

EFFICIENCY OF SDGS IMPLEMENTATION IN VILLAGE SUSTAINABLE DEVELOPMENT TO REDUCE INCOME DISTRIBUTION INEQUALITY

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ABSTRACT

Introduction: Village development in Indonesia aims to improve the welfare of the community, especially in terms of income equality. To achieve this goal, people-centered sustainable development is needed. Sustainable development is an effort to improve the quality of life while still trying not to exceed the ecosystem that supports life. Sustainable development in villages can be implemented through the Village SDGs. The Village SDGs include 17 goals that are interconnected with each other. Each goal has specific targets in addressing pressing social, economic, and environmental issues and creating a more just and sustainable future together. The purpose of this study is to determine whether people-centered sustainable development is effective in reducing income distribution inequality and to explain how it affects income distribution inequality.

Methods: Using DEA analysis and panel data regression, the research object is 33 provinces in Indonesia.

Results: The results show that education and income have a significant negative effect on income inequality. Furthermore, health has a significant positive effect on income distribution inequality.

Conclusion and suggestion: Equal access to education, health, and equal income, will be effective in reducing the level of inequality in the community.

INTRODUCTION

The decentralization system implemented in Indonesia implements that regions have the authority to self-manage. Likewise in the village, according to Law No. 6/2014 Article 1 paragraph 1 concerning Villages, the village is a legal community unit that has regional boundaries that are authorized to regulate and manage government affairs, the interests of local residents according to the wishes of the community, the rights of origin,

and traditional rights that are recognized and respected in the government system of the Republic of Indonesia (Wahyuddin et al., 2019). This is the first step toward independence in government administration and village fund management (Suwardi et al., 2022). The birth of the Law on Villages provides an opportunity to be able to pay attention to their true identity in organizing and managing the village together with the community (Dewi & Budiawan, 2023).

In its implementation, the village will be in direct contact with the people in its role of providing public services, especially to the people. So it is expected that the implementation of government and management of village funds requires a reliable and innovative village apparatus, as well as adequate infrastructure, so that the implementation is more directed and according to the required targets (Susanti et al., 2021). A people-centered development strategy has the ultimate goal of improving the quality of life of all people with individual and collective expectations. This development strategy, at its core, is a process of eradicating absolute poverty, realizing distributive justice, and increasing people's participation in real ways (Wadu et al., 2020).

Village community empowerment has been driven by villagers themselves, both as individuals and as members of community groups. Villages can narrow the problems while expanding the power of the poor, vulnerable, and marginalized groups hence as to create harmony among village communities through productive and sustainable activities (Kemendes PDTT, 2022). However, in the current concept of development, the dichotomy between town and country is unavoidable. In the theory and implementation of development, agricultural activities are generally considered synonymous with villages, while industry is synonymous with cities. This separation has implications that cause many problems in its implementation, achieving development goals is not optimal. Rural areas are still relatively underdeveloped when compared to urban areas, resulting in uncontrolled urbanization and informal sector problems (Ihsan et al., 2020).

As has been the case in recent decades, the world has seen an increasing need to address global problems such as poverty, inequality, climate change, and environmental degradation. The most important thing to do in addressing global problems is to equalize people's income, especially in rural areas. Income distribution is the most important factor in determining the level of community welfare. The imbalance of people's income in a region or country will affect the welfare and prosperity of a country. Indonesia is one of the countries with the largest inequality in the world, where the wealth of the four richest people in Indonesia is equal to the amount of wealth owned by 100 poor people. Inequality cannot be eliminated, but countries can reduce it with an equitable growth process (Nadya & Syafri, 2019). For this reason, in order to reduce inequality, a pro-poor development is needed, namely development that favors the poor, where the majority of the poor live in rural areas (Qomariyah et al., 2017).

