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Analysis of the Effect of Village Funds, Village Fund Allocation, Education Capital Expenditure, Health Capital Expenditure, Gross Regional Domestic Product, and Human Development Index on Poverty in Underdeveloped Districts in Indonesia

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Abstract: *This study aims to analyze the effects of village funds, village fund allocation, education capital expenditure, health capital expenditure, Gross Regional Domestic Product (GRDP), and the Human Development Index (HDI) on poverty in underdeveloped districts in Indonesia. The research employs a quantitative approach using panel data regression analysis by combining time-series data from 2015 to 2024 and cross-sectional data from 62 underdeveloped districts in Indonesia. The data used in this study are secondary data obtained from Statistics Indonesia (BPS) and the Ministry of Finance. The independent vaiables consist of village funds, village fund allocation, education capital expenditure, health capital expenditure, GRDP, HDI, while poverty serves as the dependent variable. Chow test, Hausman test, and Lagrange Multiplier test were conducted, and the results indicate that the Random Effects Model (REM) is the most appropriate estimation model. The results show that, partially, village funds, education capital expenditure, GDRP, and HDI have a negative and significant effect on poverty. Meanwhile, village fund allocation and health capital expenditure have a positive but insignificant effect on poverty in underdeveloped districts in Indonesia.*

Kata Kunci: *Village Funds, Village Fund Allocation, Education Capital Expenditure, Health Capital Expenditure, GRDP, HDI, Poverty, Underdeveloped Regions*

JEL : H72, H75, I32, O15, O18

1. INTRODUCTION

Poverty is a condition in which a person is unable to meet basic needs such as food, clothing, shelter, education, and healthcare. Todaro & Smith (2020) mention various dimensions of poverty, including hunger, poor education, poor health, and inability to participate in community life.

Poverty is a problem faced by the majority of countries in the world. Globally, approximately 8.5% of the world's population (685 million people) still lives in extreme poverty. The region with the highest concentration is the African continent, where more than 60% of the world's extremely poor population lives. Developing countries in Asia and South America have experienced a downward trend in poverty over the past two decades, although they still face challenges of high economic vulnerability (World Bank, 2024).

In Indonesia, poverty rates vary depending on the measurement method. According to the World Bank (2025), Indonesia's poverty rate in 2024 was 15.6% (44.3 million people) using a poverty line of USD 3.65 for lower-middle-income countries, and could rise to 60.3% if using a standard of USD 6.85 for upper-middle-income countries. Meanwhile, the Central Statistics Agency (BPS) reports a lower figure of 8.57% (24.05 million people), as it uses a national poverty line of Rp595,242 per month, adjusted to reflect the conditions of the Indonesian population. However, this poverty rate remains above the target set in the National Medium-Term Development Plan (RPJMN), which is 6–7% for 2024 (Perpres, 2020a).

The poverty rate in Indonesia also does not reflect all regions in Indonesia. There are regions with lower poverty rates, but there are still many regions with poverty rates above the Indonesian average. When broken down, the poverty rate in the regencies of disadvantaged regions in Indonesia is still far above the Indonesian poverty rate. Of the 62 disadvantaged regencies (Perpres, 2020b), only two have a poverty rate below the Indonesian average (8.57%), namely the Sula Islands Regency (7.96%) and Taliabu Island Regency (7.13%). The average poverty rate in districts

classified as underdeveloped is significantly higher, standing at 25.01% in 2024.

