

Does Expenditure Structure Affect Rural Poverty Alleviation in Indonesia? The Role of Village Fund Management

Fian Ari Agusta¹ and Khoirunurrofik²

Corresponding author. Email: fianariagusta@gmail.com

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Abstract

This study aimed to explore public financial management at the village level and identify the types of village fund expenditures that had the most significant relationship in reducing short-term rural poverty in Indonesia. Using the 2019–2021 panel data and the fixed effect method, the authors analyzed the relationship between the five types of village fund spending on poverty in 49,192 village units. The estimation results showed that spending merely on village development negatively and significantly affected the number of low-income rural families in Indonesia. Meanwhile, spending on disaster management, emergencies, and village urgency indicated a positive and significant relationship with the number of low-income families in the village. It implies that the government should focus on spending programs and activities that create job opportunities and increase income for rural poverty reduction. The government also needs to improve data related to uniformity and validity in measuring, recording, and reporting data in ministries, institutions, and regional governments. Thus, in allocating village funds, the government must expand the formula allocation so that village funds can significantly reduce rural poverty.

Keywords: village fund spending; village fund; rural poverty.

¹ Finance and Development Supervisory Agency (BPKP); Faculty of Economics and Business, University of Indonesia.

² Department of Economics, Faculty of Economics and Business, University of Indonesia.

I. Introduction

Decentralization is delegating authority, responsibility, and resources from the central government to lower levels of government administration (Cheema & Rondinelli, 2007). Until the late 1980s, three forms of decentralization were identified: deconcentration, devolution, and delegation (Rondinelli & Cheema, 1989). Decentralization helps improve governance from a top-down, hierarchical, and bureaucratic basis to an accountable and transparent government system based on independence, participation, and cooperation (Faguet, 2014). Schneider (2003) proposed three basic dimensions of the concept of decentralization: fiscal, administrative, and political.

In Indonesia, decentralization was regulated in Law No.22/1999, which has undergone several changes, including Law No.23/2014 and Law No.9/2015. In addition, Law No. 25/1999 regarding financial balances was amended to Law No. 33/2004 and Law No. 1/2022. Law No. 23/2014 and Law No.1/2022 state that the type of government transfer from the center to the regions consists of the General Allocation Fund (DAU), Revenue Sharing Fund (DBH), Special Autonomy Fund (Otsus), Special Allocation Fund (DAK), and also Village Fund. The amount of each type of transfer to the regions, based on the central government's decision and existing regulations, differs for each region.

Fiscal decentralization seeks to avoid financial crises and cut bureaucracy by shifting fiscal responsibility to the regions for efficiency and effectiveness in public services (Agyemang-Duah W, 2018). Economic development in rural areas has become the government's focus in developing countries, including Indonesia (Arifin et al., 2020). Village funds are a form of transfer funds to the regions (block grants) that are directly handed over to the Village (Ministry of Finance, 2020). According to Law No.6/2014, the village fund is a form of fiscal decentralization aiming to increase the welfare of village communities and alleviate poverty by providing basic needs, building infrastructure, and utilizing natural and environmental products. From 2015 to 2022, village funds transferred to the regions reached IDR 468 trillion, which tends to increase yearly (Ministry of Finance, 2022). The resulting output is the infrastructure that supports economic activities in village communities and improves the villagers' quality of life.

The village fund spending comprises five aspects: 1) government administration, 2) village development, 3) village community development, 4) village community empowerment, and 5) disaster management, emergencies, and village urgency. In the last three years, village development expenditure has always dominated; it increased substantially to 78% in 2019, decreased by 46.20% due to the COVID-19 pandemic, and climbed gradually by 47.04% in 2021 (Ministry of Finance, 2022). The disaster management sector's expenditure rose sharply from only 0.18% to 40.5% in 2020. Meanwhile, the expenditure of the remaining sectors shows insignificant changes. The COVID-19 pandemic caused changes in the usage of 2020 village funds. According to Minister of Village's Law No. 6/2020 concerning amendments to Minister of Village's Law No. 11/2019, the impact of the COVID-19 pandemic can be handled by providing Village BLT (cash transfer) for low-income families in the village. The population of Indonesia in 2015 was 28.51 million, while in 2019, it was 24.79 million, and in the first semester of 2022, it became 26.16 million (Statistics Indonesia, 2022). The number of people living in poverty in rural areas is always greater than in urban areas.

