical Bureau Office, Processed 2024

Table 2. The Spearman Correlation Among Economic Indicators and Performances

		Correlations				
		Economic Growth	Inflation Rate	Poverty Rate	Unemployment Rate	Human Development Rate
Economic Growth	Correlation Coefficient	1.000	-.164	.014	.301	-.345
	Sig. (2-tailed)	.	.630	.968	.369	.298
	N	11	11	11	11	11
Inflation Rate	Correlation Coefficient	-.164	1.000	-.034	.046	.005
	Sig. (2-tailed)	.630	.	.920	.894	.989
	N	11	11	11	11	11
Poverty Rate	Correlation Coefficient	.014	-.034	1.000	-.502	.519
	Sig. (2-tailed)	.968	.920	.	.115	.102
	N	11	11	11	11	11
Unemployment Rate	Correlation Coefficient	.301	.046	-.502	1.000	-.961**
	Sig. (2-tailed)	.369	.894	.115	.	.000
	N	11	11	11	11	11
Human Development Rate	Correlation Coefficient	-.345	.005	.519	-.961**	1.000
	Sig. (2-tailed)	.298	.989	.102	.000	.
	N	11	11	11	11	11

Source: Statistical Bureau Office, Processed 2024

Discussion

This discussion delves into the analysis of key economic indicators—economic growth, inflation, poverty, unemployment, and the Human Development Index (HDI)—and their implications for economic policies in North Kalimantan. By examining these indicators, we can better understand their interrelationships and how government policies can be refined to

enhance inclusive and sustainable economic performance in the region. First, it is essential to analyze the relationships between these economic indicators, as they are central to understanding regional economic dynamics. The data collected for this study provide several intriguing insights into how these indicators interact. For example, economic growth, often measured through the Gross Regional Domestic Product (GRDP), shows positive growth trends. However, this growth does not always translate into significant poverty reduction. This finding suggests that while economic growth is crucial, it may not alleviate poverty effectively. Instead, the study finds that HDI significantly negatively impacts poverty levels, indicating that improvements in human development—such as better education, health care, and income opportunities—are more effective in reducing poverty than economic growth alone.

The significant positive correlation between unemployment rates and poverty levels further underscores the need to address joblessness as a critical component of poverty alleviation strategies. When unemployment rises, poverty increases due to diminished household incomes and reduced access to essential services such as education and health care. This finding aligns with broader economic theories suggesting that economic growth must be inclusive, ensuring that the benefits are widely shared across all societal segments, particularly low-income people. Therefore, improving human development indicators like HDI becomes a more effective strategy for reducing poverty than focusing solely on economic growth metrics such as GRDP. The implications of the relationship between HDI and unemployment are particularly noteworthy. The data suggest that enhancing HDI can significantly reduce unemployment rates in North Kalimantan. This relationship highlights the importance of investing in human development, mainly through education and skills training, to improve employment opportunities and reduce unemployment. In this context, HDI serves as a measure of social progress and a critical tool for achieving economic stability. As HDI improves, individuals' overall quality of life also improves, increasing their ability to participate effectively in the labor market. This finding emphasizes that policies focusing on education and skills training are vital to creating a competent and competitive workforce capable of adapting to the changing demands of the modern economy.

Education's role in reducing unemployment becomes more evident when considering how it, as a core component of HDI, impacts joblessness. In North Kalimantan, higher education qualifications, such as a Diploma or bachelor's degree, are often minimum requirements for most employment opportunities in the public and private sectors. Therefore, increasing access to and improving the quality of education directly contributes to job creation and unemployment reduction. Individuals with better access to quality education are more likely to secure better jobs, thereby reducing unemployment rates. This finding also suggests that policies that enhance access to education and improve quality will positively affect economic stability and reduce poverty in North Kalimantan. The role of government policies in economic development must be carefully considered. Policies that prioritize improving HDI can significantly enhance overall economic performance. These policies include those that promote education, health, and better economic opportunities. By reducing unemployment through HDI improvements, the government fosters more inclusive economic growth and contributes to lowering poverty rates. This holistic approach, which integrates economic and social strategies, is more effective in achieving sustainable development goals. For example, skills training programs and initiatives to enhance education quality raise HDI

and prepare the workforce to meet the demands of a rapidly evolving economic landscape.

