

THE IMPACT OF GOVERNMENT SPENDING IN EDUCATION AND HEALTH ON ECONOMIC GROWTH IN INDONESIA 2014-2023

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Abstract

This study aims to analyze the influence of government spending in education and health on economic growth in Indonesia in the period 2014–2023. This research is motivated by the Indonesian government's commitment to achieve the Sustainable Development Goals (SDGs) through Asta Cita towards Indonesia Emas 2045, one of which emphasizes the importance of human resource development through education and health. The method used is a descriptive quantitative approach with panel data regression analysis utilizing secondary data from 34 provinces in Indonesia. The results of the study indicate that partially, government spending in education has a negative but insignificant effect on economic growth, while government spending in health has no significant effect. Simultaneously, both variables also have no significant effect on Indonesia's economic growth. This study recommends that the government optimize budget allocation by increasing capital expenditure and goods/services expenditure that support the quality of education, as well as strengthening promotive and preventive programs in the health sector to improve the quality of human resources and sustainable economic growth.

Keywords: Government Expenditure in Education, Government Expenditure in Health, Economic Growth, Panel Data.

INTRODUCTION

The Sustainable Development Goals (SDGs) are goals to promote social, economic, and environmental sustainability. The government is committed to achieving the SDGs, and they are included in the national development plan. Of the 17 SDGs, the government's focus is on goal 3, a healthy and prosperous life, and goal 4, quality education. This second goal is explicitly outlined in the national priority program through Asta Cita, eight ideals that serve as the foundation of the government's strategic policies to achieve a golden Indonesia by 2045.

To realize these ideals, various parties have a responsibility to achieve them, including local governments. The government prioritizes spending on education and health to improve the quality of human resources and impact economic growth.

According to data from the Directorate General of Fiscal Balance (DJPK) of the Ministry of Finance, provincial government spending in Indonesia on education and health has increased. In 2014, government spending on education was 1.14 trillion rupiah, rising to 2.8 trillion rupiah by 2023. Meanwhile, government spending on health in 2014 was 665.95 billion rupiah, rising to 1.29 trillion rupiah by 2023.

Government spending on education and health is also a top priority in the regional budget (APBD). After public services, education is the highest, accounting for an average of 28.15% of the total provincial budget in Indonesia. Health is next, with an average allocation of 10.29%. This substantial budget allocation aligns with constitutional mandates and national regulations.

The increase in spending in the education and health sectors is not only a form of compliance with regulations, the government also recognizes that developing quality human resources is the foundation for driving sustainable economic growth.

According to Toddaro (2014:448, cited in Septiani, p.i. 2023), education and health are closely related to economic growth. Bloom et al. (2004) also argue that adequate education and good health encourage a more productive workforce, which in turn can stimulate national economic growth. Ogundari, K., & Awokuse, T. (2018)

Therefore, research was conducted to analyze the influence of government spending in the education and health sectors on economic growth in Indonesia in 2014-2023, as a government policy to achieve the Asta Cita and SDGs goals.

METHOD

This study uses a descriptive quantitative approach to analyze the impact of government spending on education and health on economic growth in Indonesia from 2014 to 2023. The data used is panel data, a combination of time series and cross-sectional data covering 34 provinces in Indonesia.

The type of data used is secondary data obtained from the Directorate General of Fiscal Balance (DJP) of the Ministry of Finance for government expenditure variables in the education and health sectors, and the Central Statistics Agency (BPS) for economic growth data (GRDP).

The operational definitions of the variables in this study include:

Independent variables: Government expenditure on education (X_1) and government expenditure on health (X_2); both measured in rupiah per year per province.

Dependent variable: Economic growth (Y), measured by the percentage growth of Gross Regional Domestic Product (GRDP) at constant prices.

The analysis method used was panel data regression with E-Views 12 software. Panel model selection was carried out using the Chow Test, Hausman Test, and Lagrange Multiplier Test to determine the best model (Common Effect, Fixed Effect, or Random Effect). Furthermore, classical assumption tests were conducted, including multicollinearity and heteroscedasticity tests, as well as hypothesis testing using the t-test (partial), F-test (simultaneous), and calculation of the coefficient of determination (R^2). (Napitupulu, 2021).