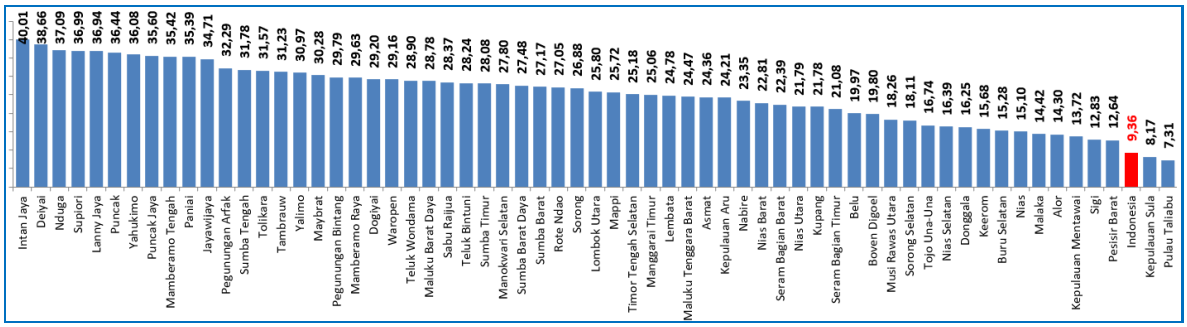

Figure 1. Comparison of the Percentage of the Poor Population in Underdeveloped Districts and Indonesia (National) in 2024
Source: BPS

The government has undertaken various initiatives, such as regional autonomy, the establishment of village governments, and the allocation of substantial funds for villages, education, and health. However, despite significant government spending, poverty rates in underdeveloped districts remain high and have not shown a significant decline over the past five years.

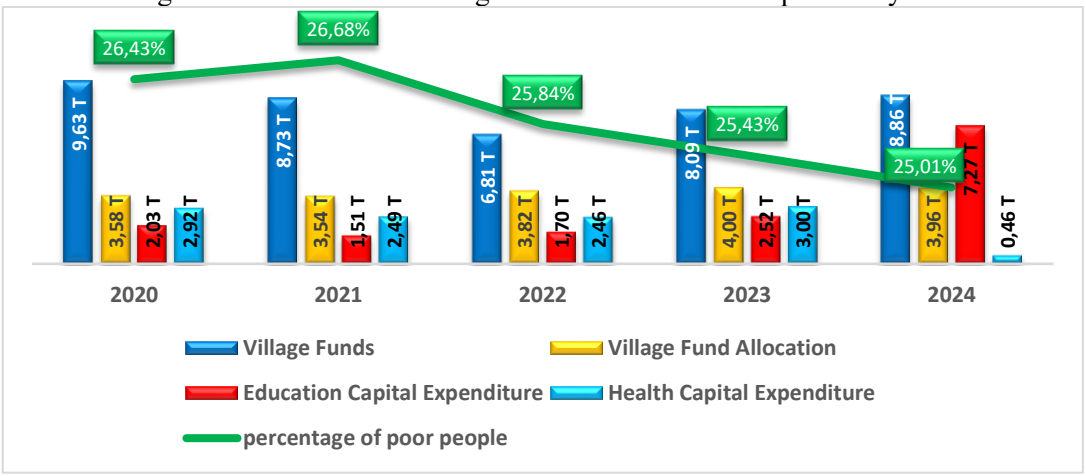

Figure 2. Realization of Village Funds, Allocation of Village Funds, Capital Expenditures for Education, Capital Expenditures for Health, and Percentage of Poor Population in 2020-2024 in Underdeveloped Regions
Source: Ministry of Finance dan BPS

Poverty in underdeveloped regions is also influenced by GRDP and HDI. In 2024, the GRDP of underdeveloped regions, at 325.56 trillion rupiah, accounted for only 0.15% of the national GDP of 22,139 trillion rupiah, indicating low economic activity. Meanwhile, the average HDI of 61.69 remains far below the national average (75.02). This situation highlights the need to improve the HDI to reduce poverty.

Previous studies have yielded inconsistent results regarding the factors influencing poverty. Sigit & Kosasih (2020), state that, when considered separately, village funds and the allocation of village funds have a negative and significant effect on poverty, whereas capital expenditures have a negative but insignificant effect. Meanwhile, Susilowati et al. (2017) concluded that village funds actually have a positive and significant effect on poverty, whereas village fund allocations and capital expenditures have a negative and significant effect.

A similar pattern is observed for the GRDP variable, which generally has a negative effect on poverty, though some studies indicate a positive effect, albeit not significant. According to studies conducted by Susilowati et al. (2017), Sigit & Kosasih (2020), and Sabuna & Ruslan (2023), GRDP has a negative and significant effect on poverty. However, different results were found by Qudri et al. (2023), who stated that GRDP actually has a positive but insignificant effect on poverty. Meanwhile, the HDI variable tends to show consistent results, namely a negative and significant

effect on poverty.

