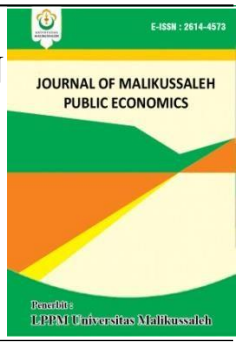
Journal Of Malikussaleh Public Economics, Volume 09 No. 1 April 2026
E-ISSN: 2614-4573
URL: http://ojs.unimal.ac.id/index.php/Jompe

THE EFFECTS OF GOVERNMENT EXPENDITURE ON THE HEALTH, EDUCATION, AND SOCIAL PROTECTION SECTORS ON INCOME INEQUALITY IN INDONESIA



Amanda Mahviza Harahap[1], Fanny Nailufar[2]*, Ichsan[3], Zata Hasyyati[4]
[1,2,3,4]*Faculty Economy and Business, Universitas Malikussaleh*
Corresponding author: *fannynailufar@unimal.ac.id

ARTICLEINFORMATION

Keywords:
Government expenditure, Health expenditure, Education expenditure, Social protection, Income inequality.

ABSTRACT

This study aims to examine the effect of government spending in the health, education, and social protection sectors on income inequality in Indonesia. The data used in this study are secondary data in the form of a time series from 2005 to 2024 obtained from the Central Bureau of Statistics. The data analysis method uses multiple linear regression. The results show that government spending in the health sector has a negative and significant effect on income inequality in Indonesia. Government spending in the education sector has a positive and significant effect on income inequality in Indonesia. Government spending in the social protection sector does not have a significant effect on income inequality in Indonesia. Simultaneously, government spending in the health, education, and social protection sectors has a positive and significant effect on income inequality in Indonesia.

1. INTRODUCTION

As a developing country, Indonesia still faces challenges in achieving economic stability, particularly in relation to income distribution inequality. Income distribution is considered equitable when all segments of society enjoy the fruits of national production, thereby improving their welfare. Income inequality is an important indicator of welfare, but it is often not the main focus in evaluating welfare over time.(Hindun *et al*., 2019).

Income inequality occurs in both developed and developing countries and is an important issue in economic development (Kalalo et al., 2016). This condition requires the active role of the government through policies that encourage equitable distribution of development outcomes and improvement of people's living standards. Income inequality has a negative impact not only on individuals and households, but also on social and economic stability, even in developed countries, thus potentially triggering financial instability. If it continues, inequality can exacerbate poverty, reduce the quality of human resources, and hamper economic development.

Income inequality is an important indicator in describing differences in prosperity, living standards, and income between individuals and households (Kasman et al., 2013). This condition reflects the uneven distribution of income across various regions in Indonesia. One of the measures commonly used to assess inequality is the Gini Index, which shows the gap between high-income groups and other groups.

The Gini index has a value between 0 and 1, where 0 indicates a completely equal distribution of income, while 1 reflects absolute inequality because income is controlled by one party. The higher the Gini index value, the greater the level of inequality, and conversely, the lower the value, the more equal the distribution of income (Sugiarti & Erdkhadifa, 2023).

Income inequality in Indonesia is influenced by structural factors, particularly limited access to education, health services, and employment opportunities for low-income groups, which widens the gap between the rich and the poor. Communities with greater resources are able to take advantage of economic opportunities, while vulnerable groups are left behind. Inequality is also fueled by uneven development between regions.

In addition, differences in spending patterns contribute to income inequality. After the pandemic, consumption among high-income groups increased more rapidly, while middle- and low-income groups tended to stagnate, thereby hampering regional economic acceleration and widening the welfare gap between regions. This condition has the potential to cause social injustice for groups that do not benefit significantly from economic growth (Aiyar & Ebake,

2020). The data on the development of the Gini ratio in Indonesia over the past 5 years is as follows:

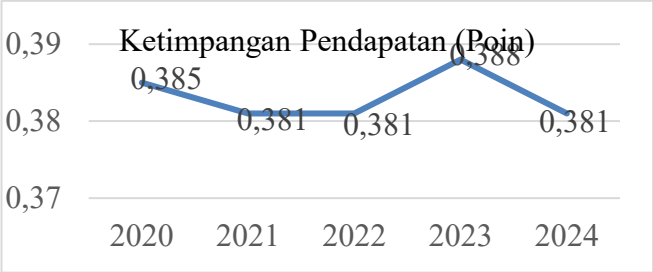


Figure 1. Gini Ratio of Income Inequality in Indonesia from 2020 to 2024
Source: Indonesian Central Statistics Agency (BPS), 2025

Figure 1.1 shows that the Gini coefficient in Indonesia's 34 provinces fluctuates annually. In the 2020–2021 period, the Gini coefficient decreased from 0.385 to 0.381, but in 2021–2022 it tended to stagnate due to uneven economic growth, inflationary pressures, and global uncertainty. In 2023, inequality rose again to 0.388 as the COVID-19 pandemic continued to impact economic recovery. Subsequently, in 2024, the Gini coefficient fell again to 0.381, indicating an improvement in income distribution, although it was not yet completely stable.