The panel regression model in this study is formulated as follows:

$$\ln Y_{it} = \alpha + \ln \beta_1 x_{1it} + \ln \beta_2 x_{2it} + \varepsilon_{it}$$

Keterangan :

Y = Economic growth

α = Constant

ln = Natural Logarithm

β_1 - β_2 = Regression Coefficient

x_1 = government spending in education

x_2 = government spending in the health sector

ε = Standard Error

it = Provinces in Indonesia in 2014 – 2023

RESULTS AND DISCUSSION

This study uses panel regression data covering the period 2014–2023 in 34 provinces in Indonesia. Based on the results of the Chow, Hausman, and Lagrange Multiplier tests, the best model selected was the Random Effects Model (REM).

By using a random effect model as a regression estimate for this study, the following are the results:

$$\text{LOG_Y} = 2.75597475616 - 0.0298851572743 \cdot \text{LOG_X1} + 0.000549026675109 \cdot \text{LOG_X2} + [\text{CX}=\text{R}]$$

The explanation is as follows:

1. The constant value of 2.75 means that if there were no variables for government education expenditure (X_1) and government health expenditure (X_2), the result would be that the economic growth variable (y) would increase by 275.60%.
2. The beta coefficient value of the government expenditure variable related to education (X_1) is -0.02. If the value of other variables is constant and the education expenditure variable (X_1)

- increases by 1%, then the economic growth variable (y) will decrease by 2.99%, and vice versa, if the value of other variables is constant and the education expenditure variable (X1) decreases by 1% then the economic growth variable (y) will increase by 2.99%.
3. The beta coefficient value of the government expenditure variable related to education (X1) is -0.02. If the value of other variables is constant and the education expenditure variable (X1) increases by 1%, then the economic growth variable (y) will decrease by 2.99%, and vice versa, if the value of other variables is constant and the education expenditure variable (X1) decreases by 1% then the economic growth variable (y) will increase by 2.99%.

The following are the results of the hypothesis test with the help of E-views 12:

Table 1. Respondent Characteristics

Information	Coefficient	t-test	Prob
C	2.755975	4.573664	0.0000
LOG_X1	-0.029885	-2.1103031	0.0354
LOG_X2	0.000549	0.034009	0.9729
R-squared	0.018675		
Adjusted R-squared	0.012089		
F-statistic	2.835495		
Prob (F-statistic)	0.060274		

Source: E-views 12 output results, processed data

A. T-test results (Partial)

1. With a calculated t value of -2.1103031 > t table, or 1.9677981, and a sig value of 0.0354 < 0.05, the results of the t-test of the government expenditure variable related to education (X1) show that the government expenditure variable in the education sector has an effect on economic growth.
2. With a calculated t value of 0.034009 < t table or 1.9677981 and a significance value of 0.9729 > 0.05, the results of the t test of the government expenditure variable related to health have no effect on economic growth.

B. F test results (Simultaneous)

Based on the results of the F test, it can be interpreted as follows: The calculated F value is 2.835495 > F table, which is 3.025547 and the sig. value is 0.060274 > 0.05, meaning that the variable (X1) expenditure in the education sector by the government and the health sector (X2) has no effect on economic growth in Indonesia.

C. Results of the Coefficient of Determination

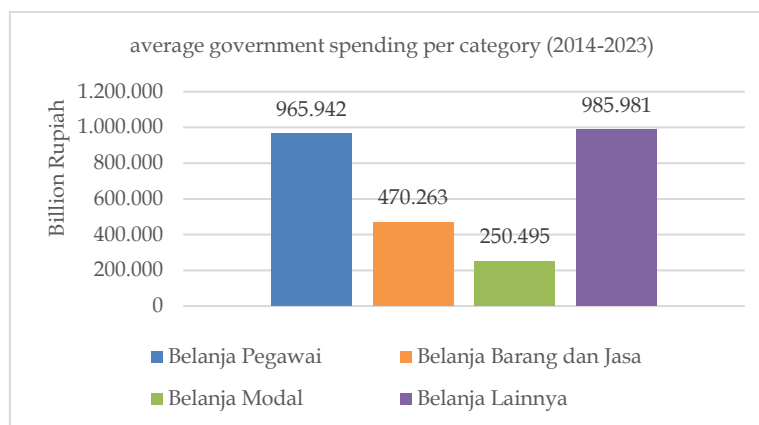
Based on the estimation results, the adjusted R Square value is 0.012089 or 1.2089%. The coefficient of determination value shows that the independent variables, which include government spending on health and education, are able to explain the economic growth variable in Indonesia by 1.2089%, while the remaining 98.7911% (100 - adjusted R Square