Based on these differing results, there is a research gap characterized by inconsistencies regarding the impact of village funds, village fund allocations, capital expenditures, and GRDP on poverty across various regions, and no study has yet examined their impact on all districts in Indonesia's underdeveloped regions. Previous research has also generally focused on capital expenditure in general, and there remains a lack of studies on capital expenditure by function (education and health). Therefore, this study was conducted to re-examine the influence of village funds, village fund allocation, capital expenditure on education, capital expenditure on health, GRDP, and HDI on poverty in underdeveloped districts in Indonesia.

2. LITERATURE REVIEW

2.1. Poverty

Poverty is the inability of a person to meet basic needs in order to live properly (Sutiyo & Fadhilah, 2024). In line with this definition, Todaro & Smith (2020) state that poverty is closely related to limited access to basic needs such as education, health, and income. In national statistical data standards, the Central Statistics Agency (BPS) defines poverty as a situation in which a person is unable to meet the minimum basic needs required for a decent and dignified life (BPS, 2021). Furthermore, in measuring poverty, BPS (2023) uses the concept of the basic needs approach. Poverty is viewed as the economic inability to meet basic food and non-food needs as measured by the poverty line (food and non-food). People are considered poor if they have an average per capita expenditure per month below the poverty line.

2.3. Village Funds

Village funds are funds transferred directly by the central government to village administrations without any intervention from local governments. This is intended to ensure that village development receives full financial support that has been calculated in advance by the central government.

According to Law Number 1 of 2022, village funds are part of regional transfers allocated to villages with the aim of supporting the funding of government administration, development implementation, community empowerment, and social welfare. Village development aims to improve the welfare of village communities and the quality of human life, as well as to alleviate poverty through the fulfillment of basic needs, the development of village facilities and infrastructure, the development of local economic potential, and the sustainable use of natural resources and the environment (Law Number 6 of 2014).

2.4. Village Fund Allocation

Village fund allocation is a type of village revenue that is part of the balance fund/transfer fund received by district/city governments from the central government. Unlike village funds, although the source of the funds comes from the central government, the authority to allocate village funds lies with the local government because the balance fund is first included in the regional budget. Local governments have the authority to budget the allocation of village funds in amounts determined by the local government for each village in its area.

The central government is responsible for overseeing the minimum total budget allocated by local governments to each village. The amount of village fund allocation is at least 10% of the balancing funds received by district/city local governments after deducting the Special Allocation Fund (Law Number 6 of 2014).

2.5. Capital Expenditure

Capital expenditure is one of the main components in state and regional financial management that focuses on spending to acquire fixed assets and long-term investments. According to Government Regulation No. 12 of 2019, capital expenditures are budgetary expenditures for the acquisition of fixed assets and other assets that provide benefits over more than one accounting period.

Local government capital expenditure plays a strategic role in driving local economic growth and reducing poverty levels. Capital expenditure is directed at improving access to basic services such as education, health, and economic infrastructure, which are directly

correlated with poverty reduction (Todaro & Smith, 2020). However, the success of capital expenditure in reducing poverty is highly dependent on the effectiveness of its implementation. According to Bappenas, the main challenges in Indonesia are the accuracy of program targets, limited regional managerial capacity, and corrupt practices that still hinder the optimization of capital expenditure for poverty reduction purposes.

2.6. Gross Regional Domestic Product

Gross Regional Domestic Product (GRDP) is a key economic indicator used to describe the total added value of goods and services produced by all business units in a region within a certain period. GRDP reflects the level of regional economic activity and is an important measure for observing economic growth dynamics, economic structure, and community welfare levels. According to Atmodjo & Sumbogo (2023), GRDP is the sum of all gross value added from various economic activities that produce goods and services in a region within a certain period, regardless of ownership of the factors of production. BPS (2025) states that GRDP at the regional level (province/district/city) describes a region's ability to create value added at a certain point in time.