In general, the 2020–2024 period shows a downward trend in income inequality between provinces, as reflected in the decline in the Gini coefficient. The lower the Gini coefficient, the more equitable the distribution of income or wages among the population (Febriyani & Anis, 2021). Pradnyadewi & Purbadharmaja (2017) explain that in the early stages of development, economic growth concentrated in certain regions tends to increase inequality, but in later stages, the process of equalization begins to take place, causing inequality to gradually decline.

One important strategy for reducing inequality is improving the quality of human resources. Regions with higher levels of education generally have a more productive workforce and higher incomes, which can ultimately strengthen equitable welfare when accompanied by expanded access to employment opportunities (Putri & Aminda, 2024).

Income inequality is mainly driven by differences in ownership of resources and factors of production, particularly capital. Regional characteristics also shape economic development patterns, resulting in uneven growth across regions, with some areas developing more rapidly than others. This situation creates disparities between social groups and affects lifestyles and household expenditure patterns based on livelihoods (Hadju et al., 2021).

On the other hand, government spending plays a strategic role in narrowing the gap. Spending on health, education, and social protection can improve the quality of human resources as a prerequisite for economic equality. Thus, the quality of government spending not only drives economic growth but also contributes to reducing income inequality (Rizqy et al., 2021).

The government has a strategic role in reducing economic inequality while maintaining social stability through inclusive fiscal policies. Instruments such as progressive taxation and income redistribution programs can be effective mechanisms for reducing inequality, as high-income groups contribute more to state revenues. The funds collected from taxes can then be allocated to finance social programs, especially in the education and health sectors, which improve access for low-income groups. Such policies have the potential to strengthen social mobility and narrow the gap between social groups (Purbandono, 2024).

Government policy plays a crucial role in reducing economic inequality while maintaining social stability, which is vulnerable to disruption if the gap is not addressed seriously. Purnamasari (2017) emphasizes that policies oriented towards wealth redistribution, improving access to education, and strengthening social security need to be prioritized in order to create a more just and harmonious society. The implementation of appropriate fiscal and social policies can reduce economic inequality and strengthen solidarity among community groups.

The success of these efforts depends on the government's consistency in designing policies that are responsive to the needs of the community, accompanied by inclusive public participation. With an integrated and sustainable approach, inequality can be controlled so that social and economic stability can be maintained in the long term (Ningsih & Setyowati, 2022).

The quality of human resources is influenced by various factors, particularly education, health, environment, and lifestyle. Health is a fundamental requirement in human development because it determines an individual's ability to engage in productive activities, making it a major factor affecting labor productivity (Hajebi & Razmi, 2014). In this context, government spending plays an important role in financing strategic public sectors, particularly education and health (Zulham et al., 2017).

Hajebi & Razmi (2014) emphasize that improving health is not enough to rely solely on the primary health care system, but must be accompanied by efforts to reduce income inequality through equitable economic distribution. Such redistribution contributes to improving people's living standards through better nutrition, education, and health, which in turn promotes production efficiency and motivates participation in socioeconomic activities. Thus, health is a key component of human resource quality and a strategic asset in national development.

Income and health inequalities have a reciprocal relationship, whereby a reduction in inequality tends to increase the ability of individuals or households to meet their health needs, thereby strengthening the economic development process (Hajebi & Razmi, 2014). In this context, the provision of health services is the responsibility of the government through health spending directed at expanding access, improving service quality, and disease prevention (Ruslan et al., 2024).

Government spending in the education sector is a strategic investment in human resource development. Through budget allocations regulated in Government Regulation No. 48 of 2008 concerning Education Funding, the government is expected to be able to reduce inequalities in access to education. In addition to the role of the state, the ability of households to finance education also affects educational equity, where low-income families with large dependents tend to experience limitations that widen the learning opportunity gap (Hamzah et al., 2017). Therefore, free or subsidized education policies and curriculum adjustments to meet labor market needs are important steps to improve workforce skills and strengthen the economic foundation of society.

Improvements in education increase individuals' knowledge and skills, thereby enhancing labor productivity, which ultimately has an impact on welfare through increased income and consumption power. Conversely, limited access to education among poor groups is a cause of low productivity and limited economic mobility (Meylina & Nikensari, 2013). Higher educated communities have greater opportunities to obtain decent jobs and better incomes, thereby contributing to reducing income inequality. Therefore, improving access to and quality of education is a strategic instrument in strengthening economic mobility and promoting sustainable income distribution and welfare (Darmuji et al., 2024).

