

GOVERNMENT SPENDING PRIORITIES AND THEIR POVERTY IMPACT: A PATH ANALYSIS IN INDONESIA

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Abstract

This study examines the impact of government expenditure on poverty, focusing on spending in the economic, education, health, and social protection sectors. Using path analysis, it investigates both the direct and indirect effects of expenditure on poverty through economic growth. The results show that economic growth significantly reduces poverty, supporting the trickle-down effect. However, sectoral expenditures produce mixed outcomes. Economic expenditure promotes growth but increases poverty, indicating weak pro-poor targeting. Education expenditure significantly reduces poverty but constrains growth due to excessive salary allocations. Health expenditure negatively affects growth and has no significant impact on poverty. Social protection expenditure stimulates growth but fails to alleviate poverty because of targeting inefficiencies. Government expenditure does not automatically reduce poverty, as its effectiveness depends on expenditure composition, targeting accuracy, and institutional quality. The findings highlight the importance of well-targeted fiscal policies that simultaneously promote inclusive economic growth and sustainable poverty reduction.

Keywords: *economic growth; government expenditure; path analysis; poverty*

INTRODUCTION

Poverty remains a complex global challenge. It is a central priority on the international development agenda, including the Sustainable Development Goals (SDGs) which aim to eradicate extreme poverty by 2030. Recent data reveal that approximately 8.5% of the global population, or 692 million people, still live in extreme poverty with incomes below \$2.15 per day (World Bank, 2024b). More alarmingly, World Bank reports indicate that the global target of reducing poverty to 3% by 2030 is projected to be delayed by three decades. Poverty rates have increased for the first time in decades due to the impact of the COVID-19 pandemic. Building upon this global perspective, cross-country poverty phenomena demonstrate diverse patterns. Developed countries such as Scandinavian nations, Germany, and France have successfully suppressed poverty rates through comprehensive welfare systems that encompass education, healthcare, and social benefits (Sultanova, 2023).

Meanwhile, Panama has achieved success through priority policies focusing on providing basic needs, expanding quality employment opportunities, human capital development, and strengthening household resilience (World Bank, 2024a). In contrast, Nigeria continues to face multidimensional poverty challenges requiring strategic government expenditure in social sectors, infrastructure development, and human capital improvement. China's remarkable achievement in lifting over 800

million people out of poverty within three decades demonstrates significant transformation through targeted fiscal spending, rural development, and infrastructure investment (Wang et al., 2023). Various other strategies, such as conditional cash transfer programs in Brazil, microfinance development in India, and export-led industrialization in South Korea, further affirm the crucial role of government in poverty alleviation (Sultanova, 2023), although their effectiveness depends heavily on respective socio-economic contexts.

Turning to the Indonesian context, the poverty challenges faced share significant similarities. Poverty persists as a complex socio-economic problem, caused by several factors such as low income, education level, health, resources, and capital. Poverty arises from the inability of individuals to meet basic needs, leading to neglect of other essential aspects like education and healthcare. Low educational attainment and poor health among impoverished populations further diminish human capital quality, resulting in reduced productivity and income. This leads to a cycle of poverty that continues for generations, where poor families are unable to access clean water, education and healthcare. Poor families also struggle to meet nutritional needs, exacerbating deficits in intellectual and physical development. Breaking this cycle becomes increasingly difficult without systemic interventions to improve access to education, healthcare, and resources. In Indonesia, poverty alleviation efforts have been consistently implemented. These initiatives are grounded in two key strategic documents: (1) the President's directives from the March 2020 Limited Meeting on Poverty Eradication Acceleration, and (2) the June 2021 Limited Meeting on Chronic Poverty Alleviation. Implementation follows three core principles: program consolidation, policy integration, and precise targeting through collaborative mechanisms. At the operational level, a specialized approach for extreme poverty employs mutually reinforcing multidimensional intervention packages. The implementation follows two core strategies: (1) alleviating financial burdens through social protection programs and subsidies for poor/vulnerable peoples, and (2) productivity-enhancing empowerment programs to boost economic capacity (TNP2K, 2024). However, these efforts appear insufficient in effectively reducing poverty levels in Indonesia. According to Statistics Indonesia (BPS) data, the poverty rate reached 9.36 percent, equivalent to 25.90 million people, as of March 2023. This figure remains above the targeted poverty rate of 6.5-7.5 percent set in the National Medium-Term Development Plan (RPJMN) 2020-2024 (Sekretariat Wakil Presiden Republik Indonesia, 2024).