2.7. The Human Development Index

The Human Development Index (HDI) is one of the indicators used to measure the quality of human resources in a country/region. The HDI reflects three basic dimensions of well-being, namely longevity, knowledge, and decent living standards. The HDI not only assesses the success of development from an economic perspective, but also from the perspective of the overall quality of life of the community.

Feriyanto in Asnidar (2018) states that the HDI is a measure of human development based on a number of basic components of quality of life. Therefore, the better the HDI, the more positive the impact of development on the people of a country or region. Meanwhile, Suhyanto et al. (2020) state that the HDI is a geometric average measure of human development achievements, which include a long and healthy life, education, and a decent standard of living. According to Rayana in Aisyaturridho et al. (2021), the HDI is a measurement and comparison of life expectancy, literacy, education, and living standards for all countries worldwide. BPS (2024) defines the Human Development Index (HDI) as a measure of the achievement of the main dimensions of human development, namely: long and healthy life, knowledge, and a decent standard of living.

3. METHOD

3.1. Scope of Research

This study is a quantitative study using panel data regression analysis. Panel data is a combination of time series data and cross-sectional data (Basuki, 2021). The panel data used is a combination of time series data from 2015 to 2024 and cross-sectional data on poverty, village funds, village fund allocations, education capital expenditure, health capital expenditure, GRDP, and HDI in 62 disadvantaged districts in Indonesia.

3.2 Types and Sources of Data

The type of data used in this study is secondary data. The secondary data used includes poverty, village funds, village fund allocations, health capital expenditure, education capital expenditure, GRDP, and HDI from 2015 to 2024. Poverty, GRDP, and HDI data are sourced from the Central Statistics Agency (https://www.bps.go.id), while village funds, village fund allocations, education capital expenditure, and health capital expenditure data are sourced from the Ministry of Finance (https://www.djpk.kemenkeu.go.id).

3.3. Operational Definition of Variables

Based on the problems and hypotheses to be tested, one independent variable and six dependent variables were determined. The independent variable used in this study was poverty. The dependent variables used were village funds, village fund allocations, capital expenditure on education, capital expenditure on health, GRDP, and HDI. An explanation of these variables can be seen in Table 1 below:

Table 1. Operational Definition of Variables

No	Variable	Description	Unit
1	Poverty	The percentage of poor people in disadvantaged districts based on survey results published by the Central Statistics Agency	Percentage
2	Village Funds	Funds transferred by the central government to village administrations directly without intervention from local governments.	Million Rupiah
3	Fillage Fund Allocation	Funds sourced from balancing funds/transfers from the central government to local governments and forming part of regional revenue in the regional budget (APBD). Local governments have the authority to regulate the amount of village fund allocations to each village in their region, with a minimum total value of 10% of the balancing funds received after deducting the Special Allocation Fund (DAK). The amount of village fund allocation used in this study is 10% x (DAU + DBH).	Million Rupiah
4	Health Capital Expenditure	The health capital expenditure used in this study is capital expenditure for health functions incurred by local governments sourced from the regional budget (APBD).	Million Rupiah
5	Education Capital Expenditure	The education capital expenditure used in this study is capital expenditure for education functions incurred by local governments sourced from the regional budget (APBD).	Million Rupiah
6	GRDP	The GRDP used in this study is the GRDP based on current prices in underdeveloped districts based on survey results published by the Central Statistics Agency.	Billion Rupiah
7	HDI	Human development index in underdeveloped districts based on survey results published by the Central Statistics Agency	Index

3.4. Data Analysis Techniques

This study uses panel data regression to analyze the effect of each independent variable on the dependent variable.

In this study, data transformation to natural logarithms was performed for the variables of village funds, village fund allocations, education capital expenditure, health capital expenditure, and GRDP to reduce data distribution inequality, reduce the influence of outliers, stabilize error variance (heteroscedasticity), and change nonlinear relationships to more linear ones. According to Gujarati & Porter (2009), logarithmic transformation is used to reduce heteroscedasticity and skewness/inequality in data distribution. Therefore, if the variables in this study are included in the model equation, the following equation is obtained:

$$\mathbf{KM_{it}} = \boldsymbol{\alpha} + \boldsymbol{\beta_1}\, \boldsymbol{Log}(\mathbf{DD})_{it} + \boldsymbol{\beta_2}\, \boldsymbol{Log}(\mathbf{ADD})_{it} + \boldsymbol{\beta_3}\, \boldsymbol{Log}(\mathbf{BM\_Dik})_{it} + \boldsymbol{\beta_4}\, \boldsymbol{Log}(\mathbf{BM\_Kes})_{it} + \boldsymbol{\beta_5}\, \boldsymbol{Log}(\mathbf{PDRB})_{it} + \boldsymbol{\beta_6}\mathbf{IPM_{it}} + \boldsymbol{\varepsilon_{it}} \quad \text{.....1)}$$

where KM is the percentage of poor people, DD is village funds, ADD is village fund allocation, BM_Dik is capital expenditure on education, BM_Kes is capital expenditure on health, PDRB is gross regional domestic product, IPM is human development index, Xk is the kth independent variable, α is a scalar/constant, i is the ith individual/entity, t is the tth time, β is the coefficient of variable Xk, ε is the error term consisting of disturbances from specific individual effects and other residual disturbances, and Log is natural logarithm.

The selection of the panel data regression model was conducted by identifying the best

model among the Common Effects Model (CEM), Fixed Effects Model (FEM), and Random Effects Model (REM). To this end, three tests were used: the Chow Test (to compare CEM and FEM), the Hausman Test (to compare FEM and REM), and the Lagrange Multiplier Test (to compare CEM and REM). Decisions were made based on probability values with a significance level of 0.05.

After the model was selected, classical assumption tests were conducted to ensure the model met the BLUE criteria. In panel data, the commonly used tests are multicollinearity and heteroscedasticity, especially if the model used is CEM or FEM (OLS-based). If using REM (GLS-based), a heteroscedasticity test is not required because this model already addresses that issue.

Next, a partial test (t-test) was conducted to determine the effect of each independent variable on the dependent variable individually, and a simultaneous test (F-test) was conducted to determine the combined effect of the independent variables. Both tests used a 5% significance level, where a probability value below 0.05 indicates a significant effect.

4. RESULTS AND DISCUSSION

4.1. Data Analysis Results

4.1.1. Model Selection

The Chow test, Hausman test, and Lagrange multiplier test were conducted in accordance with the stages, and it was found that the REM model was the best panel data regression model in this study.

Table 2. Summary of Chow Test, Hausman Test, and Lagrange Multiplier Test Results

Description	Probability	Conclusion	Selected Model
Chow Test	0,0000	Reject Ho	FEM
Hausman Test	0,6059	Do not reject Ho	REM
Lagrange Multiplier Test	0,0000	Reject H0	REM

Source: processed data (2025)

4.1.2. Results of Classical Assumption Tests

Since the selected model is REM, the classical assumption test that needs to be performed is the multicollinearity test, and there is no need to perform a heteroscedasticity test (Basuki, 2021).

Table 3. Multicollinearity Test Results

	LOG(DD)	LOG(ADD)	LOG(BM_DIK)	LOG(BM_KES)	LOG(PDRB)	IPM
LOG(DD)	1.000000	0.385378	0.217619	0.198205	0.136865	-0.221013
LOG(ADD)	0.385378	1.000000	0.172983	0.164355	0.403396	-0.250048
LOG(BM_DIK)	0.217619	0.172983	1.000000	-0.092521	0.230335	0.107216
LOG(BM_KES)	0.198205	0.164355	-0.092521	1.000000	0.104089	-0.094327
LOG(PDRB)	0.136865	0.403396	0.230335	0.104089	1.000000	0.530400
IPM	-0.221013	-0.250048	0.107216	-0.094327	0.530400	1.000000

Source: processed data

Based on Table 3, it can be seen that all correlation values between independent variables are below 0.8. This means that the model equation is safe and there is no multicollinearity. The value 1.0000 in the table is the correlation between the same variables and can be ignored.

4.1.3. Partial Test Results (T-test)

After obtaining the most appropriate panel data model, namely the REM model, a partial test (t-test) was conducted with the results shown in Table 4 below.

