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The Role of Education and Health Budget Functions in Achieving SDG 1 at the Regional Government Level in Indonesia

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Abstract:

This study aims to analyze the effect of education and health budget allocations on the achievement of SDG 1 (No Poverty) in local governments in Indonesia. This study uses a positivist paradigm with multiple linear regression method. The research population includes 542 provincial/district/city local governments during the period 2018–2021, resulting in a total of 2,168 observation units. Using purposive sampling, a sample of 2,132 observation units was obtained. The findings show that the education and health budgets play a role in efforts to achieve SDG 1. In addition, control variables, such as the age of the government, have no effect on SDG 1. This study encourages local governments to increase and ensure that education and health budgets are allocated evenly and effectively to support the achievement of SDG 1. This study has a number of limitations, including the use of data limited to a four-year period and an analysis focus that only covers one of the 17 global SDG goals, namely Sustainable Development Goal 1 (No Poverty). This study highlights the crucial role of local government function budgets in supporting the achievement of SDG 1.

Keywords: *Education Budget Function, Health Budget Function, SDG 1*

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1. Introduction

The Sustainable Development Goals (SDGs) constitute a global development agenda agreed upon by 193 UN member states, including Indonesia. Comprising 17 goals and 169 targets, the SDGs aim to achieve prosperity and peace for all people by 2030. In Indonesia, the implementation of the SDGs is regulated and monitored through Presidential Regulation Number 59 of 2017 concerning the Implementation of Sustainable Development Goals. The eradication of poverty in all its forms everywhere (SDG 1) is one of the key goals within the SDGs. According to Bappenas (2022), No Poverty is designated as a primary target of the SDGs, considering that

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poverty remains a persistent issue today. Poverty is a complex and multidimensional problem (Ferezegia, 2018). According to S Gopal et al., (2021), poverty is a condition of deprivation experienced by individuals due to insufficient income to meet basic needs, low levels of education, and poor health conditions.

According to the Central Statistics Agency (2022), overall, from 2018 to 2021, the poverty rate in Indonesia showed a decline in both numbers and percentage. However, an increase occurred during the 2019–2020 period due to the impact of the Covid-19 pandemic. BPS also reported that in September 2021, the number of people living in poverty reached 26.50 million, a decrease of 1.04 million compared with March 2021, and a decline of 1.05 million compared with September 2020. Although there has been an overall downward trend from year to year, in 2021 there were still 26.50 million Indonesians living in poverty. The latest data released by the World Bank, as reported by CNBC Indonesia (2025), states that 60.3% of the population in Indonesia is poor, equivalent to 172 million people. These two facts show that SDG 1's goal of ending poverty by 2030 is still far from being achieved. Therefore, active government involvement is crucial in eradicating poverty through increasing and allocating appropriate and equitable budgets for education and health functions to produce quality education and health services that can improve human resources and productivity at work, ultimately impacting SDG 1 (No Poverty). In this context, the budget for education and the budget for health are two important elements that play a role in strengthening the achievement of Sustainable Development Goal 1 (No Poverty).

The achievement of SDG 1 is largely determined by the performance of local governments. Based on Law Number 23 of 2014 concerning Local Government, it is stated that local governments are responsible for administering government, development, managing local resources, and providing services to the community in order to improve welfare and the quality of public services. Local governments are also responsible for ensuring that the community has access to public services, including education, health, social protection, and infrastructure. This emphasizes the responsibility of local governments in improving the welfare and ensuring community access to public services so that the objectives of the SDGs can be achieved. One of the challenges faced by local governments in implementing the SDGs is limited human resources, even though excellent human resources are a major factor in the success of sustainable development programs (Amin, 2018). Development in the education sector plays an important role in improving the quality of human resources (Fikri & Suparyati, 2017). However, currently in Indonesia, there is still a gap in the quality and access to education due to the ineffectiveness and uneven distribution of the education budget (Nindita & Riani, 2024). Therefore, local governments need to plan and manage the education budget more efficiently and evenly so that all levels of society can access quality education.