The theoretical foundation of this study integrates two complementary perspectives: neoclassical economics and Keynesian fiscal theory. Neoclassical theory posits that government spending on productive sectors such as infrastructure, education, and health enhances economic efficiency and human capital, thereby promoting long-term growth and reducing poverty through improved productivity and employment opportunities (Barro, 1990; Mankiw et al., 1992). In contrast, Keynesian theory emphasizes the role of government expenditure as a countercyclical tool that stimulates aggregate demand, creates jobs, and directly alleviates poverty through income transfers and public service provision (Keynes, 1936; Maku et al., 2020). However, these theoretical perspectives offer competing predictions regarding the transmission mechanisms through which government spending affects poverty. While neoclassical theory suggests that poverty reduction occurs primarily through growth-mediated channels, Keynesian theory recognizes both direct effects (through income support and service provision) and indirect effects (through demand stimulation and employment creation). This study bridges these perspectives by positing economic growth as a mediating mechanism that transmits the effects of government expenditure to poverty reduction.

Empirical studies on the relationship between government expenditure and poverty have produced mixed findings, reflecting variations in methodological approaches, country contexts, and expenditure classifications. A substantial body of literature supports the poverty-reducing effect of government spending. Mehmood and Sadiq (2010), using time-series data from Pakistan, found both short- and long-term negative relationships between government expenditure and poverty, suggesting that productive spending on infrastructure, education, and health generates sustainable poverty-reduction outcomes. Similarly, cross-country studies by Anderson et al. (2018), Arthur (2019), and

Dung and Le (2023) confirm that government spending significantly reduces poverty, although the magnitude of the effect varies across countries and depends on the composition of expenditure. However, these findings are inconsistent. Anderson et al. (2018), in their meta-regression analysis, cautioned that the poverty-reducing effect of government spending is less pronounced in low- and middle-income countries due to institutional weaknesses, poor targeting, and limited fiscal capacity. This observation aligns with studies in Nigeria (Ibrahim & Umar, 2021) and Indonesia (Miar & Yunani, 2020), which found that the impact of government spending on poverty is not always statistically significant. Disaggregating government expenditure by function provides further insights into these dynamics. Education and health spending have consistently been shown to reduce poverty by enhancing human capital and improving productivity (Celikay & Gumus, 2017; Nkamnebe, 2023; Taruno, 2019; Yahaya, 2019). For instance, Taruno (2019) found that health and education spending significantly reduced rural poverty in Indonesia, while urban poverty reduction was more strongly associated with health expenditure. Similarly, Elshahawany and Elazhary (2023) demonstrated that education and health spending significantly reduced poverty at the regional level in Egypt. In contrast, the effectiveness of social protection spending remains contested. While several studies confirm that social protection programs contribute to poverty reduction (Adeniyi et al., 2022; Edeh et al., 2023; Runtunuwu et al., 2023), others find insignificant effects due to poor targeting and implementation challenges (Arfanita et al., 2023; Taruno, 2019; Zaki et al., 2023). Celikay and Gumus (2017) cautioned that social spending may create a "social spending trap" where beneficiaries become dependent on transfers rather than seeking productive employment, thereby limiting long-term poverty reduction.

A critical limitation of existing studies is their predominant focus on the direct effects of government expenditure on poverty, with limited attention to the mediating role of economic growth. The trickle-down effect theory (Lewis, 1954) and Keynesian fiscal theory both suggest that government spending can influence poverty not only directly but also indirectly through its impact on economic growth. Government spending on infrastructure, education, and health can enhance productivity, stimulate investment, and create employment opportunities, thereby fostering economic growth. This growth, in turn, generates income gains for the poor and reduces poverty. Empirical evidence on this mediating pathway remains scarce. Fan and Zhang (2008) demonstrated that government spending in rural Uganda contributed to poverty reduction both directly and indirectly through agricultural growth. Similarly, Wang et al. (2023) found that fiscal spending in Chinese counties reduced poverty through both direct welfare effects and indirect growth-mediated channels. However, these studies are geographically limited and do not systematically test the mediation hypothesis.