Social spending is directed toward financing social protection programs to improve community welfare. Based on Minister of Finance Regulation No. 81 of 2012, social assistance spending is government expenditure in the form of money, goods, and/or services aimed at improving economic capacity and welfare, as well as protecting the community from social risks (Ruslan et al., 2024).

Strong social security programs are an important instrument in mitigating the impact of economic inequality. Providing access to basic services such as health care, housing, and unemployment insurance for poor groups can reduce the burden of living while preventing further poverty. With such protection, individuals and households remain resilient in the face of economic shocks and have the opportunity to improve their quality of life (Purbandono, 2024).

The following data shows the development of government spending in the health, education, and social protection sectors in Indonesia from 2020 to 2024, as quoted from BPS:

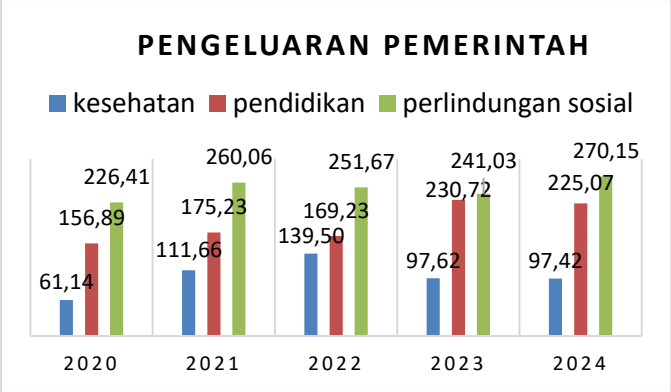


Figure 2. Government Expenditures on Education, Health, and Social Protection in Indonesia 2020-2024 (Trillion Rupiah).

Source: Indonesian Central Statistics Agency (BPS), 2025

Figure 1.2 shows that government spending on health, education, and social protection fluctuated during the observation period. Health spending increased sharply from IDR 61 trillion in 2020 to IDR 139 trillion in 2022 in response to the COVID-19 pandemic, but in 2023–2024 it tended to stagnate as post-pandemic normalization and policy priority changes took effect. Meanwhile, education spending shows an upward trend from IDR 156 trillion in 2020 to IDR 225 trillion in 2024, reflecting the government's commitment to expanding access and improving the quality of education as an investment in human resources.

In the social protection sector, government spending fluctuated during the observation period. Expenditures increased from IDR 226 trillion in 2020 to IDR 260 trillion in 2021 due to the expansion of social assistance during the pandemic, then decreased to IDR 241 trillion in 2023 in line with budget priority adjustments, and increased again to IDR 270 trillion in 2024. The amount of spending was determined based on development priorities and community needs through central and regional government planning and budgeting mechanisms (Ruslan et al., 2024).

Various studies show that government spending on health, education, and social protection plays a role in reducing income inequality. Prannisa et al. (2023) found that government spending contributed significantly to reducing inequality in West Java, while Rindiani et al. (2025) showed that spending in these three sectors was effective in reducing inequality in both the short and long term.

Similar findings were presented by Yasni & Yulianto (2020) in their study “The Role of Capital Expenditure and Local Government Social Assistance Expenditure on Income Inequality in Indonesia,” which concluded that capital expenditure and social assistance simultaneously had a significant effect on reducing

interprovincial inequality in the 2012–2016 period. These research results emphasize the importance of sectoral fiscal policy as a key instrument in promoting income equality.

This study examines the impact of government spending on health, education, and social protection on income inequality in Indonesia. The study aims to analyze the relationship between government budget allocation and inequality dynamics, as well as to understand its impact on various community groups. The findings of this study are expected to serve as a basis for formulating more effective policy strategies to overcome income distribution inequality and achieve equitable and sustainable development (Taufik et al., 2024).

2. LITERATURE REVIEW

Income Inequality

Income distribution inequality is a condition where there are differences in economic prosperity, reflected in income gaps between individuals, resulting in the formation of rich and poor groups (Arafah & Khoirudin, 2022). This inequality is influenced by differences in natural resources and demographic characteristics between regions, which give rise to a dichotomy between developed and developing regions. In addition, variations in the income received by the community also cause income distribution to be uneven.

Income inequality is generally measured using the Gini ratio, which describes the level of inequality in income distribution within a region. This indicator shows the extent to which income is concentrated in certain groups compared to other groups. Therefore, income inequality is an important measure in assessing the success of a region in achieving inclusive and equitable economic prosperity (Arafah & Khoirudin, 2022).

Government Expenditures

Government spending plays a role in creating effective and efficient resource allocation, stimulating economic growth, and maintaining macroeconomic stability (Wahyudi, 2023). Increased government spending is expected to improve the quality of human resources, expand employment opportunities, and increase community income.