Law Number 20 of 2003 on National Education is a law that guarantees the national education system and is capable of ensuring better and more equitable access to education, as well as efficient education management in a focused, planned, and sustainable manner, in accordance with the objectives of the 1945 Constitution to educate the nation. This regulation also stipulates the state's obligation to allocate a

minimum of 20% of the state budget and regional budget to education. With the right allocation of education funding, it is hoped that the quality of education can be improved, producing more competitive human resources and helping to reduce social and financial inequality, thereby reducing poverty in Indonesia. These findings are in line with the results of research by Hofmarcher (2021); Thahir et al., (2021); Pusparani (2022); Taruno (2019); Sisto et al., (2020); and Chairunnisa & Qintharah (2022), which analyze the extent to which the education budget impacts the improvement of education quality, thereby increasing the quality of human resources, which ultimately contributes to poverty reduction.

Quality and equitable health services are one of the keys to success in achieving the SDGs (Handayani et al., 2022). Development in the health sector has an impact on increasing the productivity of the community at work (Fikri & Suparyati, 2017). However, the condition of health services in Indonesia is still poor, such as the uneven distribution of quality health services for all Indonesian people (Prihandhan et al., 2018). This inequality is caused by health budget allocations that are still low compared to neighboring countries (Idaiani & Riyadi, 2018). Therefore, it is necessary for local governments to increase health budget allocations and distribute them more fairly to ensure that all levels of society have access to quality health services.

Law Number 17 of 2023 on Health guarantees the right to health for all Indonesian citizens through the implementation of an integrated, high-quality, and equitable national health system. This regulation strengthens the national health system, regulates the responsibilities, rules, and roles of the central and regional governments in realizing equitable, high-quality, and sustainable health services in Indonesia. In this regulation, the mandatory spending requirement of 5% of the state budget and 10% of the regional budget for health has been removed. The government argues that the health budget should be allocated based on needs and commitments, not on minimum allocation amounts. With equitable budget allocation and distribution, it is hoped that health services in Indonesia can be of higher quality and more evenly distributed, thereby increasing the productivity of the community at work and contributing significantly to reducing poverty in Indonesia. This is in line with several previous studies conducted by Handayani et al., (2022); Ali et al., (2020); Olopade et al., (2019); Komarudin & Oak (2020); Hatta (2018); and Melati et al., (2021), which analyzed the extent to which the health function budget impacts the improvement of the quality of health services, making the community more productive at work, which in turn will have an impact on reducing poverty.

Based on the phenomena that have occurred and the results of previous studies, there are still gaps (research gaps) that can be filled by this study. One of them is the problem of poverty, which has yet to find a comprehensive and sustainable solution. In addition, previous studies have focused more on the use of general expenditure variables as independent variables without separating the roles of each budget function. Several studies have also limited their scope to regional or specific area analysis, thus failing to represent the national condition. Therefore, this study aims to analyze more specifically the role of the education budget and health budget in efforts to promote the achievement of SDGs, particularly in poverty alleviation.

Based on data used in 2018-2021 with a total final sample of 2,132 observations, it was found that the education function budget and health function budget have an effect on the achievement of SDG 1. Here are some findings that can be described. First, this study provides empirical evidence of the negative effect between the education function budget and the achievement of SDG 1 (No Poverty). The results of this study contribute to providing additional explanations to previous studies in analyzing the education function budget, including Hofmarcher (2021); Sisto et al., (2020); Wijaya & Suasih (2021); Zulyanto (2022); Furqan et al., (2023); and Pusparani (2022), which state that the allocation of local government budgets in the education sector can support the achievement of SDG 1 (No Poverty). The allocation of budgets for education can improve the quality of education, which in turn will improve the quality of human resources, expand access to decent work, and ultimately contribute to a reduction in the percentage of people living in poverty. The difference with this study lies in the measurements used. Thus, the novelty in this study lies in the measurement of the education function budget variable, which is measured using the percentage of the education function budget against the total overall function budget to assess its effect on the achievement of SDG 1.

Second, this study also shows a negative influence between the health function budget and the achievement of SDG 1 (No Poverty). The results of this study contribute to providing additional explanations to previous studies in analyzing health function budgets, including Ali et al., (2020); Olopade et al., (2019); Handayani et al., (2022); Hatta (2018); Furqan et al., (2020); Novitasari & Sugianto (2024); and Acharya et al., (2018), who stated that the allocation of health budgets contributes to the achievement of SDG 1 (No Poverty). Appropriate health budget allocation can expand access to health, improve the quality of human resources and work productivity, and contribute to increased income, thereby breaking the cycle of poverty. The difference with this study lies in the measurements used. Thus, the novelty in this study lies in the measurement of the health function budget variable, which is measured using the percentage of the health function budget against the total overall function budget to assess its effect on the achievement of SDG 1.