value) is explained by other variables not included in this research model. According to Ghozali (2016), the coefficient can be insignificant but still informative for knowledge.

DISCUSSION

The Influence of Government Spending in the Education Sector on Economic Growth.

Based on panel data regression results, government spending on education in 34 Indonesian provinces from 2014 to 2023 actually had a negative impact on economic growth. This aligns with research by Dinda Ayu Widiani (2022), which concluded that education spending had little impact on economic growth.



Average Education Spending Data per Category 2014-2023
Source: DJPK, Ministry of Finance

The graph shows that this finding stems from the fact that the majority of the education budget is still dominated by personnel and other expenditures, rather than goods, services, and capital expenditures that serve to improve the quality of education and infrastructure. As a result, education spending is largely used for administrative purposes, rather than long-term investments that can boost economic productivity. Therefore, the government needs to revise the direction of education spending policy by increasing the proportion of goods and capital expenditures, for example through scholarships and improvements in teacher quality, curriculum, and educational facilities, to truly support economic growth.

The Impact of Government Spending in the Health Sector on Economic Growth

Panel data regression results indicate that government spending in the health sector has no significant impact on economic growth. This is because the majority of the health budget is still focused on curative financing, such as hospital treatment, National Health Insurance (JKN) claims, and drug procurement, while the portion allocated to promotive and preventive programs such as immunization, counseling, nutritional improvement, and stunting prevention remains small. Data from the 2023 Indonesian Health Survey also confirms the persistently high stunting rate in many provinces, indicating suboptimal health spending in improving human resource quality. As a result, health spending has not yet had a significant impact on economic expansion. Therefore, the government needs to shift its health spending strategy to preventive and promotive programs (health improvement), such as stunting management, immunization, and health education, so that the results truly support community productivity and long-term economic growth.

The Impact of Government Spending in Education and Health on Economic Growth

Based on the results of the F-test, the combination of government spending in the health and education sectors was proven to have no significant effect on Indonesia's economic growth

because the probability value of the F statistic (0.060274) is greater than 0.05. This finding contradicts the theory of endogenous economic growth which positions education and health spending as human capital investments that should drive productivity and long-term growth. These results indicate that budget allocations in both sectors are still ineffective; education spending is still dominated by employee spending rather than strengthening the quality of learning and infrastructure, while health spending focuses more on curative financing rather than promotive and preventive efforts. As a result, budget increases do not automatically increase productivity or the standard of living of the community. Therefore, the government needs to transform spending policies to be more results-oriented, for example by providing equitable scholarships and strengthening preventive/promotive programs. This policy is in line with Asta Cita and the SDGs targets, and if implemented consistently will strengthen the role of government spending as a primary instrument for sustainable and equitable economic growth.

CONCLUSION

The research results show that government spending on education actually hinders economic growth slightly because it is still dominated by spending on less productive employees. Meanwhile, spending on the health sector has not yet had a tangible impact because spending allocations have not optimally supported promotional, preventive, and health service programs that boost productivity. Overall, government spending on education and health has not been effective in boosting economic growth because the majority remains routine rather than strategic spending that impacts public welfare and productivity.

To address this, the government is advised to increase the effectiveness of the education budget through equitable distribution of scholarships, improving the quality of learning, and implementing the Merdeka Belajar curriculum to produce superior human resources in line with Asta Cita and the SDGs. Furthermore, health sector spending should be more focused on preventative programs such as stunting management, immunization, and health education and checkups for school-age children to improve public health and positively impact long-term economic growth.

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