Based on the theoretical framework and empirical review presented above, the following hypotheses are formulated to guide the empirical analysis:

Economic growth has direct effect on poverty

1. Government spending on economic has direct effect on poverty
2. Government spending on education has direct effect on poverty
3. Government spending on health has direct effect on poverty
4. Government spending on social protection has direct effect on poverty
5. Government spending on the economy has an indirect effect on poverty through economic growth
6. Government spending on education has an indirect effect on poverty through economic growth
7. Government spending on health has an indirect effect on poverty through economic growth
8. Government spending on social protection has an indirect effect on poverty through economic growth

This study offers a novel approach by positioning economic growth as a mediating variable in the relationship between government spending and poverty in Indonesia. With this approach, the research not only assesses the extent to which government spending directly impacts poverty reduction but also how it stimulates economic growth, which in turn benefits the poor. The research findings are expected to enrich the literature on the effectiveness of fiscal policy in developing countries and provide practical recommendations for the Indonesian government in designing more targeted and sustainable poverty-alleviation strategies.

METHODS

This study employs a quantitative descriptive design using secondary data sourced from BPS-Statistics Indonesia and LKPP, from 2016 to 2022. The variables used in this study include poverty rates, economic growth, and government expenditure across four categories: economic affairs, health, education, and social protection, covering all 34 Indonesian provinces. Furthermore, the effectiveness of government expenditure on poverty reduction may be contingent upon economic growth performance. Consequently, government expenditure indirectly influences poverty levels through its impact on economic growth. Economic growth is measured using the proxy of Gross Regional Domestic Product (GRDP) growth for each province in Indonesia.

In contrast, government expenditure variables including economic affairs, education, health, and social protection expenditures are measured based on government budget realization indicators. Meanwhile, the poverty level is measured using the percentage of the poor population in each region. To analyze both the direct and indirect effects of education, health, and social protection expenditures on poverty reduction, the study variables were estimated using path analysis. The relationship between independent variables and dependent variables in this study is modeled in a structural equation as follows:

$$\begin{aligned} Growth_{it} &= b_1Eco_{it} + b_2Edu_{it} + b_3Health_{it} + b_4Soc_{it} + \varepsilon_{1it} \dots\dots\dots(1) \\ Pov_{it} &= b_5Growth_{it} + b_6Eco_{it} + b_7Edu_{it} + b_8Health_{it} + b_9Soc_{it} + \varepsilon_{2it} \dots\dots\dots(2) \end{aligned}$$

The coefficients in the equation system (b_1 through b_9) represent path coefficients or standardized coefficients. These standardized regression coefficients are calculated by multiplying ordinary regression coefficients by the ratio of the independent variable's standard deviation to the dependent variable's standard deviation (Gudono, 2016). The path coefficients indicate the direct effects of each variable on the relevant dependent variables, while indirect effects can be computed by multiplying the coefficients along each connecting path (Garson, 2013).

Before conducting path analysis, several diagnostic tests were performed to ensure the validity and reliability of the estimates. All tests were conducted at a 5% significance level. The Kolmogorov-Smirnov normality test was used to examine the distribution of the residuals. The results indicated that the residuals were normally distributed (p -value = 0.652), as the p -value exceeds 0.05. This means that the null hypothesis of normality was not rejected, indicating no evidence of a substantial departure from normality.

Multicollinearity was assessed using the Variance Inflation Factor (VIF). As shown in Table 1, all VIF values were below 10, with a maximum value of 4.02. These results indicate that multicollinearity was unlikely to substantially affect the estimated regression coefficients.

Table 1. Variance Inflation Factor

Variabel	VIF	1/VIF
<i>Growth</i>	1.18	0.848
<i>Eco</i>	2.83	0.353
<i>Edu</i>	3.62	0.277
<i>Health</i>	4.02	0.249
<i>Soc</i>	3.99	0.251

The Breusch-Pagan test was applied to detect heteroscedasticity in the residuals. The test results showed a p-value of 0.1277. Therefore, the null hypothesis of homoscedasticity was not rejected, suggesting that heteroscedasticity was not a serious concern. The Wooldridge test was subsequently conducted to assess serial correlation in the panel data. The significant result ($p < 0.05$) indicated that the residuals were correlated across time periods. To account for this within-panel correlation, the analysis employed a population-averaged generalized estimating equations (GEE) model with an appropriate working correlation structure and robust standard errors (Liang & Zeger, 1986).