This study implies the importance of local governments to increase and ensure that the education and health budgets are allocated evenly, appropriately, and effectively to improve the quality of education and health, which in turn will contribute to the achievement of SDG 1 (No Poverty). Local governments need to prioritize budgets in the education and health sectors, which have been proven to have a direct impact on improving human resources and community productivity.

This study has a number of limitations, including the use of data limited to a four-year period and an analysis that focuses on only one of the 17 SDGs, namely Sustainable Development Goal 1 (No Poverty). Furthermore, SDG 1 variables are measured using only one indicator, namely the percentage of the population living below the national poverty line, by gender and age group. This indicator ignores other indicators included in SDG 1. Therefore, future research should use more additional indicators that describe various aspects of SDG 1, such as the extreme poverty rate, the percentage of men, women, and children of all ages living in poverty in various dimensions, according to the national definition, the proportion of health insurance participants

through the National Health Insurance (SJSN) in the health sector, and others. It is important for local governments to ensure that the allocation and management of budgets for the education and health sectors are carried out optimally, effectively, and efficiently. Budgeting that focuses on achieving various No Poverty indicators will also support the achievement of Sustainable Development Goal 1 in a comprehensive and sustainable manner.

2. Theoretical Background

Stewardship Theory: The stewardship theory describes a situation in which managers are not solely driven by personal interests, but are oriented toward achieving the main objectives of the organization. This theory explains how executives, as stewards, are motivated to manage the resources under their responsibility in accordance with the interests of the organization (Donaldson & Davis, 1991). When faced with a choice between actions oriented toward personal interests and actions that support the organization, a steward will choose to continue acting in accordance with the interests of the organization (Davis et al., 1997). In this view, stewards seek to prioritize organizational goals over personal goals with the belief that when they work for the advancement of the organization, their personal needs will also be met (Anton, 2010). The stewardship theory in the context of local government organizations emphasizes the strong relationship between governors, regents, and mayors (local governments) as stewards and local government objectives as principals (Pratiwi et al., 2022). In this study, one of the sustainability goals of local government organizations as principals is poverty alleviation (Sustainable Development Goal 1). Therefore, stewards must be responsible for managing resources, consisting of education and health budgets, effectively, efficiently, and on target, for the success of poverty alleviation programs as the goal of local government organizations (principals).

Sustainable Development Goals (SDGs): Sustainable Development Goals, or in Indonesian known as Tujuan Pembangunan Berkelanjutan, are 17 global goals with 169 targets set by the United Nations as a global agenda to ensure peace, welfare, and prosperity for humanity, both now and in the future. The SDGs are a continuation of the MDGs, which ended in 2015, and represent a new chapter in global development as they encompass various universal development goals for the period 2015-2030 (Adis et al., 2019). In Indonesia, the implementation of the SDGs is supervised and regulated through Presidential Regulation Number 59 of 2017 concerning the Implementation of Sustainable Development Goals. The following are the 17 goals listed in the Sustainable Development Goals (SDGs) according to the (United Nations, 2015):

1. End poverty in all its forms everywhere.
2. End hunger, improve food security, improve nutrition, and promote sustainable agriculture.
3. Ensure healthy lives and promote well-being for all at all ages.

4. Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all.
5. Achieve gender equality and empower all women and girls in all areas.
6. Ensure availability and sustainable management of water and sanitation for all.
7. Ensure access to affordable, reliable, sustainable, and modern energy for all.
8. Promote inclusive and sustainable economic growth, create productive jobs, and ensure decent work for all.
9. Build resilient infrastructure, promote inclusive and sustainable industrialization, and foster innovation.
10. Reducing inequalities within and among countries.
11. Making cities and human settlements inclusive, safe, resilient, and sustainable.
12. Encouraging sustainable consumption and production patterns.
13. Taking concrete steps to address climate change and its impacts.
14. Conserving and sustainably using the oceans, seas, and seaside resources to support sustainable development.
15. Protect and restore terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse biodiversity loss.
16. Promoting peaceful, just, and inclusive societies, ensuring access to justice, and strengthening effective and accountable institutions at all levels.
17. Strengthening the means of implementation and revitalizing global partnerships for sustainable development.