Literature has indicated that village fund programs may or may not impact poverty alleviation in villages. For example, Chandoevrit and Ashakul (2008) found that the Village Fund program in Thailand does not affect poverty alleviation because it does not significantly impact people's income and expenses in this country. Another Thai study also indicated that Village Funds in Thailand increase household expenditure and income (Boonperm et al., 2013). Similarly, in the Indonesian context, the village funds allocation is ineffective because of its priority on equity and lack of consideration of the villages' heterogeneity and characteristics, thus causing injustice (Lewis, 2015). In contrast, Khoirunurrofik et al.'s (2021) research suggested that the existing components of the village fund formulation are quite effective, although weighting each component is a challenge in itself; therefore, village funds can effectively help the village achieve its development goals. Economic growth is not pro-poor, indicating that reducing poverty and inequality must be fortified by job creation and increased income (Suryahadi, 2018).

Manurung's (2022) research equally suggested that village funds effectively reduce hunger and poverty in Indonesia. Conversely, Sigit and Kosasih (2020) discovered that village funds negatively affect the poverty rate in Indonesia; thus, specific policies regarding supervision, innovative use, and formulation require amendments. Village funds can reduce the prevalence of stunting in areas with a more significant amount of village funds per capita (Indra & Khoirunurrofik, 2021). Before the pandemic, village funds in the economic dimension were more frequently used for infrastructure to aid regional openness (Yusuf & Khoirunurrofik, 2022). After the pandemic, village funds for economic recovery were allotted for infrastructure development through a more work-intensive cash program (Yusuf & Khoirunurrofik, 2022).

Previous research shows that fiscal decentralization positively reduces poverty in Indonesia (Nursini & Tawakkal, 2019; Siburian, 2022). Meanwhile, several studies have shown that fiscal decentralization does not affect poverty (Hernandez, 2016; Shahzad & Yasmin, 2016). Public spending on education has a long-term effect on reducing poverty, especially for families with lower educational levels (Hidalgo & Iturbe, 2018). It is confirmed by Muh and Naue (2015), who observed that education and health expenditures negatively affect poverty, while the infrastructure sector does not affect poverty levels. Fan et al. (2000) uncovered that spending on agriculture, irrigation, road infrastructure, and education reduced rural poverty rates in India.

This study aimed to investigate and identify which types of village fund spending have the most significant relationship in reducing rural poverty in Indonesia. The existing literature suggests that previous research has yet to focus on the spending structure and only looked at the amount of expenditure or the allocation of village funds in general. Village characteristics will affect spending because each village's needs are different. Previous research on village funds was also aggregated at the District/City/Provincial level using quantitative methods. This study addressed the following research question regarding the 'type of spending that has the most prime effect on reducing rural poverty in Indonesia.

We deployed a unit of analysis at the village level nationally using a quantitative method with a fixed effect econometric model for three years, from 2019-2021. In this study, we used short-term term poverty, whose intervention is through public consumption, not structural poverty, that can change people's behaviour and productivity. Meanwhile, data for the village fund expenditure structure were collected from the realization percentage of each expenditure from the central government's village funds.

This study showed that village development negatively and significantly affects the number of low-income rural families in Indonesia. Meanwhile, spending on disaster management, emergencies, and village urgency showed a positive and significant relationship with the number of low-income families in the village. The village government is expected to be able to increase cash-intensive cash-for-work programs to secure jobs and derive an income. To increase economic activity in the village, the village government necessitates the creation of Micro, Small, and Medium Enterprises (MSMEs), Village-Owned Enterprises (BUMDes), and business groups that offer employment opportunities and drive income growth.

This study raises the possibility that the government will recuperate a uniform data measuring, recording, and reporting system. In addition, improved data validity is fundamental for future researchers in evaluating government policies. The government is called for escalating the number of formula allocations incorporating the weighted poverty rates to ensure the effective use of village funds, leading to significant poverty reduction. This paper is structured as follows. The first section presents a general overview of the importance of this research and its innovation. The second section describes the conceptual framework, and the subsequent section outlines data and research methods. The fourth section presents results and discussions, and conclusions and implications are discussed in the last section.

II. Methods

2.1. Conceptual Framework

The Vicious Cycle of Poverty says that poverty is a problem that will be interconnected in a circle that has no end (Nurksee, 1953). Poverty is caused by low productivity, resulting in low income earned by the community. Low-income results in low savings and people's purchasing power. Low savings lead to low investment, causing low capital value. Poverty affects productivity and the low-income level, which will continue rotating ceaselessly. Governments have endeavored to break the poverty cycle by intervening in fiscal policy through village funds. As a government initiative, village funds are targeted at rural poverty alleviation directly or indirectly.