Village development in Indonesia basically aims to improve the welfare of the community and create an equitable distribution of income, based on the quality of life of rural communities, through the fulfillment of basic needs, the development of village infrastructure, the development of local economic potential, and the sustainable use of natural resources. Villages are a source of problem identification, having a high number of underprivileged people, a limited level of health, and a low level of education. In this case, the concept of sustainable development is needed, which is an effort to improve the quality of life while still trying not to exceed the ecosystem that supports life. For this reason, until now sustainable development has become an important issue that needs to be continuously socialized in the community (Dewi & Budiawan, 2023). The development of villages based on sustainable goals is in order to solve poverty, inequality, protect the planet, and ensure that all people enjoy health, justice, and prosperity equally (Sena et al., 2023).

The United Nations (UN) adopted the Sustainability Development Goals (SDGs) as a comprehensive framework to guide countries in achieving sustainable development by 2030. The SDGs include 17 interconnected goals. Each has specific targets to address pressing social, economic and environmental issues and create a more just and sustainable future together (Khasanah et al., 2023). Sustainable development refers to improving the welfare of citizens in meeting their needs, which in essence refers to equitable development between communities that exist today and communities that exist in the future. Development can be said to be sustainable, if it has met an economic criterion and has social benefits in meeting the needs of the community (Saribulan et al., 2023).

The Village SDGs can be implemented in current village development practices, so as to encourage village progress in Indonesia. The measure of human capital, in the process of sustainable development, is widely understood as a component of development (Iskandar, 2021). To determine human development, it can be measured by the Human Development Index (HDI) which can be used to measure the success of human-centered development. There are three parameters used with the HDI approach, namely health, education, and income. People-centered development is based on an understanding of human ecology, where people are the center of attention in the development process (Fernandya et al., 2022).

Producing quality human beings, of course, requires quality education as well, where education is one of the important aspects in the SDGs program. Indonesia is one of the legal states that make education an important foundation in advancing the nation. However, education in Indonesia to date has faced various obstacles and reduced its quality. National education has not been evenly distributed throughout society, especially to rural communities. The implementation of the Sustainable Development Goal (SDGs)

program is an effort to promote the welfare of society, one of which is through quality education. Quality and equitable education will be able to have an efficient impact on the sustainable development process. The success of sustainable development will be efficient in achieving equitable distribution of community welfare, so as to reduce income inequality (Safitri et al., 2022).

Suwardi et al. (2022) explain that community involvement participates in rural development, which is the main pillar in the progress of the village. Puspitaningrum and Lubis (2018) also explained that there is a strong relationship between the level of community participation and village development. These results are supported by the results of research by Shahpari and Davoudi (2014) that increasing human capital, in this case human quality, can reduce the Gini index to make income distribution more equitable. Community involvement in development is related to the level of human productivity. Health factors are expected to improve the quality of human resources which in turn can provide positive benefits for increasing productivity, which will indirectly increase people's income, which in turn can reduce the income gap. However, Wicaksono et al. (2018) found that the level of health has no significant effect on the income gap. Likewise, research by Noviana et al. (2015) found that health has not been able to overcome the income gap. Furthermore, research by Hindun et al. (2019) also explains that, when the government increases the amount of spending on the education sector, it has an impact on increasing the income gap. This result is not in accordance with Wahyuni and Monika's (2017) research that a higher level of education affects increasing income equality.

The different results of previous research make this research interesting to do. Through this research, it is expected to identify the factors of human involvement in reducing income inequality in rural communities in particular. Moreover, community involvement in rural areas contributes greatly to changes in the village economy, hence sustainable development that focuses on improving human quality is needed. For this reason, this study will measure the level of efficiency and influence of the implementation of SDGs in rural sustainable development through community involvement in reducing income inequality in rural areas in Indonesia.

LITERATURE REVIEW

Sustainability Development Theory

Sustainable development is aimed at the process of equitable development between the current generation and future generations (Priyoga, 2010), that aims to improve the welfare of society, through the availability of human needs and aspirations. It can be said that sustainability is a complex concept, which in its operational implementation contains many things that need to be considered and interrelated to

achieve development goals. In this case, several strategies are needed in its implementation, namely equity, participation, diversity, integration, and a long-term perspective followed by an ideal approach (Hapsoro & Bangun, 2020).