The Role of the Education Function Budget in Achieving SDG 1: Law Number 20 of 2003 on National Education is a regulation that guarantees the improvement of education quality, equal access to education, and efficient and targeted education management, in line with the mandate of the 1945 Constitution in an effort to educate the nation. This regulation also stipulates the state's obligation to allocate a minimum of 20% of the state budget and regional budget to education. This shows that a good and equitable allocation of the education budget is important in realizing quality education, thereby improving the quality of human resources that can drive the achievement of SDG 1. Research conducted by Thahir et al., (2021); Hofmarcher (2021); and Wijaya & Suasih (2021) shows that the education budget used to finance educational facilities, scholarships, and equitable access to education plays a strategic role in reducing poverty. In addition, research conducted by Chairunnisa & Qintharah (2022); Pusparani (2022); and Taruno (2019) emphasizes the importance of the role of the education budget in reducing poverty levels as part of achieving SDG 1. Targeted education budget allocation can improve the quality of education, expand employment opportunities, and increase income, thereby reducing poverty. Therefore, the education budget is thought to play a role in achieving SDG 1. Thus, the first hypothesis (H1) in this study is as follows:

H1: The Education Function Budget Has a Negative Effect on the Achievement of SDG 1

The Role of the Health Function Budget in Achieving SDG 1: Law Number 17 of 2023 on Health is a regulation that guarantees the right to health for all Indonesian citizens through the implementation of an integrated, high-quality, and equitable

national health system. In this regulation, the obligation to allocate a mandatory spending of 5% of the state budget and 10% of the regional budget has been abolished. The government argues that the health budget should be allocated based on needs and commitments, not on the minimum allocation amount. This shows that an equitable allocation of the health budget contributes to realizing access to quality health services, thereby increasing productivity at work and promoting the achievement of SDG 1. Research by Handayani et al., (2022); Ali et al., (2020); Novitasari & Sugianto (2024); and Olopade et al., (2019) states that the health budget is an important instrument in achieving SDG 1. Health budgets play a role in improving access to and quality of health services, which makes the community more productive at work and able to escape the trap of poverty. Research by Komarudin & Oak (2020); Hatta (2018); and Melati et al., (2021) found that adequate health budget allocation and good governance quality are important factors that determine how effective the health budget is in improving health services and ultimately reducing poverty rates. Therefore, the health function budget is thought to play a role in achieving SDG 1. Thus, the second hypothesis (H2) in this study is as follows:

H2: The Health Function Budget Has a Negative Effect on the Achievement of SDG 1

3. Methodology

Data: This study used data from local governments in Indonesia covering 542 provinces/districts/cities in 2018-2021. However, because there were 8 provinces and districts that did not have data on education and health budgets, and 1 district that did not have SDG 1 data, they were excluded from the research sample. Due to these data limitations, the final sample size was set at 533 for each year of observation, or approximately 98.34% of the total number of provinces/districts/cities in Indonesia. As this study observed four years of budgets, the total final sample size was 2,132 observations. All data used in this study was obtained from Indonesian government agencies, namely the National Development Planning Agency (Bappenas) for SDG 1 data (percentage of the population living below the national poverty line, by gender and age group), the Ministry of Finance for education and health budget data, and the Ministry of Home Affairs for local government age data.

Empirical Model and Variable Operationalization: The following empirical model is used in this study to respond to the issues examined and test the hypotheses formulated:

$$\mathbf{SDGSA_{it} = \beta 0 + \beta 1 Education_{it} + \beta 2 Health_{it} + \beta 3 Ages_{it} + e_{it} \ldots\ldots\ldots\ldots (1)}$$

$SDGSA_{it}$ is a variable for measuring the achievement of the Sustainable Development Goals, which is measured using the percentage of the population living below the national poverty line, by gender and age group. An increasing or high percentage indicates a higher number of people living below the national poverty line. A lower percentage of people living below the national poverty line indicates that SDG 1 is being achieved. $Education_{it}$ is a variable for local government education budgets in

Indonesia, measured using the percentage of the education budget divided by the total budget. The higher the percentage of the education budget, the better the poverty alleviation. Conversely, the lower the percentage of the education budget, the worse the poverty alleviation. $Health_{it}$ is a variable of the local government health function budget in Indonesia, which is measured using the percentage of the health function budget divided by the total function budget. The higher the percentage of the health function budget, the better it is at alleviating poverty. Conversely, the lower the percentage of the health function budget, the worse it is at alleviating poverty.