In fiscal policy, government spending is an instrument for controlling the economy through the preparation of annual budgets reflected in the state budget at the national level and regional budgets at the local level. Based on Law Number 33 of 2004 Article 66 paragraph 1, regional financial management must be carried out in an orderly, law-abiding, efficient, economical, effective, transparent, and responsible manner, as well as taking into account the principles of fairness and benefit to the community (Novitasari & Arif, 2023).

Government Expenditures in the Health Sector

Government spending on health is an important indicator of public welfare because health determines productivity and the ability of individuals to improve their economic conditions. Healthy human resources have higher innovation capabilities and play a strategic role in development. Health is also a fundamental right that must be guaranteed by the state (Widodo et al., 2012).

Improving health services is a key investment in enhancing human resource quality. Health levels are closely related to poverty and welfare, so poor health can exacerbate social inequality. Therefore, the government needs to ensure fair, equitable, affordable, and quality access to health services as part of its efforts to improve public welfare (Widodo et al., 2012).

Government Expenditures in the Education Sector

The human capital theory asserts that education is the main instrument in increasing community productivity; the higher the level of education, the higher the productivity. The state's commitment to educational development is reflected in Law No. 20 of 2003, which requires a minimum allocation of 20% of the state and regional budgets for education. The high quality of education in developed countries demonstrates the importance of adequate educational infrastructure and services as a form of long-term investment.

Government investment in the education sector, such as infrastructure development and equal distribution of services, plays an important role in improving the quality of human resources (Pangke, 2018). The quality of education reflects the progress of a nation because it is the key to sustainable development and improved quality of life. Higher knowledge and skills enable people to take advantage of technological advances, thereby boosting productivity and economic prosperity (Suncaka, 2023).

Government Expenditures on Social Protection

Social protection is a crucial instrument in social policy to reduce poverty and narrow welfare gaps. Social assistance programs are expected to improve the quality of life of the community while creating more inclusive justice. Social protection also serves to strengthen the economic resilience of poor households by meeting their basic needs (Siagian et al., 2022).

The International Labour Organization (ILO) defines social protection as efforts to ensure income security, access to social services, protection, and empowerment, with priority given to vulnerable groups. In line with this, Bappenas (2020) explains that social protection spending includes the health insurance budget through the Contribution Assistance Recipient (PBI) scheme and various social assistance programs such as the Family Hope Program (PKH), Non-Cash Food Assistance, the Smart Indonesia Program (PIP), Rastra/Raskin, and the Social Protection Card sourced from the State Budget.

Conceptual Framework

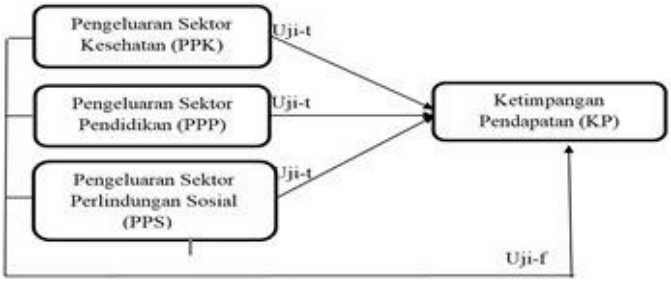


Figure 3. Conceptual Framework

Hypothesis

Based on the theoretical basis and theoretical framework above, the hypotheses of this study are as follows.

H_1 : It is suspected that government spending in the health sector has a significant impact on income inequality in Indonesia.

H_2 :Government spending on education is thought to have a significant impact on income inequality in Indonesia.

H_3 :It is suspected that government spending on social protection has a significant impact on income inequality in Indonesia.

H_4 :Government spending in the health, education, and social protection sectors is thought to have a significant impact on the welfare of the Indonesian people.

3. RESEARCH METHOD

Types and Sources of Data

This study uses secondary data in the form of archival reports and documents. The data used is time series data for the period 2005–2024 obtained from the Indonesian Central Statistics Agency, with a total of 20 observations.

Data collection

Data collection in this study was conducted through access to online databases that provide statistical data, surveys, and reports, as well as through archives and documentation available at government agencies, namely the Indonesian Central Statistics Agency (BPS).

Data Analysis Methods

Data analysis in this study was conducted using multiple linear regression with the help of the Eviews program. This method was used to comprehensively test the effect of independent variables on dependent variables. The following are the equations used in this study's analysis:

$$\mathbf{Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \varepsilon}$$

The multiple linear regression equation established in this study is as follows:

$$KP_t = \beta_0 + \beta_1 logPPK_{1t} + \beta_2 logPPP_{2t} + \beta_3 D(logPPS)_{3t} + e_t$$

4. RESULTS AND DISCUSSION

Classical Assumption Test

The classical assumption test aims to determine whether the regression model meets the BLUE data criteria or not (Wahyudi, 2017). This study uses a series of classical assumption tests commonly applied to multiple linear regression models, including normality, multicollinearity, autocorrelation, and heteroscedasticity tests. The results of each test are presented as follows:

Normality Test

Normality tests are used to determine whether data are normally distributed. A good regression model has normally distributed data or data that are close to normal. Normality testing is performed using the Jarque-Bera (JB) probability value (Gujarati, D.N., & Porter, 2012), with the following criteria:

a) Probability value JB > 0.05 (α = 0.05) = Data is normally distributed.
b) Probability value JB < 0.05 (α = 0.05) = Data is not normally distributed.