Ideally, sustainable development requires an approach to achieving sustainability or continuity in various aspects of life, one of which is socio-cultural. More broadly, social and cultural sustainability is expressed in social justice, human dignity and the improvement of the quality of life of all human beings. The goals of social and cultural sustainability are, first, population stability whose implementation includes strong political commitment, community participation, strengthening the role and status of women, improving the quality, effectiveness and environment of the family. Second, fulfilling basic human needs. Third, maintaining cultural diversity and fourth, encouraging the participation of local communities in decision-making (Jaya, 2004).

Pembangunan Keberlanjutan Desa (Village Sustainability Development)

The village as an arena for the development of sustainable livelihoods provides great hope in efforts to overcome poverty in the village. Village independence and sovereignty, as stated in the Village Law, will be easily realized when villagers' livelihoods are developed, diversified, and made sustainable. The livelihoods of villagers can be considered sustainable when their functions can be enjoyed continuously without reducing their functions at present and in the future (Zamroni et al., 2015).

SDGs development is one aspect of policy development for sustainable village development. The SDGs can be implemented continuously in accordance with the provisions of Law Number 6 of 2014 concerning Villages in an integrated manner in achieving national development. Village SDGs development is one of the national development goals through dynamic and adaptive village institutions in unique development targets according to the village's potential in order to accelerate sustainable village development (Nellis et al., 2023).

Some aspects that can affect the development of an area are the participation of the community and the development strategy carried out by the government concerned (Dartika & Pramono, 2021). Research by Putri and Agungnanto (2017) and Bakti (2018) explained that community participation is one aspect of the village development process. This means that community involvement in the village development process will accelerate the development process because the community feels involved and has an interest in the existing development. The government's role here is to encourage and raise public awareness to participate in the implementation of development. Next, Research from Ibrahim and Muliati (2023) explained that, with community participation in the village development process, villagers can understand the authorities of the village,

district, and provincial governments so that the proposed programs and activities can be more appropriate in accordance with the village's authority.

People-Centered Development Model

People-oriented development is a development process that puts people at the center of attention and the development carried out must benefit all parties. Problems such as poverty, inequality, and unemployment need to receive the main attention, because these problems cause instability that leads to negative influences, such as the loosening of social ties and the weakening of values and human relations. Therefore, a region's commitment to increasing economic growth without excluding any party, especially the poor, upholding human rights values, not discriminating, and providing protection to underprivileged communities, is the essence of the people-centered development model paradigm (Fernandya et al., 2022).

The main challenge in development is to improve lives. A better quality of life implies higher incomes, but it is more important that incomes are equitably distributed (Perwiranegara, 2021). Important factors that need to be considered as a community contribution to reducing inequality in society are education and health standards. Capital and the quality of human resources (HR) are the determining factors of poverty in a region. The measure of human capital quality can be seen from the Human Development Index (HDI). A low level of HDI can reduce the labor productivity of the population. Low labor productivity can reduce people's income and low income will increase the number of poor people. Hence it can be said that the quality of human resources is a factor that causes poverty (Ridwan & Putri, 2022).

Income Distribution Inequality

The relative inequality of income distribution among people in a country or region can be measured by the Gini coefficient (Gini ratio). Income distribution in the context of development has a relationship that can be explained by the inverted U-curve better known as the Kuznets Curve. According to Kuznets, higher income inequality can be caused by income distribution, but inequality can decrease as an equitable economy develops. Inequality in income distribution is an impact or consequence of growth-oriented development. A rural development paradigm that focuses on economic growth and social growth will not avoid inequality. This can occur due to differences in productivity in each individual/group (Khoirudin & Musta'in, 2020). Many factors can influence income distribution inequality. Badriah (2019) stated that good economic growth can reduce low levels of income inequality. Increased economic growth is based on well-managed local budgets. These quality budget expenditures will be able to have a double impact on economic growth, reduce poverty, and reduce inequality. Government

spending can be used for the health, education, and infrastructure sectors as a medium to measure the level of public welfare (Khairunnisa et al., 2021).