This study includes the control variable Agesit, which is the age of the local government during the 2018–2021 period, measured using the number of years since the region was formed until 2021. The age of the local government reflects the level of experience of the government in implementing efforts to achieve the SDGs, particularly in the aspect of poverty alleviation. Table 1 below presents details of the operationalization of variables and data sources used in this study:

Table 1. Variable Operationalization

Name	Variable Operationalization	Data Source
$SDGSA_{it}$	This is a variable for achieving the Sustainable Development Goals (SDGs), which is measured using the percentage of the population living below the national poverty line, by gender and age group. The lower the percentage of the population living below the national poverty line, the more the SDG 1 goal is being achieved.	National Development Planning Agency (BAPPENAS)
$Education_{it}$	This is a variable for the education function budget of provincial/district/city governments in Indonesia, measured using the percentage of the education function budget, with the formula: education function budget divided by total function budget multiplied by 100.	Ministry of Finance
$Health_{it}$	This is a variable for the health function budget of provincial/district/city governments in Indonesia, measured using the percentage of the health function budget, using the formula: health function budget divided by total function budget multiplied by 100.	Ministry of Finance
$Ages_{it}$	This is a variable for the age of local governments during the 2018–2021 period, measured using the number of years since the region was formed until 2021.	Ministry of Home Affairs (KEMENDAGRI)

Data Source : Stata 17 Output (Kadimun, 2025)

4. Empirical Findings/Result

Descriptive Statistics Variables

Table 2 below presents descriptive statistical data from all variables used in this study:

Table 2. Descriptive Statistics Variables

Variable	Mean	Std. Dev.	Min	Max
$SDGSA_{it}$	12.05	7.50	1.68	43.65
$Education_{it}$	25.04	6.91	4.78	56.73
$Health_{it}$	16.05	4.75	1.38	41.05
$Ages_{it}$	42.60	24.04	4	71

Number of Observations = 2.132
Operationalization of Variables in Table 1

Data Source: Stata 17 Output (Kadimun, 2025)

Table 2 shows the results of descriptive statistical analysis for all variables involved in this study. The mean of the $SDGSA_{it}$ variable shows a figure of 12.05, which means that the average $SDGSA_{it}$ (percentage of the population living below the national poverty line, by gender and age group) in Indonesia from 2018 to 2021 has decreased. The mean value of the $Education_{it}$ variable is 25.04, indicating that the average budget allocation for education by local governments in Indonesia from 2018 to 2021 is still relatively low. The mean value of the $Health_{it}$ variable is 16.05, indicating that the average budget allocation for health functions by local governments in Indonesia from 2018 to 2021 is still relatively low.

For the control variable, the mean value of the $Ages_{it}$ variable shows that the average age of local governments in this study is 42.60 years, indicating that most regions have a relatively mature and experienced government structure. Furthermore, Table 3 displays the results of the correlation analysis between the variables analyzed in this study:

Variable Correlation Analysis

Table 3. Variable Correlation Analysis

Variable	$SDGSA_{it}$	$Education_{it}$	$Health_{it}$	$Ages_{it}$
$SDGSA_{it}$	1.0000			
$Education_{it}$	-0.3973***	1.0000		
	0.0000			
$Health_{it}$	-0.1739***	0.0773***	1.0000	
	0.0000	0.0004		
$Ages_{it}$	-0.2457***	0.4703***	0.2685***	1.0000

Variable	$SDGSA_{it}$	$Education_{it}$	$Health_{it}$	$Ages_{it}$
	0.0000	0.0000	0.0000	

Number of Observations = 2.132
Explanation of variable operationalization in Table 1
*** = P-value significant at 1%

Data Source : Stata 17 Output (Kadimun, 2025)

Table 3 shows the results of the correlation analysis between variables, which reveals the relationship between the main variables in this study. The significant relationship between $SDGSA_{it}$, $Education_{it}$, and $Health_{it}$ indicates that these variables interact with each other and can be used to support further hypothesis testing. These findings confirm that budget allocation for education and health functions plays an important role in achieving the SDGs, particularly in poverty eradication efforts at the local government level. Meanwhile, for the control variables, a significant negative correlation was found between the variable $Ages_{it}$, and the variable $SDGSA_{it}$.