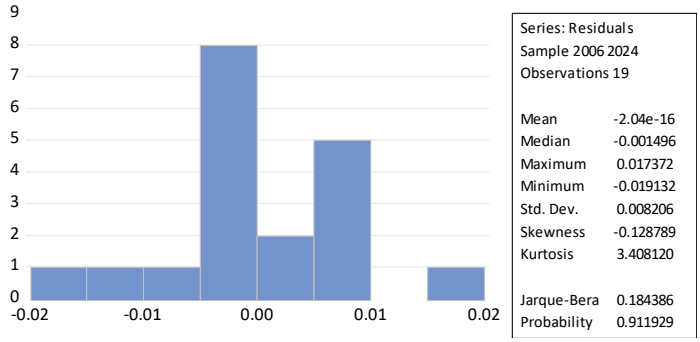


Figure 4. Normality Test Results

Source: Data processed using Eviews 13, (2025)

Based on Figure 2 above, the Jarque-Bera Chi-Square value is 0.1843 < 9.487 at α = 5%, so this residual data is normally distributed. This can also be

seen from the probability value of 0.911 > 0.05.

Multicollinearity Test

According to (Gujarati, D.N., & Porter, 2012), the multicollinearity test aims to determine the existence of correlations between independent variables. This test is conducted by examining the Variance Inflation Factor (VIF) value. If the VIF value is < 10, then there is no multicollinearity, while a VIF value > 10 indicates multicollinearity between independent variables.

Table 2.
Multicollinearity Test Results

Variance Inflation Factors
Date: 11/13/25 Time: 17:52
Sample: 2005 2024
Included observations: 19

Variable	Coefficient Variance	Uncentered VIF	Centered VIF
C	0.027849	6548.428	NA
LOGPPK	1.65E-05	3766.513	2.778521
LOGPPP	5.91E-05	14600.16	2.749765
D(LOGPPS)	1.05E-05	1.180155	1.017372

Source: Data Analysis Eviews 13, (2025)

Autocorrelation Test

Autocorrelation is the correlation between errors in a series of observations arranged according to time or space. This test aims to determine whether errors in one period are correlated with other periods, which generally occurs in time series data. This study uses the Breusch–Godfrey LM Test to detect autocorrelation, with criteria based on chi-square probability compared to a specific significance level (α) (Gujarati, D.N., & Porter, 2012).

Table 3.
Autocorrelation Test Results

Breusch-Godfrey Serial Correlation LM Test:
Null hypothesis: No serial correlation at up to 2 lags

F-statistic	0.808970	Prob. F(2,13)	0.4665
Obs*R-squared	2.102955	Prob. Chi-Square(2)	0.3494

Source: Data Analysis Eviews 13, (2025)

Based on Table 3 of the autocorrelation test results, the Obs*R-squared value is < Chi-squared table df (2), namely 2.10 < 5.99, so this model is free from indications of autocorrelation. This can be seen from the probability value of 0.3494 > 0.05.

Heteroscedasticity Test

The heteroscedasticity test aims to determine whether there are differences in residual variance between observations. A good regression model requires constant residual variance or homoscedasticity. In this study, the heteroscedasticity test was conducted using the White Heteroscedasticity Test (Gujarati, D.N., & Porter, 2012).

Table 4.
Heteroscedasticity Test Results

Heteroskedasticity Test: White
Null hypothesis: Homoskedasticity

F-statistic	0.325794	Prob. F(3,15)	0.8067
Obs*R-squared	1.162285	Prob. Chi-Square(3)	0.7621
Scaled explained SS	0.872240	Prob. Chi-Square(3)	0.8321

Source: Data Analysis Eviews 13, (2025)

Based on Table 4 of the heteroscedasticity results, the Obs* R-squared value is < Chi-Squared table df (3), namely 1.16 < 7.81, so this model is free from indications of heteroscedasticity. This can also be seen from the probability value of 0.7621 > 0.05.