While path analysis is an appropriate method for examining both direct and indirect effects, several methodological limitations warrant consideration. First, the potential for reverse causality exists, as poverty may also influence government spending patterns for instance, regions with higher poverty rates may receive greater fiscal transfers. Although the use of lagged variables is one possible approach to mitigate this issue, our study employs contemporaneous data, which may not fully address endogeneity concerns. Second, omitted variable bias may arise from unobserved factors that influence both government spending and poverty, such as institutional quality, governance effectiveness, and political economy dynamics. The model controls for the main expenditure categories and economic growth but does not include other potentially relevant variables such as corruption levels, bureaucratic efficiency, or regional characteristics that may confound the relationships examined. Third, endogeneity may stem from measurement errors in the expenditure variables or from simultaneous determination of economic growth and poverty. The diagnostic tests conducted in this study including tests for multicollinearity (VIF), heteroscedasticity (Breusch-Pagan), and normality (Kolmogorov-Smirnov) assess important model assumptions but do not directly address endogeneity. Despite these limitations, the study contributes robust empirical evidence on the mediating role of economic growth in the relationship between government spending and poverty. Future research could extend this analysis by employing instrumental variable approaches, panel fixed effects models, or qualitative comparative case studies to address the limitations identified above.

RESULTS

The effects of economic growth and government expenditures (economic affairs, education, health, and social protection functions) on poverty were estimated using path analysis, an extension of multiple linear regression. Consequently, the classical regression assumptions equally apply to this path analysis. After passing the classical assumption tests, the research model was examined through path analysis, with the test results presented in Table 2. Economic growth, economic affairs expenditure, and education expenditure were significantly associated with poverty at the 5% level, whereas health and social protection expenditures were not. In addition, all four expenditure categories economic affairs, education, health, and social protection were significantly associated with economic growth. The complete set of estimated path coefficients is presented in Figure 1.

Table 2. Estimation Results

	Standardized Coefficient (β)	P > z
Dependent variable: <i>Pov</i>		
<i>Growth</i>	-0.010	0.018
<i>Eco</i>	0.017	0.007
<i>Edu</i>	-0.023	0.020
<i>Health</i>	0.009	0.516
<i>Soc</i>	0.018	0.057
Dependent variable: <i>Growth</i>		
<i>Eco</i>	0.466	0.000
<i>Edu</i>	-0.496	0.000
<i>Health</i>	-0.324	0.029
<i>Soc</i>	0.339	0.010