Hypothesis Testing

Hypothesis testing in this study used the Random Effects method, with analysis performed using STATA 17 software. The following table shows the results of the hypothesis testing:

Table 4. Hypothesis Testing Results

$$\mathbf{SDGSA_{it} = \beta 0 + \beta 1 Education_{it} + \beta 2 Health_{it} + \beta 3 Ages_{it} + e_{it} ……..(1)}$$

Variable	Expected Sign	$SDGSA_{it}$
_CONS		26.026
		0.000
$Education_{it}$	H1 : (-)	-.401***
		0.000
$Health_{it}$	H2 : (-)	-.214***
		0.000
$Ages_{it}$	+/-	-.010
		0.129
Prob > F		0.000
R-square		0.179
Obs		2.132
Mean Vif		1.25

Description:
Description of variable operationalization in Table 1
***,* = P-Value significant at 1% & 10%

Data Source : Stata 17 Output (Kadimun, 2025)

5. Discussion

Overall, the results of multiple linear regression analysis show that the R-Squared value is 0.179, indicating that this model can explain 17.9% of the variability in SDG achievement in the area of poverty alleviation by local governments in Indonesia. However, this figure is still relatively low, indicating that there are other variables outside the model that also influence the achievement of a more comprehensive SDG 1. The Prob > F value shows ($p < 0.01$) and the Mean Vif value is 1.25, so it can be said that there is no multicollinearity problem in the model and it is reliable for explaining the variation in SDG achievement in the field of poverty alleviation in local governments in Indonesia.

Table 3 shows that the functional budget in the education sector ($Education_{it}$) has a negative effect on the achievement of SDG 1 (No Poverty) at the local government level in Indonesia, with a coefficient of -0.40 and significance at the 1% level. This indicates that the data in this study supports the acceptance of the first hypothesis (H1). In addition, Table 3 shows that the functional budget in the health sector ($Health_{it}$) has a negative effect on the achievement of SDG 1 (No Poverty) at the local government level in Indonesia, with a coefficient value of -0.21 and significance at the 1% level. This indicates that the data in this study supports the acceptance of the second hypothesis (H2).

The first finding broadly supports previous research conducted by Hofmarcher (2021); Sisto et al., (2020); Chairunnisa & Qintharah (2022); and Wijaya & Suasih (2021), which found that local government budgets allocated to the education sector can support the achievement of SDG 1 (No Poverty). The equitable allocation of the education budget by local governments can improve the quality of education, thereby improving human resources, increasing access to decent work, and ultimately contributing to a reduction in the percentage of people living in poverty. In addition, these findings support the research by Pusparani (2022), which states that the local government education budget has the potential to be an effective strategy in achieving SDG 1 in the field of poverty alleviation. This study also supports research conducted by Zulyanto (2022) which found that education budget allocation does have an impact on poverty alleviation efforts. Quality education resulting from appropriate education budget allocation can have an impact on reducing poverty rates. The research by Furqan et al., (2023) examined the achievement of SDGs through increased accountability and good governance in the budgeting process. The allocation of the education budget greatly contributes to poverty alleviation. The effectiveness of the education budget is highly dependent on the quality of local government governance and accountability. Therefore, the novelty of this study lies in the measurement of the education budget variable, which is measured using the percentage of the education budget to the total overall budget to assess its impact on the achievement of SDG 1. Several studies above show that there are many factors that can be used as measures in improving the SDGs that were not analyzed in this study. In line with previous studies, it can be concluded that education is the key to improving human resources and the standard of living of the community.

The use of stewardship theory in this study can explain the impact of the education function budget on SDG 1 (No Poverty), because in this theory, local governments are stewards who are mandated to be responsible for managing resources in the form of education function budgets effectively, efficiently, and on target, for the success of poverty alleviation programs as the sustainable development goal of local government organizations (principals). This is important so that the allocation of the education budget can have a real impact on improving the quality of education and human resources, thereby contributing to a reduction in poverty levels.

A high level of education has a direct impact on the ability of individuals and communities to escape poverty. The government plays an important role in achieving SDG 1, especially in the budgeting stage. Local governments will allocate budgets to finance all activities related to the implementation of educational functions, such as the provision of educational facilities and infrastructure, the development of infrastructure, educational scholarships, and the financing of educators. The results of the study indicate that the higher the education budget allocated by local governments and the more appropriate the allocation of this budget, the more it can encourage improvements in the quality of education and human resources, which in turn supports the achievement of SDG 1 related to poverty eradication efforts at the local government level in Indonesia.