Multiple Linear Regression Results

The model used in this study is multiple linear regression analysis, which aims to analyze the effect of independent variables on dependent variables using Eviews 13 software. The results of the multiple regression are as follows:

Table 5.
Multiple Linear Regression Results

Dependent Variable: KP
Method: Least Squares
Date: 11/13/25 Time: 17:56
Sample (adjusted): 2006 2024
Included observations: 19 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-0.394165	0.166879	-2.361977	0.0321
LOGPPK	-0.019979	0.004059	-4.922011	0.0002
LOGPPP	0.043249	0.007687	5.626192	0.0000
D(LOGPPS)	0.004789	0.003234	1.480748	0.1594

R-squared	0.689743	Mean dependent var	0.386158
Adjusted R-squared	0.627691	S.D. dependent var	0.014732
S.E. of regression	0.008989	Akaike info criterion	-6.400969
Sum squared resid	0.001212	Schwarz criterion	-6.202139
Log likelihood	64.80920	Hannan-Quinn criter.	-6.367319
F-statistic	11.11565	Durbin-Watson stat	1.494944
Prob(F-statistic)	0.000426		

Source: Data Processing Eviews 13, (2025)

Based on Table 5 above, the regression results can be interpreted as follows:

$$KP = -0.394 - 0.019 logPPK_t + 0.043 logPPP_t + 0.004 D(logPPS)_t + e$$

Based on the regression results after performing differencing transformation to overcome multicollinearity, changes in income inequality over time are influenced by changes in government spending on health, education, and social protection.

A constant value of -0.394165 indicates that the variables of expenditure in the health, education, and social protection sectors are constant, so the income

inequality variable also decreases by -0.394 points.

The regression coefficient value for the health sector expenditure variable is -0.019979, indicating a negative relationship. This means that if the health sector expenditure variable increases by 1%, income inequality will decrease by -0.019 points, assuming that the education and social protection sector expenditure variables remain constant.

This study is in line with the theory that government spending on the health sector has an effect on reducing income inequality. This is consistent with the research conducted by Rindiani et al. (2025), which found that an increase in health spending can significantly reduce income inequality in Indonesia. The provision of health services is the responsibility of the government through health expenditure, increasing the proportion of government spending to meet standards and allocate spending to support the implementation of basic services that are the government's obligation (mandatory spending). The findings by Wahyudi (2023) state that government spending in the health sector has a negative effect on income inequality in Indonesia. This shows that there has been equal distribution of access to education and health care facilities to all levels of society.

The regression coefficient value for education sector expenditure is 0.043249, indicating a positive relationship. This means that if the education sector expenditure variable increases by 1%, inequality increases by 0.043 points, assuming that the health sector and social protection sector expenditure variables remain constant.

This study is not in line with the theory, as in reality, government spending on education has no effect on reducing income inequality. This condition occurs because the allocation of government spending in the education sector is insufficient in the distribution or dissemination of each education program created by the government, such as the uneven distribution of educational facilities, especially in remote areas of Indonesia. This condition prevents the education system from achieving its full potential, resulting in a lack of creative and innovative graduates. This also affects the quality of human resources and can hinder Indonesia's economic development (Novitasari & Arif, 2023).

These findings are in line with research conducted by Tewa P. Voto (2024), which shows that spending on education increases income inequality. The same results were found in research conducted by Masri et al. (2015), which shows that the level of education in Aceh has no significant effect on income equality. This is because although the budget for education in Aceh is relatively large, the quality of education is still low. This shows that it is not only the quantity of education that is important, but also the quality of education that plays an important role in income inequality. This study is not in line with research conducted by Prannisa et al. (2023), which found that government spending on education had a significant effect on reducing income inequality in West Java during the 2015-2020 period.

The regression coefficient value for social protection sector expenditure is 0.004789, which indicates a positive relationship. This means that if the social protection variable increases by 1%, inequality increases by 0.004 points, assuming that the health and education sector expenditure variables remain constant.

This study shows that government spending on social protection does not have a significant effect on reducing income inequality, which is not in line with theory. This is because social protection programs, such as cash assistance and social security, are not yet effective and optimal in reducing inequality even though they are intended for low-income groups (Rahma, 2024).

These findings are in line with Alamanda (2020) and Rahma (2024), who state that spending on social assistance, subsidies, and grants does not have a significant effect on income inequality in Indonesia. However, these results differ from those of Yuliantaka (2025), who shows that conditional subsidies and cash assistance can reduce extreme poverty and narrow regional disparities when distributed in a targeted and transparent manner.

Coefficient of Determination R^2

Table 6.
Results of the Coefficient of Determination Test

R-squared	0.689743	Mean dependent var	0.386158
Adjusted R-squared	0.627691	S.D. dependent var	0.014732

Source: Data Analysis Eviews 13, (2025)

Based on Table 6, the coefficient of determination (R2) of the magnitude of the influence of government spending in the health sector, education sector, and social protection sector on income inequality in Indonesia is 0.6276 (62.67%). The remainder is influenced by other variables outside the model, which is 1 – 0.6276 = 0.3724 (37.24).