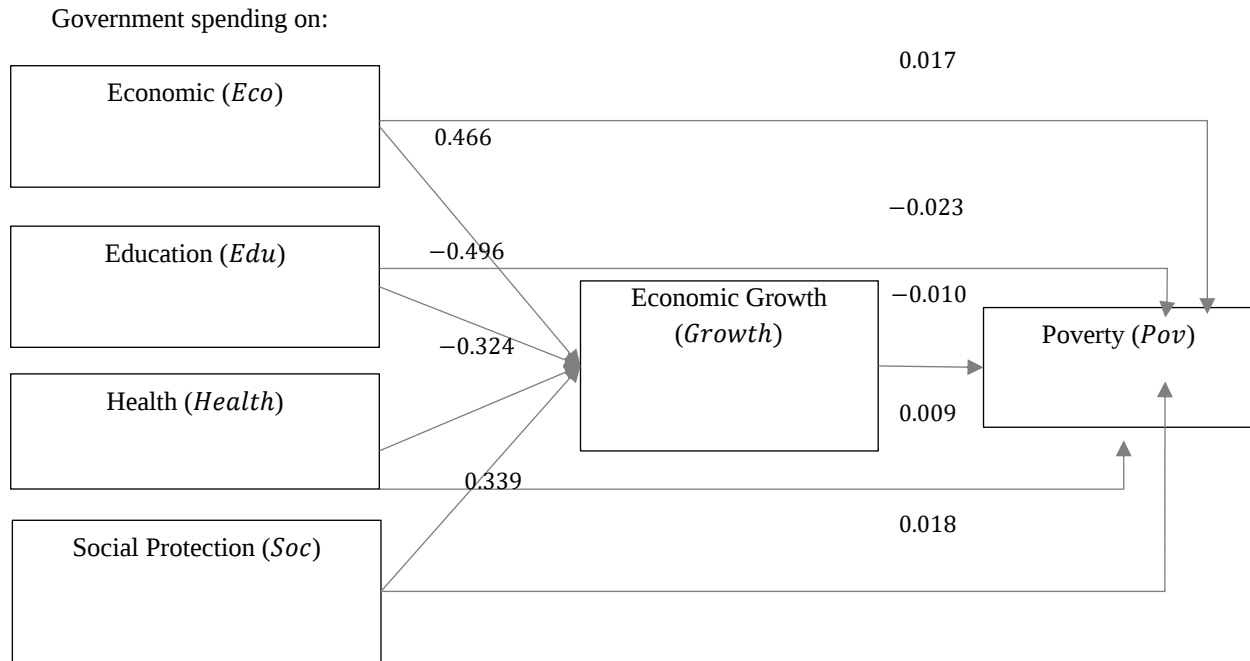


Figure 1. Path Coefficients Diagram

In addition to the path coefficients reported in Table 2, the model's explanatory power and effect size were evaluated to assess the statistical significance tests. The effect size of each predictor can be interpreted from the standardized coefficients (β). Economic expenditure ($\beta = 0.466$) and social protection expenditure ($\beta = 0.339$) had large positive effects on economic growth, while education expenditure ($\beta = -0.496$) and health expenditure ($\beta = -0.324$) showed large negative effects. These effect sizes indicate that while statistical significance is achieved, the substantive importance of these variables is also notable, particularly for education and economic expenditure.

For the poverty equation, all significant variables exhibited small effect sizes. Economic growth ($\beta = -0.010$) and education expenditure ($\beta = -0.023$) showed negative effects, whereas economic expenditure ($\beta = 0.017$) showed a positive effect. Meanwhile, health expenditure ($\beta = 0.009$) and social expenditure ($\beta = 0.018$) had no significant effect on poverty reduction. This suggested that, although education expenditure significantly reduced poverty, its practical significance was modest compared to its negative effect on economic growth.

The indirect effect of the government expenditure variables economic, education, health, and social protection was obtained by multiplying the direct path coefficient of each variable on economic growth by that of economic growth on poverty. The significance of these indirect effects was analyzed using the Sobel test. As shown in Table 3, only economic and education expenditure had statistically significant indirect effects on poverty.

Table 3. Test Statistic for Sobel Test

Variable	z sobel	p-value
<i>Eco</i>	-2.133	0.033
<i>Edu</i>	2.020	0.043
<i>Health</i>	1.605	0.109
<i>Soc</i>	-1.742	0.082

DISCUSSION

The results indicate that economic growth was significantly and negatively associated with the poverty rate during the study period, suggesting that higher economic growth reduces poverty. One possible explanation is that growth can increase labour demand, productivity, and household income, thereby improving poor households' ability to meet basic needs.

The trickle-down effect theory, developed by Arthur Lewis (1954), explains that economic gains initially concentrated among higher-income families will eventually trickle down, creating employment opportunities and various economic prospects. This, in turn, fosters conditions that promote a more equitable distribution of economic growth benefits (Budhijana, 2019). The benefits of economic growth are initially felt by the wealthy, while the poor begin to experience advantages when the wealthy start spending the gains from economic growth. Consequently, the trickle-down effect accelerates and enables disadvantaged groups to attain a better quality of life.

Previous empirical studies in various countries have similarly reported that economic growth is associated with lower poverty levels (Balasubramanian et al., 2023; Indrajaya & Iskanto, 2023; Kouadio & Gakpa, 2022; Meriani & Nopiah, 2024; Runtunuwu et al., 2023; Yurina & Mislá, 2023). China's experience, for example, which lifted more than 800 million people out of extreme poverty through rapid economic growth and targeted development policies, exemplifies how growth can serve as a powerful engine for poverty reduction. Likewise, Uganda's consistent GDP growth in the 1990s sharply reduced poverty levels, although disparities between urban and rural areas remained (Fan & Zhang, 2008). On the other hand, Nigeria demonstrates that when growth is not inclusive, poverty can persist or even worsen, highlighting that the quality and distribution of growth matter as much as its pace.

Our findings show that economic expenditure has a positive correlation on both poverty levels and economic growth. The positive effect of economic expenditure on economic growth indicates the government's ability to stimulate regional economic growth through its expenditure. According to the theories proposed by Keynes and Harrod-Domar, the government plays a crucial role in implementing various policies through budget allocations to achieve economic growth. Economic expenditure is part of fiscal policy aimed, among other things, at driving economic growth. Economic expenditures are strategically allocated to bolster key government-led development initiatives, such as (1) strengthening food and energy security, (2) expanding infrastructure networks, and (3) accelerating technological and digital transformation - all fundamental components of the national strategy for sustainable economic growth.