The second finding is in line with a number of previous studies, including Ali et al., (2020); Olopade et al., (2019); Handayani et al., (2022); Novitasari & Sugianto (2024); and Hatta (2018), which found that the health sector budget has an impact on improving the achievement of SDG 1. Appropriate health budget allocation by local governments can expand access to health services and boost labor productivity, which ultimately leads to increased income and a way out of the cycle of poverty. This study also supports the findings of Acharya et al., (2018), who stated that a larger and more targeted budget allocation for health functions at the local government level is an effective strategy in reducing poverty, which is the goal of SDG 1. In addition, research by Palenewen et al., (2018) also shows that the health function budget plays an important and significant role in reducing the percentage of the poor. The budget for the health sector has been proven to increase the human development index, community productivity, and community welfare, which in turn contributes to poverty reduction. Furthermore, research by Furqan et al., (2020), reveals that the quality of financial reports has an impact on the quality of public services. One of the public services referred to in this study is health. Quality public services can improve community welfare and contribute to reducing poverty, which is the main objective of SDG 1. Thus, the novelty of this study lies in the measurement of the health function budget variable, which is measured using the percentage of the health function budget to the total overall function budget to assess its effect on the achievement of SDG 1. In line with previous studies, the conclusion that can be drawn is that better access to health will increase community productivity, enabling them to work better and earn a more decent income. The government has a very crucial role in efforts to achieve SDG 1, one of which is in the budgeting process.

The use of stewardship theory in this study can explain the impact of the health function budget on SDG 1 (No Poverty), because in this theory, local governments

are stewards who are mandated to be responsible for managing resources in the form of health function budgets effectively, efficiently, and on target, for the success of poverty alleviation programs as a sustainable development goal of local government organizations (principals). This is important so that the allocation of the health function budget can truly have a real impact on improving the quality of health services, human resources, and increasing labor productivity, thereby contributing to a reduction in poverty rates.

The health budget allocated by local governments is used to finance all activities related to the implementation of health functions, such as quality and equitable health programs and services, access to health facilities, financing of medical personnel salaries, and development of health infrastructure. Therefore, it can be concluded that the higher the budget allocated by local governments to the health sector and the more accurate the allocation, the greater the role it can play in supporting the provision of fairer and higher-quality health services and increasing community productivity, which ultimately contributes to the achievement of SDG 1 in the context of poverty alleviation at the local government level in Indonesia.

This research model includes the age of the government as a control variable to support the impact of education and health budgets on poverty alleviation (SDGs). The test results show that the direct influence of the age of the government has no effect on the achievement of SDGs in the field of poverty alleviation. These results can be explained by the fact that the success of poverty alleviation does not depend on whether the government is stable or not. The age of the government as a control variable plays a role in supporting the influence of education and health budgets on reducing the percentage of the poor (Malelea et al., 2024). When the age of the government is not included in the research model, education and health budgets have no effect on poverty levels (SDGs). However, when the age of the government is included as a control variable, education and health budgets have a significant effect on poverty reduction. Thus, it can be explained that education and health budgets will have an effect on reducing poverty levels when the government is established and will not have a significant effect when the government is not yet established.

6. Conclusions

The following conclusions are based on the findings from the analysis and test results in this study:

1. The education function budget has a negative effect on the achievement of SDG 1 (No Poverty) in local governments in Indonesia. The higher the education function budget allocated by local governments, the lower the percentage of people living below the national poverty line, according to gender and age group.
2. The health function budget has a negative effect on the achievement of SDG 1 (No Poverty) in local governments in Indonesia. The higher the health function budget allocated by local governments, the lower the percentage of people living below the national poverty line, according to gender and age group.

This study implies the importance of local governments to improve and ensure that the education and health budgets are allocated evenly, appropriately, and effectively to improve the quality of education and health, which in turn will contribute to the achievement of SDG 1 (No Poverty). Local governments need to prioritize budgets in the education and health sectors, which have been proven to have a direct impact on improving human resources and community productivity.

This study has several limitations, including the use of data from only four years and the analysis of only one of the 17 global targets of the SDGs, namely Sustainable Development Goal 1 (No Poverty). In addition, SDG 1 variables were measured using only one indicator, namely the percentage of the population living below the national poverty line, by gender and age group. This indicator ignores other indicators included in SDG 1.

For future research, it is hoped that more additional indicators can be used to describe various aspects of SDG 1, such as the extreme poverty rate, the percentage of men, women, and children of all ages living in poverty in various dimensions, in accordance with the national definition, the proportion of health insurance participants through the Health Sector Social Security Program (SJSN), and others. In addition, it is recommended to expand the scope of this research to include other SDG goals or targets.

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