5. CONCLUTION

Based on the above discussion, the following conclusions can be drawn:

1. Health sector spending has a negative and significant impact on income inequality in Indonesia.
2. Education sector spending has a positive and significant effect on income inequality in Indonesia.
3. In general, social protection sector spending has no effect on income inequality in Indonesia.

4. Simultaneously, spending on health, education, and social protection has a positive effect on income inequality in Indonesia.

Recommendations

The recommendations that can be given by researchers in this study are as follows:

1. With regard to the health and education sectors, the government needs to review education and health programs in order to improve quality and ensure equitable access, improve infrastructure, especially in remote areas, and create a skilled workforce. Education and public health programs should be accompanied by the creation of new jobs.
2. Regarding social protection variables, the government needs to review social protection programs to ensure they meet community needs, regularly check recipient data, and ensure transparency between the community and relevant institutions so that assistance reaches the right targets. Recipients of assistance are expected to use the funds wisely, such as for priority nutritional needs or for productive rather than purely consumptive purposes, so that the funds received are not wasted. If this is managed properly, the benefits can be felt by the community.
3. Future researchers are encouraged to use or add other variables related to income inequality and explore more interesting phenomena that have not been examined in this study.

BIBLIOGRAPHY

Alamanda. (2020). The Effect of Government Expenditure. Info Artha, 4(01), 1–11.

Arafah, M., & Khoirudin, R. (2022). Analysis of Income Inequality in the Distribution of Income in Regencies/Cities in Bali Province. Journal of Economics and Development, 5(2), 628–636.

Darmuji, D., Alawiyah, T., & Hasanah, K. (2024). The Impact of Education Quality and Poverty on Economic Income Inequality: An Analysis. Indonesian Education Journal, 5(8), 458–467. https://doi.org/10.59141/japendi.v5i8.3183

Febriyani, A., & Anis, A. (2021). The effect of economic growth, investment, and human development index on income distribution inequality in Indonesia. Economic and Development Studies, 3, 375–375.

Gujarati, D.N., & Porter, D. (2012). Fundamentals of Econometrics (5th Edition).

Hadju, I. I., Masinambow, V. A., & Maramis, M. T. (2021). Analysis of Regional Development Inequality in North Sulawesi Province. Scientific Journal of Efficiency, 21(01), 110–120.

Hajebi, E., & Razmi, M. J. (2014). Effect of Income Inequality on Health Status in a Selection of Middle and Low Income Countries. Equilibrium, 9(4), 133–152. https://doi.org/10.12775/equil.2014.029

Hamzah, F., Rosyadi, R., & Kartika, M. (2017). The Effect of Government Expenditure on Education, Gender Gap, and Per Capita Income on Educational Inequality and Income Inequality in Regencies/Cities in West Kalimantan Province. Journal of Business Economics and Entrepreneurship, 6(2), 77. https://doi.org/10.26418/jebik.v6i2.22985

Hindun, H., Soejoto, A., & Hariyati, H. (2019). The Effect of Education, Unemployment, and Poverty on Income Inequality in Indonesia. Journal of Business Economics and Entrepreneurship, 8(3), 250. https://doi.org/10.26418/jebik.v8i3.34721

Kalalo, T., Engka, D. S. M., & Maramis, M. T. B. (2016). Analysis of Income Distribution of the People in Airmadidi District, North Minahasa Regency. Scientific Journal of Efficiency, 16(01), 818–830. https://ejournal.unsrat.ac.id/v3/index.php/jbie/article/view/12043

Kasman, A., Ernawati, & Ariani, W. O. R. (2013). Study of the Effect of Income Inequality and Economic Growth on Poverty Levels in Southeast Sulawesi Province. Journal of Economics (JE), 09, 8–17. http://jurnal-ekonomi.uho.ac.id

Masri Fithrian, Nur Syechalad, M. N. (2015). Analysis of the Effect of Aggregate Demand and Education Level on Income Inequality in Aceh. Journal of Economics, 3(3), 23–32.

Meylina Astri, Sri Indah Nikensari, H. K. (2013). The Effect of Local Government Expenditures on the Education and Health Sectors on the Human Development Index in Indonesia. Journal of Economic and Business Education, Vol.1.

Novitasari, W., & Arif, M. (2023). Analysis of the Effect of Government Expenditure in the Education, Health, Infrastructure, and Income Inequality Sectors on the Number of Prosperous People in Indonesia. Journal of Business and Management, 3(4).

Pangke, (2018). The Impact of Government Spending in the Education and Health Sectors on Poverty in Jayapura City. Journal of Economic Studies and Development Studies Volume, 5(3), 1–9. https://doi.org/10.56076/jkesp.v5i3.2118

Pradnyadewi, D., & Purbadharmaja, I. (2017). The Effect of Human Development Index, Infrastructure Costs, Investment, and Economic Growth on Income Distribution Inequality in Bali Province. E-Journal of Development Economics, University of Udayana, 6(2), 255–285.