Although empirical evidence suggests that economic expenditure can increase productivity, its impact on poverty is counterintuitive. An increase in economic expenditure is associated with a higher percentage of the poor population. This positive relationship between economic function expenditure and poverty contradicts Keynesian theory and the research hypothesis. This finding indicates that government expenditure on economic functions is not effectively targeted at poverty alleviation.

The Sobel test also indicates that economic affairs expenditure has a significant indirect association with poverty through economic growth. Economic expenditure, which is primarily focused on fostering economic growth through infrastructure programs, often does not directly benefit the poor. Similar patterns have been observed in several developing countries, where infrastructure-focused spending tends to benefit middle- and upper-income groups disproportionately. For instance, in Sub-Saharan Africa, large-scale infrastructure projects have boosted GDP growth but often bypassed rural communities that remain in poverty (Fan & Zhang, 2008).

During the study period, education expenditure was significantly and negatively associated with economic growth, a finding that contrasts with conventional human-capital theory but is consistent with Fadly et al. (2021). Education is generally regarded as a key driver of economic growth, as it enhances knowledge, skills, productivity, and innovation. However, the negative effect of educational expenditure on economic growth may occur if budget allocation is not focused on improving the quality of education. Indonesia's Education System Law (No. 20/2003) mandates that at least 20% of national and regional budgets be allocated to education, including teacher salaries. As illustrated in Figure 3, a significant portion of educational expenditure across the 34 provinces in Indonesia is still allocated to personnel expenses, averaging 51.64%. High education expenditure reduces the government's fiscal space to invest in other sectors that may be more urgent or more productive in the short term. Consequently, inefficient or poorly managed educational expenditure can lead to economic stagnation.

A cross-country comparison provides additional insights. For instance, South Korea has successfully utilized education expenditure as a growth engine by prioritizing quality improvement and innovation-driven education rather than personnel costs. This strategy transformed South Korea from a low-income to a high-income country within a few decades (Jones, 2019; Trang, 2021). In contrast, Indonesia's education spending remains heavily skewed toward salaries, limiting its potential to yield long-term productivity gains. This comparison illustrates that the effectiveness of education expenditure in driving growth depends not only on the size of the budget but also on how it is allocated and managed.