The Relationship between the Effects of Education and Inequality in Rural Communities

The contribution of the community to inequality is how much access to education the community can receive. Education is one of the sectors that can affect inequality. The level of wages earned by the community is based on education, which contributes greatly to the distribution of community income. Income is earned by the community by working and the higher a person's education, the higher the quality of work they will have. The current cost of education is quite expensive, making it difficult for people with low income to get a higher education and the quality that will be obtained will be different from people who have high income. This reinforces that education is one of the factors causing income inequality. Nadya and Syafri (2019) found equitable education will improve income distribution, thereby reducing inequality among people. Further research (Situngkir & Syafri, 2021) explained that average years of schooling may reflect a decline in income inequality.

H1: Efficient Education Sector in Reducing Inequality in Rural Income Distribution in Indonesia.

Relationship between Health and Inequality in Rural Communities

The quality of human resources will help the development process. Development in the health sector is expected to improve the quality of human resources, which in turn benefits increased productivity and life expectancy. Indirectly, increased productivity has an impact on increasing income, thereby reducing existing income inequality. In the case of Indonesia, improving health is not only controlling the primary care system but also focusing on income inequality conditions, namely equalizing income distribution through improving nutrition and people's living standards (Wicaksono et al., 2018). This statement is supported by Yoertiara's (2022) research that equalizing access to health can reduce community income inequality. The results of Janah's (2022) research also explain that an increase in HDI means an increase in education, health, and community income, which will reduce income inequality in a region.

H2: Health Sector Efficient in Reducing Inequality in Rural Income Distribution in Indonesia

Relationship between the Influence of Community Income and Village Community Inequality

Humans are at the center of attention in the development process. Social problems that continue to occur need major attention because they can affect instability or imbalance, which will lead to negative influences. There needs to be a commitment to

increase development in a way that is fair, non-discriminatory, and provides protection equally to all levels of society. The main challenge in the development process is how to improve lives. A good quality of life is supported by income. However, the effects are not as great as those of education and health. However, low productivity results in low income, which then triggers an increase in poverty in a region (Fernandya et al., 2022).

H3: Efficient Community Income Levels in Reducing Inequality in Rural Communities in Indonesia.

RESEARCH METHODS

This research is quantitative causality research, where it uses numbers as research data and reviews the relationship between the independent variable and the dependent variable. The data used in the study are secondary data obtained by researchers through the publication of the Indonesian Central Bureau of Statistics. The samples in this study were 33 provinces in Indonesia. The data analysis technique used is descriptive technique where this analysis technique presents the object of research systematically and factually. Furthermore, data envelopment analysis (DEA) was also conducted to measure the efficiency of a decision-making unit (DMU). According to each DMU, it is considered to have a negative efficiency value, by showing a value between 0 and 1. The score is considered efficient if it shows the number 1 (100% efficiency value). Anything less than 1 indicates inefficiency (Ersangga & Atahau, 2021). To strengthen the results of the efficiency of the research data, the data are then processed with a panel data regression model to see the effect of the independent variables (Education, Health, and Income) on the dependent variable (Income Distribution Inequality). Panel data regression is regression by combining cross-section and time-series data in one equation. This regression is used to overcome some of the problems faced by cross-section data regression testing and testing with time-series data (Sriyana, 2014). In processing the data, this research uses Eviews-10 and Stata-17.

Table 1. Operational Variables Definition

Variables	Definition	Measurement	Reference
Income Distribution Inequality (Y)	Inequality in the distribution of resources and wealth. For example, economic inequality, income inequality, and inequality in access to education and health.	Gini Ratio of Rural Areas	(Anas et al., 2019; Badriah, 2019; Gunung et al., 2023; Nadya & Syafri, 2019; Situngkir & Syafri, 2021; Yoertiara, 2022)
Education (X ₁)	Proportion of the population in a given education level age group that is still in school at the	School Enrollment Rate (Rural)	(Akbar, 2018; Eriani & Yolanda, 2022;

	education level corresponding to their age group to the population in that age group.		Rahmayani & Andriyani, 2022)
Health (X2)	The average estimated length of time (in years) that a person can expect to live.	Life Expectancy Rate	(Khaeni, 2023)
Community Income (X3)	The amount of expenditure of each household member in a certain period of time.	Rural Community Per Capita Expenditure	(Sugiyarto et al., 2016; Syahri & Gustiara, 2020)