Prannisa, A., Muljarijadi, B., & Wardhana, A. (2023).

Government Spending (Economy, Social Protection, Health, Education) on Income Inequality in West Java. Trikonomika, 22(1), 26–32. https://doi.org/10.23969/trikonomika.v22i1.5976

Purbandono, R. (2024). The Impact of Economic Inequality on Social Stability: Analysis of the Role of Government Policy in Reducing Economic Disparities. Journal of Global and Multidisciplinary, 2(12), 3869–3883. https://journal.institercom-edu.org/index.php/multiple

Putri, D. Y., & Aminda, R. S. (2024). Analysis of Factors Affecting Income Inequality in the Special Region of Yogyakarta Province. Journal of Development Economics and Digitalization, Vol. 3.

Rahma, G. A. (2024). The Effect of Fiscal Policy on Income Inequality in Indonesia: A Quantile Regression Analysis. Parahyangan Economic Development Review, 3(2), 108–117.

Rindiani, S. S., Ruslan, F., & Sofyan, S. (2025). The Role of Government Expenditures on Education, Health, and Social Protection in Income Inequality in Indonesia. 5(Vol. 5 No. 1 (2025): April 2025), 40–41. https://www.e-journal.trisakti.ac.id/index.php/jet

Rizqy K., M. Handry Imansyah, D. R. (2021). The Impact of Government Expenditures in the Education, Health, and Infrastructure Sectors. Syntax Idea, Vol. 3, No.12

Ruslan, F., Ratnawati, N., & Muliati. (2024). The Role of Government Expenditure in Increasing Per Capita Income: A Case Study of 34 Provinces in Indonesia. Media Ekonomi, 32(1), 11–22. https://doi.org/10.25105/v32i1.18886

Shekhar Aiyar, C. E. (2020). Inequality of opportunity, inequality of income and economic growth. World Development, 136. https://doi.org/10.1016/j.worlddev.2020.105115

Siagian, N., Zagoto, D., & Situmorang, I. B. K. (2022). Implications of DPRD Members' Recess Implementation on Electoral Districts in South Nias Regency. JIIP - Journal of Educational Science, 5(1), 73–87. https://doi.org/10.54371/jiip.v5i1.386

Sugiarti, I., & Erdkhadifa, R. (2023). Analysis of Factors Affecting Income Inequality in East Java in 2021. Al-Kharaj: Journal of Economics, Finance & Sharia Business, 5(5), 2427–2441. https://doi.org/10.47467/alkharaj.v5i5.3498

Suncaka, E. (2023). Reviewing the Problem of Low Quality Education in Indonesia. Journal of Management and Education, 02(03), 36–49. https://journal.an-nur.ac.id/index.php/unisanjournal

Taufik Arnanda Marpaung, Muhammad Imam Daei, Dorlan Habibi, & Nurhayati Harahap. (2024). National Development Strategies for Economic Inequality Between Regions from an Islamic Economic Perspective. Journal of Sharia Economics and Finance Research, 2(1), 317–334. https://doi.org/10.59059/jupiekes.v2i1.986

Tewa P. Voto, N. N. (2024). Income inequality: The effects of public education expenditure and information and communications technology in sub-Saharan Africa. Journal of Economic and Management Sciences, 27, 1–10.

Wahyudi, W. (2023). Provincial Government Expenditures and Their Impact on Economic Growth and Income Inequality in Indonesia. Sebatik, 27(2), 708–715. https://doi.org/10.46984/sebatik.v27i2.2369

Widodo, A., Waridin, W., & Kodoatie, J. M. (2012). Analysis of the Impact of Government Expenditures in the Education and Health Sectors on Poverty Alleviation through Human Development in Central Java Province. Journal of Development Economics Dynamics, 1(1), 25. https://doi.org/10.14710/jdep.1.1.25-42

Yasni, R., & Yulianto, H. (2020). The Role of Capital Expenditure and Local Government Social Assistance Expenditure on Income Inequality in Indonesia. Substance: Source of Accounting, Auditing, and Vocational Finance Articles, 4(1), 39–63. https://doi.org/10.35837/subs.v4i1.819

Yuliantaka, R. K. (2025). The Role of Government in Overcoming Economic Inequality: A Literature Review of Redistributive Fiscal Policy. LIKUID: Journal of Economics, 1(01), 5–8.

Zulham, T., Seftarita, C., & Muliza. (2017). Analysis of the Effect of Education Expenditure, Health Expenditure, Poverty Rate, and GRDP on HDI in Aceh Province. Darussalam Economic Perspective Journal, 3(1), 51–69.