Table 4. Partial Test Results (T-test)

Dependent Variable: KM

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	64.65927	7.021378	9.208916	0.0000
LOG(DD)	-0.276637	0.136982	-2.019514	0.0439
LOG(ADD)	0.829865	0.664999	1.247919	0.2126
LOG(BM_DIK)	-0.126736	0.060618	-2.090709	0.0370
LOG(BM_KES)	0.002107	0.039077	0.053924	0.9570
LOG(PDRB)	-2.086662	0.638750	-3.266792	0.0012
IPM	-0.441689	0.065493	-6.744050	0.0000

Source: EViews, processed data

Based on the partial test, four variables were found to have a significant effect with a probability value of less than 0.05, namely village funds, education capital expenditure, GRDP, and HDI. The variables of village fund allocation and health capital expenditure did not have a significant effect because the probability value was greater than 0.05.

Based on the results of the REM panel data regression in Table 4.7, the following equation can be made:

$$\mathbf{KM_{it} = 64{,}66 - 0.28\ Log(DD)_{it} + 0.83\ Log(ADD)_{it} - 0.13\ Log(BM\_Dik)_{it} + 0.002\ Log(BM\_Kes)_{it} - 2.09\ Log(PDRB)_{it} - 0.44\ IPM_{it} + \varepsilon_{it}}$$

4.1.4. Simultaneous Test Results (F Test)

A simultaneous test (f test) was carried out with the results as in Table 5 below:

Table 5. Simultaneous Test Results (F Test)

F-statistic	Prob(F-statistic)	Adj R-squared
129.4197	0.000000	0.567593

Sumber: EViews, data diolah

All independent variables collectively have a significant effect on the dependent variable. The magnitude of the simultaneous influence of the independent variables on the dependent variable is 56.76%. The remaining 43.24% is explained by other variables not included in this study. This is due to data limitations in underdeveloped districts, which prevent them from being included as additional variables in the model.

4.2. Discussion of Research Results

4.2.1. The Impact of Village Funds on Poverty in Underdeveloped Districts of Indonesia

Based on the results of the regression model, the coefficient of the village fund variable is negative with a value of -0.28, meaning that there is a negative effect between village funds and poverty. The probability value of the village fund variable is 0.0439, which is smaller than the significance level of 5% (α = 0.05), meaning that there is a significant effect between village funds and poverty. Thus, it can be concluded that village funds have a negative and significant effect on poverty. If village funds are increased by 1%, poverty will decrease by 0.28%, assuming that other variables remain constant or unchanged.

Based on the results of this study, it can be concluded that the distribution of village funds by the central government directly to villages to finance village infrastructure development, village community empowerment, social assistance, and so on has proven to be effective in reducing poverty. Therefore, the central government should continue the village fund program in the following years. The central government also needs to consider increasing the village fund budget and making policies so that the benefits of village funds can be felt directly by the community. Regular monitoring and evaluation are needed to make decisions in the future.

The results of this study are in line with research conducted by Putra (2019), Sigit & Kosasih (2020), Ritonga et al. (2021), and Abdullah (2022), which partially state that village funds have a negative and significant effect on poverty. However, the results contradict the research conducted by Susilowati et al. (2017), which states that village funds have a positive and significant effect on poverty.

4.2.2. The Effect of Village Fund Allocation on Poverty in Underdeveloped Districts in

Indonesia

Based on the results of the regression model, the coefficient of the village fund allocation variable is positive with a value of 0.83, meaning that there is a positive influence between village fund allocation and poverty. The probability value of the village fund allocation variable is 0.2126, which is greater than the significance level of 5% (α = 0.05), meaning that there is no significant effect between village fund allocation and poverty. Thus, it can be concluded that village fund allocation has a positive but insignificant effect on poverty.

Based on the results of this study, local governments need to evaluate or review why village fund allocation in disadvantaged districts is ineffective in reducing poverty rates. In fact, there is a positive relationship with an increase in poverty rates, even though the effect is not significant. The amount of the village fund allocation budget for each village can also be considered by local governments. Villages with good performance should receive a reward in the form of an additional budget. Conversely, for villages with poor performance or budget leakage, local governments should consider imposing sanctions in the form of budget cuts.