The regression model used in this study is:

$$Gini = \beta_0 + \beta_1 APS + \beta_2 UHH + \beta_3 \log(\text{Per Capita Expenditure}) + \varepsilon$$

Keterangan:

Gini : Measurement of Income Distribution Inequality (%)

β_0 : Constanta

APS : School Enrollment Rate (%)

UHH : Life Expectancy Rate (%)

Per Capita Expenditure : Measure of Community Income (Rp)

ε : Error

Panel data are data observed from several individuals (cross-section), each of which is observed with several consecutive periods (time series). Meanwhile, the so-called panel data regression is a regression by combining cross-section and time-series data in one equation. This regression is used to overcome some of the problems faced by cross-section data regression testing and testing with time-series data (Sriyana, 2014).

RESULT AND ANALYSIS

This section describes the results of statistical tests ranging from descriptive analysis, panel data regression testing, and efficiency testing with the DEA method. Table 2 explains the results of the descriptive statistical tests that are being observed. The results explain that the maximum value of the Gini ratio that explains the level of income distribution inequality is 43.6, which occurs in West Papua province in 2022. Meanwhile, the minimum value of the Gini ratio belongs to the province of Bangka Belitung Islands in 2021. Although West Papua Province has a high level of inequality, the School Participation Rate (APS) and Life Expectancy Age (UHH) are still higher when compared to Papua Province, which has the minimum APS level in Indonesia. Inequality in Indonesia is

still prevalent in areas far from urban centers. It can be seen from the low UUH ratio in the provinces of Papua, West Papua, and the Sulawesi region. It is different if we look at the Java region, where provinces such as Yogyakarta, Central Java, West Java, and East Java each have high APS and UUH levels compared to other provinces.

Table 2. Descriptive Statistics

	GINI	APS	UHH	EXPENDITURE
Mean	30.52545	70.73855	69.93624	5.991958
Median	29.50000	70.74000	69.98000	5.985399
Maximum	43.60000	83.72000	75.08000	6.172068
Minimum	21.50000	53.13000	64.58000	5.763845
Std. Dev.	4.513093	6.816367	2.498827	0.074652
Observations	165	165	165	165

Source: Data processed in 2023

Table 3 explains the results of the DEA analysis that illustrates the efficiency of the input variables to the output variables used. Sustainable development (SDGs) based on the People-Centered Development Model Analysis (Education, Health, and Income) is said to be efficient if the results obtained from the DEA calculation reach 100% or 1. However, the lower the level of achievement, the more inefficient it is indicated. DEA in its test compares several DMUs that are homogeneous based on several inputs to get the expected output. The results of the DEA analysis in this study are as follows:

Table 3. DEA VRS Analysis

Province	2018	2019	2020	2021	2022
Aceh	0.955	0.953	0.952	0.952	0.949
Bali	0.930	0.926	0.927	0.923	0.923
Banten	0.953	0.951	0.949	0.949	0.945
Bengkulu	0.968	0.964	0.962	0.961	0.958
DI Yogyakarta	0.902	0.895	0.892	0.891	0.893
Gorontalo	0.983	0.977	0.975	0.973	0.970
Jambi	0.940	0.939	0.938	0.937	0.934
Jawa Barat	0.917	0.915	0.913	0.910	0.908
Jawa Tengah	0.901	0.902	0.901	0.900	0.904
Jawa Timur	0.939	0.937	0.936	0.935	0.931
Kalimantan Barat	0.947	0.943	0.941	0.942	0.938
Kalimantan Selatan	0.972	0.969	0.967	0.965	0.962
Kalimantan Tengah	0.954	0.953	0.953	0.952	0.948
Kalimantan Timur	0.909	0.905	0.904	0.901	0.901
Kalimantan Utara	0.922	0.921	0.923	0.920	0.922
Kepulauan Bangka Belitung	0.947	0.944	0.942	0.941	0.937
Kepulauan Riau	0.958	0.955	0.955	0.952	0.948
Lampung	0.949	0.946	0.944	0.943	0.939
Maluku	0.992	0.994	0.995	1.000	1.000
Maluku Utara	0.981	1.000	0.974	0.973	0.969
Nusa Tenggara Barat (NTB)	0.996	1.000	1.000	0.994	0.990