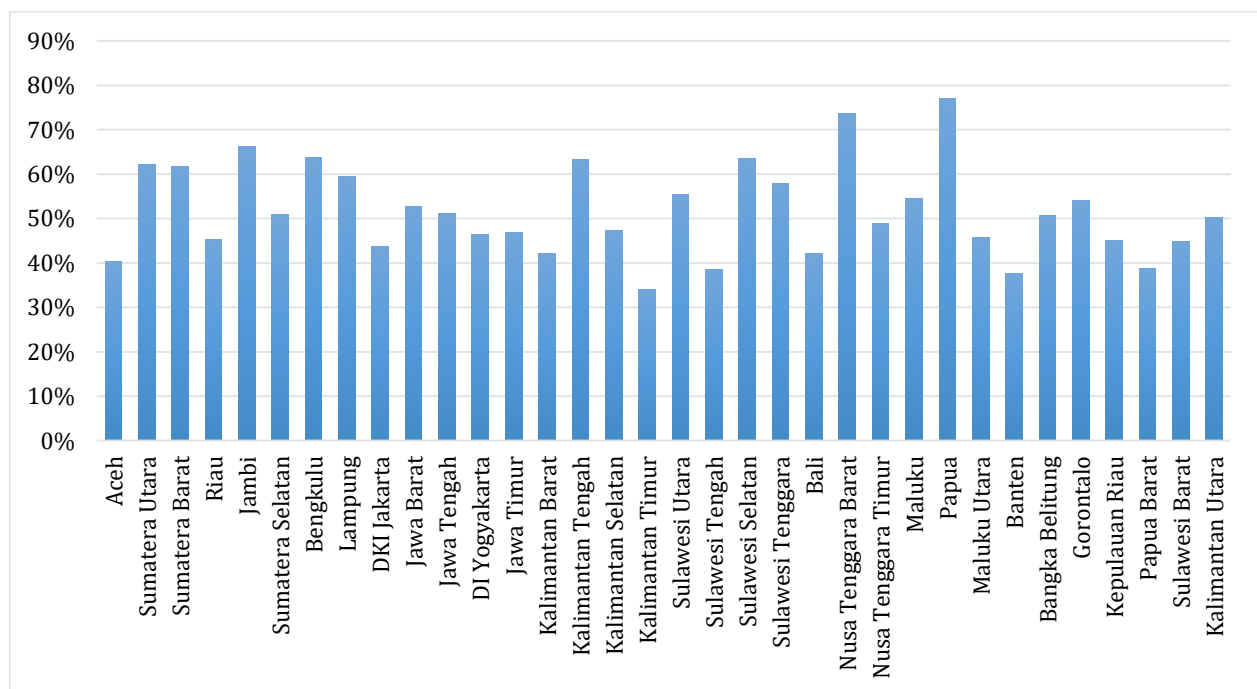


Figure 2. Share of Personnel Expenditure in Education Budget Realization
Source: Direktorat Jenderal Perimbangan Keuangan (2024)

The study reveals that education expenditure was significantly and negatively associated with poverty, consistent with previous studies from Celikay and Gumus (2016), Taruno (2019), Syamsuri and Bandiyono (2018), Elshahawany and Elazhary (2023), and Nkamnebe (2023). Financial constraints prevent most impoverished individuals from pursuing higher education, exacerbating intergenerational poverty.

Furthermore, the study also indicates that education expenditure indirectly affects poverty through its influence on economic growth. Government expenditure on education plays a crucial role in poverty reduction by fostering human resource development, improving access to education for the poor, enhancing knowledge and skills, and addressing the root causes of poverty. These results are consistent with Nkamnebe (2023), who argues that prioritizing education investment enables policymakers to create pathways out of poverty and foster more equitable and prosperous societies.

In addition to education, health expenditure represents another important pillar in alleviating poverty. Article 171 of Law Number 36 of 2009 mandates that the central government allocates 5% of the national budget (APBN), excluding salaries, for healthcare. Provincial and district/city governments allocate at least 10% of their regional budgets (APBD) for healthcare. Government expenditure on healthcare is intended to improve health status and productivity, boosting economic growth. However, despite these policy commitments, the present study found that health expenditure was negatively associated with economic growth and showed no statistically significant association with poverty. The negative impact of healthcare expenditure on economic growth may be because Indonesia's human capital quality is still far from ideal.

According to World Bank data, Indonesia's Human Capital Index (HCI) score in 2020 was 0.54, meaning that the productivity of each child born only reaches 54% of its ideal potential. This score is lower than the average score in the East Asia and Pacific region (59%) and lower than the average for upper-middle-income countries (56%) (World Bank, 2023). Within ASEAN, Indonesia ranks 6th out of 10 countries in human capital development (Datanesia, 2022). Globally, Indonesia's Human Capital Index (HCI) declined from 94th out of 172 countries in 2021 to 96th out of 174 in 2022 (Kantor Staf Presiden, 2024). The HCI is a measure of human capital quality introduced by the World Bank in 2014.

According to Yang (2019), in countries with low human capital, healthcare expenditure has been negatively correlated with economic growth. However, as human capital improves in developing countries, the negative impact of healthcare expenditure on economic growth decreases substantially, while the positive growth impact of healthcare investments becomes progressively stronger.

The study concludes that health sector expenditure has no significant effect on poverty reduction, reinforcing prior findings that government health expenditure does not always generate measurable poverty alleviation outcomes (Demak et al., 2020; Fadly et al., 2021; Syamsuri & Bandiyono, 2018). The insignificant relationship between health expenditure and poverty may be attributed to several structural and institutional factors. First, healthcare spending generally generates long-term rather than immediate economic returns, as improvements in health outcomes require time before translating into higher productivity and income. Second, unequal access to healthcare services, particularly in remote and underdeveloped regions, limits the effectiveness of public health expenditure in reaching poor households. In addition, Indonesia's relatively low Human Capital Index (HCI = 0.54) suggests that the quality of human capital remains insufficient to maximize the economic benefits of health investments. This limited effectiveness may also stem from systemic constraints in improving poor households' access to basic healthcare services, thereby requiring more targeted budgetary reforms for underserved communities. Empirical evidence further highlights implementation challenges, with regional health expenditures often proving ineffective due to geographical barriers and unequal access to health services (Amir et al., 2018; Maharda & Aulia, 2020; Syamsuri & Bandiyono, 2018). Consistent with Anderson et al. (2018), health expenditure in many developing countries often fails to target the poorest households.