The results of this study are in line with research conducted by N. A. Putra et al. (2023), which states that village fund allocation has a positive but insignificant effect on poverty. Other researchers who support this are Dewi & Irama (2018), who conclude that village fund allocation has a positive effect on poverty, although the effect is significant. The results of this study differ from those of Susilowati et al. (2017), Wijaya et al. (2018), Sigit & Kosasih (2020), and Rahmawati & Sari (2024), who found that village fund allocation has a negative and significant effect on poverty.

4.2.3. The Effect of Education Capital Expenditure on Poverty in Underdeveloped Districts in Indonesia

Based on the results of the regression model, the coefficient of the education capital expenditure variable is negative with a value of -0.13, meaning that there is a negative relationship between education capital expenditure and poverty. The probability value of the education capital expenditure variable is 0.0370, which is smaller than the significance level of 5% (α = 0.05), meaning that there is a significant effect between education capital expenditure and poverty. Thus, it can be concluded that education capital expenditure has a negative and significant effect on poverty. If education capital expenditure is increased by 1%, it will be able to reduce the poverty rate by 0.13%, assuming that other variables remain constant or unchanged.

Based on the results of this study, it was found that the realization of education capital expenditure was proven to be effective in reducing poverty rates in disadvantaged areas. Disadvantaged areas are in dire need of educational facilities such as school buildings, school laboratories, educational aids, and other facilities and infrastructure that support education. Therefore, local governments can consider increasing the allocation of the education capital expenditure budget for disadvantaged districts.

The results of this study are in line with studies conducted by Susilowati et al. (2017), Safitri & Saleh (2020), and Amami & Asmara (2022), which concluded that capital expenditure has a negative and significant effect on poverty. Similar results were found by Sigit & Kosasih (2020) and Priambodo & Hidayat (2024), but the effect was not significant on poverty. The results of this study are in contrast to those of Rahmawati et al. (2024), who stated that capital expenditure has a positive and significant effect on poverty.

4.2.4. The Effect of Health Capital Expenditure on Poverty in Underdeveloped Districts in Indonesia

Based on the results of the regression model, the coefficient of the health capital expenditure variable is positive with a value of 0.002, meaning that there is a positive influence between education capital expenditure and poverty. The probability value of the health capital expenditure variable is 0.9570, which is greater than the significance level of 5% (α = 0.05), meaning that there is no significant effect between health capital expenditure and poverty. Thus, it can be concluded that health capital expenditure has a positive but insignificant effect on poverty.

Based on the results of this study, it was found that health capital expenditure has the

potential to increase poverty in disadvantaged districts, even though the effect is not significant. Health capital expenditure should support poor communities in gaining access to health services. Therefore, local governments need to conduct field evaluations to determine whether the capital expenditure budget spent so far is in accordance with the plan and the specified requirements. If there are discrepancies, guidance from the regional head or relevant unit to the regional apparatus organization (OPD) in charge of health affairs is required.

The results of this study are in line with the results of research conducted by Rahmawati et al. (2024), which states that capital expenditure has a positive effect, but its effect is significant on poverty. The results of this study are also in line with research by Sigit & Kosasih (2020) and Rahmawati et al. (2024), which states that capital expenditure has no significant effect on poverty. The results of this study are in contrast to the studies conducted by Susilowati et al. (2017), Safitri & Saleh (2020), and Amami & Asmara (2022), which concluded that capital expenditure has a negative and significant effect on poverty.

4.2.5. The Effect of GRDP on Poverty in Underdeveloped Districts in Indonesia

Based on the results of the regression model, the coefficient of the GRDP variable is negative with a value of -2.09, meaning that there is a negative relationship between GRDP and poverty. The probability value of the GRDP variable is 0.0012, which is less than the significance level of 5% ($\alpha = 0.05$), meaning that there is a significant relationship between GRDP and poverty. Thus, it can be concluded that GRDP has a negative and significant effect on poverty. If GRDP is increased by 1%, it will be able to reduce the poverty rate by 2.09%, assuming that other variables remain constant or unchanged.