Nusa Tenggara Timur (NTT)	1.000	0.992	0.990	0.989	0,985
Papua	1.000	1.000	1.000	1.000	1.000
Papua Barat	0.993	0.995	1.000	1.000	1.000
Riau	0.939	0.935	0.934	0.933	0.930
Sulawesi Barat	0.993	0.993	0.993	0.993	1.000
Sulawesi Selatan	0.951	0.946	1.000	0.943	0.940
Sulawesi Tengah	0.980	0.974	0.969	0.967	0.966
Sulawesi Tenggara	0.942	0.941	0.938	0.937	0.936
Sulawesi Utara	0.937	0.934	0.933	0.931	0.928
Sumatera Barat	0.966	0.963	0.958	0.959	0.955
Sumatera Selatan	0.957	0.955	0.952	0.951	0.947
Sumatera Utara	0.971	0.967	0.964	0.964	0.959

Source: Data processed in 2023

The results of the DEA analysis above explain that using inputs (APS, UUH, and Expenditure) can explain the implementation efficiency and performance of the level of income distribution inequality (Gini ratio). It was found that the provinces in Indonesia that can efficiently generate income distribution inequality are North Maluku Province in 2019, NTB Province in 2019-2020, NTT in 2018, Papua Province during 2018-2022, and West Papua during 2020-2022, while other provinces have inefficient results in producing income distribution inequality. Hence it can be concluded that some of the sustainability development performance is on target in reducing income distribution inequality.

Table 4 describes the results of the panel data regression test, which illustrates the relationship between the independent variables of Education, Health, and Income on the dependent variable of Income Distribution Inequality. After conducting several tests such as the Chow test and Hausman test, the best model used in this study is the random effect model, which can be seen in the table below:

Table 4. Random Effect Model

Variable	Coefficient	Std. Error	z-Statistic	Prob.
APS	-0.069424	0.034033	-2.039927	0.0414
UHH	0.541574	0.096477	5.613488	0.0000
EXPENDICTURE	-26.55286	3.219602	-8.247250	0.0000
C	155.3533	18.78415	8.270446	0.0000

Source: Data processed in 2023

The estimation results of the panel data regression model conducted above are preceded by a robustness test to prove that the research model is robust and valid and unbiased (Sepriani & Candy, 2022). The robustness test is also conducted to pass the classical assumption test, in other words, it can be stated that this test heals the symptoms of heteroscedasticity and autocorrelation. The results show that the APS variable has a probability value of 0.0414. Where this value is smaller than the 5% significance level, it

means that APS has an influence on the Gini ratio with a negative influence relationship. Furthermore, the UHH variable has a probability value of 0.0000. Where this value is smaller than the 1% significance level, it means that UHH influences the Gini ratio, but with a positive influence relationship. Finally, the per capita expenditure variable has a probability value of 0.0000. Where the value is smaller than the 1% significance level, it means that the expenditure variable has an influence on the Gini ratio with a negative influence relationship.

Analysis of Estimation Results

Village Sustainability Development Efficiency (SDGs) and Income Distribution Inequality

Several provinces in Indonesia have implemented various policies to reduce income distribution inequality. Sustainable development theory explains that sustainable development is aimed at the process of equitable development to improve the welfare of society, through the availability of human needs and aspirations. Human-oriented development is the most important effort in reducing the level of poverty and inequality that occurs in the community, especially in the rural environment, where the number of poor people still dominates, compared to well-off people. If this is not properly addressed, instability will lead to negative influences, such as the loosening of social ties and the weakening of values and relationships between people.

The results of the DEA analysis show that only a few provinces can efficiently create income distribution inequality. This is because some of the programs implemented, such as education, health, and the amount of public expenditure, are still not optimal to run. As in the provinces of Papua and West Papua where access to health is still difficult and most people still rely on traditional medicine. Furthermore, the quality of education is still far different from the quality of education in urban areas. Public expenditure is still minimal, because many people still consume natural products as their staple food source, in contrast to some areas such as DI Yogyakarta, Central Java, West Java, and East Java, where the island of Java is known as the center of Indonesia. It can be seen that technological and economic developments are growing rapidly hence that the development of the education and health sectors can reduce inequality in income distribution. The quality of human resources is a major factor in reducing income inequality.