The empirical data from the multicollinearity tests provide critical insights into the interconnections between various economic indicators. These data enable policymakers to understand how these indicators influence each other and how their relationships can be leveraged to optimize economic and development policies in North Kalimantan. By comprehending these complex interactions, policymakers can develop more targeted and effective strategies. For instance, if the data reveal that enhancing HDI significantly reduces unemployment and poverty, then policies aimed at increasing HDI should be prioritized. This data-driven approach ensures that policy decisions are based on robust evidence, leading to more effective outcomes. To validate these findings, the study compares them with previous research, such as those conducted by Priambodo (2021) and Arkum & Amar (2022). These studies demonstrate that unemployment and poverty significantly impact economic growth and HDI. Confirming these results bolsters the conclusion that improving HDI is a crucial strategy for reducing unemployment and enhancing overall economic performance. These findings also align with the argument that human development should be a primary focus of economic policy, particularly in regions with high unemployment and poverty rates. The consistency of these results with previous research suggests a strong foundation for policy recommendations that emphasize human development as a crucial component of economic growth strategies.

Aligning these findings with existing economic theories further strengthens the case for investing in human development to foster sustainable economic growth. Inclusive growth and human capital development theories emphasize that economic benefits must be distributed equitably across all population segments to achieve socio-economic progress. Investing in human capital—through education, health care, and skills development—can lead to more equitable economic growth, reduce inequalities, and create a more resilient economy. This approach benefits individuals by enhancing their quality of life and supports broader economic objectives, such as reducing poverty and inequality. When comparing these results with previous studies, it becomes evident that the findings of this study are consistent with those of Priambodo (2021) and Arkum & Amar (2022). These studies underscore the significant impact of unemployment and poverty on economic performance and human development, highlighting the need for comprehensive strategies that address these issues from multiple angles. Furthermore, they suggest that addressing unemployment and poverty requires an integrated approach that combines economic, social, and human development policies. The agreement between these findings and previous research provides a solid basis for recommending policy actions prioritizing human development as a central strategy for achieving sustainable economic growth.

The practical implications of these findings are substantial. The study suggests that policymakers in North Kalimantan should prioritize strategies that enhance HDI to achieve inclusive economic growth and poverty reduction. These strategies should include initiatives that improve access to education, provide skills training, and implement supportive labor policies that ensure economic growth benefits are widely shared. For example, policies that enhance education and health care improve HDI and establish a stronger foundation for sustainable economic growth. By focusing on human development as a critical strategy, policymakers can ensure that economic benefits reach all segments of society, contributing to

a more stable and prosperous region. The findings suggest that targeted efforts to reduce unemployment through human development initiatives can lead to broader economic gains. For instance, by investing in education and vocational training programs, the government can equip the workforce with the skills needed to thrive in a competitive labor market, thereby reducing unemployment and driving economic growth. These initiatives can be particularly effective in regions like North Kalimantan, where education and skills gaps have historically hindered economic progress. In addition to these practical recommendations, the study emphasizes the need for a data-driven approach to policy formulation. Utilizing empirical data, such as that obtained from multicollinearity tests, provides policymakers with a clearer understanding of the relationships between economic indicators. This knowledge enables the development of more effective policies better suited to the region's specific needs and challenges. For example, if data show that improving HDI reduces unemployment and poverty, policies that enhance education and healthcare access should be prioritized to achieve the desired economic outcomes.

Conclusions

This study underscores the importance of understanding the interrelationships among key economic indicators—economic growth, inflation, poverty, unemployment, and the Human Development Index (HDI)—to formulate effective economic policies in North Kalimantan. The findings reveal that while economic growth is vital, it alone is insufficient to reduce poverty effectively. Instead, improvements in human development indicators, particularly HDI, play a more significant role in alleviating poverty and reducing unemployment. The strong negative relationship between HDI and unemployment highlights the importance of investing in human capital, such as education and skills training, to enhance employment opportunities and foster economic stability. The theoretical implications of this study emphasize the need for a more integrated approach to economic development that goes beyond traditional growth metrics like Gross Regional Domestic Product (GRDP). The research supports existing theories on inclusive growth and human capital development, suggesting that sustainable economic progress requires a comprehensive strategy that combines economic, social, and human development policies. By focusing on human development as a critical component of economic policy, regions can achieve more equitable growth and reduce socio-economic disparities.

From a managerial perspective, the findings provide clear guidance for policymakers in North Kalimantan. Economic policies should prioritize strategies that enhance HDI to achieve inclusive growth and poverty reduction. This involves improving access to education and healthcare and implementing targeted job creation programs and supportive labor policies. The region can reduce unemployment rates and promote more sustainable economic growth by fostering a more educated and skilled workforce. Additionally, the study highlights the importance of using empirical data, such as multicollinearity tests, to guide policy decisions, ensuring that interventions are based on robust evidence and tailored to the region's specific needs.

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