Based on the results of this study, it can be concluded that GRDP is proven to be effective in reducing poverty rates in disadvantaged areas. For this reason, there needs to be synergy between the central government and local governments at both the provincial and district/city levels to create policies and budgetary support that can increase the output of the economic sector in disadvantaged areas. This includes mapping basic or non-basic sectors, prospective or non-prospective sectors, and leading or non-leading sectors. The government can first focus on increasing production in the basic, prospective, and leading sectors because they have a greater multiplier effect on economic growth. Meanwhile, non-basic, non-prospective, and non-leading sectors can be included in the long-term development agenda.

The results of this study are in line with research conducted by Susilowati et al. (2017), Sigit & Kosasih (2020), and Sabuna & Ruslan (2023), which states that GRDP has a negative and significant effect on poverty. However, the results of this study are in contrast to the research by Qudri et al. (2023), which states that GRDP has a positive but insignificant effect on poverty.

4.2.6. The Effect of Human Development Index on Poverty in Underdeveloped Districts in Indonesia

Based on the results of the regression model, the coefficient of the HDI variable is negative with a value of -0.44, meaning that there is a negative relationship between HDI and poverty. The probability value of the HDI variable is 0.0000, which is less than the significance level of 5% ($\alpha = 0.05$), meaning that there is a significant relationship between HDI and poverty. Thus, it can be concluded that HDI has a negative and significant effect on poverty. If HDI increases by 1 unit, it will reduce the poverty rate by 0.44%, assuming that other variables remain constant or unchanged.

Based on the results of this study, it can be concluded that IPM is proven to be very effective in alleviating poverty in disadvantaged areas. High-quality human resources have been proven to help communities improve their quality of life. Therefore, the central and local governments need to work together to create creative programs that directly affect the quality of human resources, such as education and health, and to create policies that can support income equality.

The results of this study are in line with research conducted by Suliswanto (2012), Mukhtar et al. (2019), and Ramdhani et al. (2022), which states that HDI has a negative and significant effect on poverty. From previous studies compiled by the author, no results have been found that differ from this study.

5. CONCLUSION AND SUGGESTION

CONCLUSION

Based on the results of the analysis and discussion, it can be concluded that partially, village funds, education capital expenditure, GRDP, and HDI have a negative and significant effect on poverty in disadvantaged districts in Indonesia. This means that every percentage or unit increase in these variables will have an impact on reducing the percentage of the poor population. Meanwhile, the variables of village fund allocation and health capital expenditure have a positive but insignificant effect on poverty in disadvantaged districts in Indonesia. Simultaneously, the variables of village funds, village fund allocation, education capital expenditure, health capital expenditure, GRDP, and HDI simultaneously have a significant effect on poverty in disadvantaged districts in Indonesia.

SUGGESTION

Based on the conclusions obtained, the author offers several suggestions that can be considered to reduce poverty levels in disadvantaged districts in Indonesia, namely:

1. The central government should continue the village fund program and consider increasing the budget for village development. Monitoring and evaluation are also necessary to ensure that the funds disbursed are used by villages to improve the welfare of the community.
2. Local governments should evaluate the distribution of village funds to villages and ensure that the budget disbursed has been absorbed for the empowerment of village communities.
3. Local governments need to maintain capital expenditure programs in the field of education, including through the development/revitalization of educational infrastructure, which has been proven to improve the quality of human resources and reduce poverty.
4. Local governments need to evaluate the realization of capital expenditure in the health sector to determine whether the budget has been used for its intended purpose and whether there have been any irregularities in the implementation of the budget.
5. The central government and local governments (at the provincial and district/city levels) need to work together to increase the output of the economic sector as reflected in the GRDP, because an increase in the GRDP can reduce poverty levels.
6. The central government and local governments (at the provincial and district/city levels) need to work together to improve the quality of human resources, especially in remote areas, as reflected in the HDI. Improving the HDI has been proven to reduce poverty rates.

The model equation in this study explains 56.76% of poverty, while the remaining 43.24% is influenced by other variables not included in this study due to data limitations in underdeveloped districts. Therefore, future researchers are encouraged to refine this study and seek additional data and variables to support the research.

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