This result is supported by research by [Gunung et al. \(2023\)](#) which explains that economic inequality can occur due to unequal access to resources, and an unequal economic structure. [Sembiring and Alfarizi \(2023\)](#) explained that community empowerment and active participation are two keys to overcoming poverty and economic inequality. Community empowerment can be achieved through the process of providing knowledge, strength, protection, and skills. Education programs assist in improving access

to formal and non-formal education, so that rural communities are able to improve their skills and increase competence and employment opportunities.

Education and Income Distribution Inequality

School enrollment rate, which is a proxy for education, has a significant negative effect on income distribution inequality. This means that by increasing the number of years of schooling for rural communities by 1 year, the level of income distribution inequality will decrease by 0.06%. The education process can improve the quality of human resources (HR). Qualified human resources will have higher skills and knowledge, hence they will be more productive and will have more opportunities to get better jobs, which will then be able to generate higher incomes. The increase in income will lead to a decrease in income distribution inequality. This is because higher incomes will be more spread across different layers of society, and not just concentrated in certain groups. These results are in accordance with research conducted by [Hindun et al. \(2019\)](#) and [Oksamulya and Anis \(2020\)](#) that education has an influence in reducing income inequality. Access to education is very important to develop, as and [Ayuningtyas \(2021\)](#) find that there is still an inequality in education access between rural and urban areas. Therefore, there is a need for policy reform in order to improve access to education in rural areas. Some of these research results are inversely proportional to the research conducted by [Matondang \(2018\)](#) which found that access to education has no influence on income inequality. This is because a decent livelihood through income earned by the community is not only from formal education, but also driven by non-formal education through one's creativity.

Health and Income Distribution Inequality

The level of health in rural areas in Indonesia has a significant positive effect on income distribution inequality. The panel data regression results show that when rural life expectancy increases by 1 year, it will increase inequality by 0.54%. This shows that health has a significant influence on income distribution inequality. Therefore, it is important to improve access to and quality of health services in rural areas to reduce income distribution inequality. This result is supported by research conducted by [Khaeni \(2023\)](#) which found that access to health services in some rural and remote areas far from urban areas is still difficult. Unequal distribution in different regions can be influenced by the quality of the population, which leads to income disparities between communities. Thus, even if health services have developed but are unevenly distributed, income inequality will still be created. These results are different from research by [Kusuma et al. \(2019\)](#) which stated that an improvement in health will reduce income inequality.

Community Per Capita Expenditure and Income Distribution Inequality

The total expenditure per capita of rural communities has a significant negative effect on income distribution inequality. This means that an increase in the per capita expenditure of rural communities by one unit indicates a higher income, which in turn can reduce income distribution inequality among the community by 26.5%. Higher per capita expenditure will reflect an increase in community welfare. An increase in community welfare will lead to a decrease in income inequality. This is because higher incomes will be more spread to various layers of society, not just concentrated in certain groups. This result is consistent with research conducted by [Irania et al. \(2018\)](#) which showed that total income and the level of public consumption have a strong influence on the level of income inequality. Further research by [Rahman and Putri \(2021\)](#) also explains that the amount of wages earned by the community has a significant negative effect on income inequality.

CONCLUSION

Sustainable development of villages is a development concept that is currently being developed by several regions in the world. Sustainable development is basically aimed at the process of equitable development. Moreover, villages are the arena for developing sustainable sources of life. For this reason, focusing on rural community development and community involvement are two main concepts in reducing income inequality. From several variables used in this study, it is found that, first, education can reduce income distribution inequality. Every 1-year increase in the school enrollment rate of rural communities can reduce income distribution inequality by 0.06%. Second, health has a significant positive effect on income distribution inequality. This means that an increase in rural life expectancy by 1 year can increase income distribution inequality by 0.54%. Third, an increase in per capita expenditure of rural communities can reduce income distribution inequality. Every one unit increase in per capita expenditure can reduce income distribution inequality by 26.5%.

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