The Sobel test likewise confirms the absence of a significant indirect effect of health expenditure on poverty through the mediation of economic growth. This finding is consistent with Fan et al. (2004) and Baldacci et al. (2004), who argue that health investments primarily generate long-term economic returns, thereby limiting their short-term impact on poverty reduction within conventional policy evaluation periods. In contrast, Scandinavian countries demonstrate that well-developed universal healthcare systems can contribute substantially to reducing poverty and income inequality (Sultanova, 2023).

Social protection expenditure was significantly and positively associated with economic growth. This type of expenditure is directed toward providing social services, social security, community empowerment, social counseling, and other social assistance and protection programs, all designed to shield vulnerable populations from socioeconomic risks. The short-term goal of social protection programs is to help reduce the financial burden on poor households. Social assistance, whether in the form of cash or goods, can increase people's disposable income. Statistically, this study's findings confirm that, as a fiscal policy instrument, social protection expenditures effectively drive regional economic growth.

Previous studies have reported that government expenditure on social protection can contribute to poverty reduction (Adeniyi et al., 2022; Edeh et al., 2023; Elshahawany & Elazhary, 2023; Runtunuwu et al., 2023; Syamsuri & Bandiyono, 2018). In the present study, however, social protection expenditure was not significantly associated with poverty, consistent with previous studies (Arfanita et al., 2023; Taruno, 2019; Zaki et al., 2023). The Sobel test also revealed that the indirect effect of social protection expenditure on poverty through economic growth was also insignificant. These findings suggest that social protection spending in Indonesia has not been sufficiently effective

in alleviating poverty. The insignificant effect of social protection expenditure might stem from weaknesses in program targeting and implementation.

Although social protection programs are intended to alleviate the financial burden on vulnerable households, their effectiveness is often limited by inaccurate beneficiary data, overlapping assistance programs, delayed distribution, and weak coordination among implementing agencies. In addition, many social assistance programs are largely consumptive in nature and do not substantially enhance beneficiaries' long-term productive capacity. Consequently, while social protection spending may help sustain household consumption and stimulate short-term economic activity, its direct contribution to poverty reduction remains limited.

Nevertheless, the lack of statistical significance does not imply that social protection programs are not important in poverty alleviation efforts. Anderson et al. (2018) argued that social assistance programs in many developing countries frequently suffered from poor targeting mechanisms. In Indonesia, social protection is implemented through various programs, including social assistance, social security, Village Direct Cash Assistance (BLT Desa), Ultra Micro Financing (UMi), the Pre-Employment Card program, and electricity and LPG subsidies (*Badan Kebijakan Fiskal*, 2024).

A cross-country comparison further illustrates the contrasting outcomes. In Brazil, the Bolsa Família conditional cash transfer program successfully reduced poverty and inequality by requiring beneficiary households to fulfill specific conditions, such as ensuring children's school attendance and regular health check-ups. The program's effectiveness is largely due to its accurate targeting and its integration with broader social development policies.

By contrast, Indonesia's social protection system continues to face several implementation challenges, including low targeting accuracy, limited ownership and access to civil registration documents among poor and vulnerable populations, overlapping beneficiary lists, weak inter-agency coordination, and inadequate outreach to elderly and disabled groups (Kemenangan, 2022). These comparisons highlight that effective program design, accurate targeting, and integration with human capital development policies are essential for social protection programs to achieve meaningful poverty alleviation outcomes.

CONCLUSIONS

This study concludes that economic growth has a significant impact on reducing poverty, supporting the trickle-down theory, which suggests that while economic growth initially benefits the wealthy, it eventually creates jobs and economic opportunities for the poor. However, the findings reveal that government expenditure has varying effects on economic growth and poverty, with economic function spending stimulating growth but tending to increase poverty due to ineffective pro-poor targeting, while education expenditure significantly reduces poverty despite its negative growth effect—likely attributable to disproportionate salary allocations (72% of budgets) rather than quality improvements—and healthcare and social protection expenditures show limited poverty-reduction effects, with healthcare spending remaining ineffective in reaching poor households and social protection failing to alleviate poverty despite contributing to growth. Theoretically, these findings extend Keynesian and neoclassical views by demonstrating that the poverty-reducing effect of government spending depends critically on the composition and targeting of expenditures, qualifying neoclassical assumptions about government intervention's efficacy while supporting the trickle-down effect with the caveat that the "trickle" is not automatic and requires complementary pro-poor policies, and contributing to the social spending trap literature by showing that social protection may fail to reduce poverty when targeting mechanisms are weak.

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