Village development aims to improve rural communities' well-being and quality of life, reduce poverty by meeting communities' basic needs, develop village facilities and infrastructure, expound local economic potential, and sustainably exploit natural resources and the environment. Todaro and Smith (2011) found that development focuses on increasing economic growth and redistributing growth outcomes. The village law obliges the government to transfer funds to the villages to redistribute growth. Villages that were previously only objects of development are now given the power to manage their finances.

Village funds are transfer funds the central government provides to develop and strengthen village communities. Village funds are intended to fulfill basic needs, build infrastructure, and promote using village-based natural and ecological products. Village funds target the villagers' raised income and reduced poverty rate at the village level. Figure 1 below shows a conceptual framework for the relationship between village funds and rural poverty. The use of village funds for different types of programs or activities in the village aims to better the community's well-being and curtail poverty in rural areas. Data on village-

level poverty in this study were collected from IDM (Developing Village Index) owned by the Ministry of Villages, Development of Disadvantaged Regions and Transmigration. A survey of low-income families was conducted by village officials or assistants. As this study utilized a three-year poverty rate source of data, the poverty in this study is considered as short-term poverty, the intervention of which is through consumption.

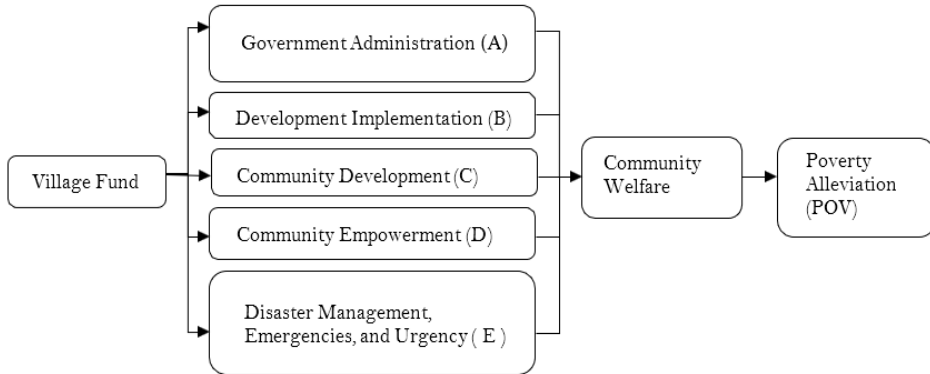


Figure 1. Conceptual Framework

2.2. Data and Method

We deployed a quantitative approach using unbalanced panel data from 2019 to 2021. Data were obtained from the Ministry of Finance and Developing Village Index (IDM) of the Ministry of Villages. The 2019–2021 data collected from the Ministry of Finance from 74,774; 74,886; and 74,916 village units respectively. In comparison, the 2019–2021 data from the Ministry of Villages indicated 66,967; 71,135; and 73,781 village units respectively. There were differences in several village codes from these data sources, so the number of matched data from the two data sources (2019–2021) consisted of 55,243; 58,996; and 60,883 villages, with a total of 175,122 observations. Based on these data, data cleaning was carried out again by removing irrelevant data from observations, including data with a value of 0. Hence, the data used totaled 134,489 observations of 49,192 village units.

The variables used in this study were the dependent variable, interest variable, and control variable. The dependent variable was the number of low-income families sourced from the IDM. The variable of interest was the percentage of realization of 5 types of village fund expenditure sourced from the Ministry of Finance. The control variables were population, area size, type of region, year of the pandemic, the village head’s gender and education, and also BUMDes, all sourced from the IDM. IDM data represented self-assessment data that village officials filled out.

The fixed effect was the estimation model because each village had different characteristics, so the unobserved time-invariant was captured through the fixed effects. This study encompassed year-fixed effects and interactions between districts and years to strengthen the model’s validity. The equation model in this study is as follows:

$$\begin{aligned} \log\text{POV}_{it} = & \beta_0 + \beta_1 \text{BidA}_{it} + \beta_2 \text{BidB}_{it} + \beta_3 \text{BidC}_{it} + \beta_4 \text{BidD}_{it} + \beta_5 \text{BidE}_{it} + \beta_6 \\ & \log\text{Population}_{it} + \beta_7 \log\text{Area}_{it} + \beta_8 \text{DCovid}_{it} + \beta_9 \text{DTypeArea}_{it} + \beta_{10} \text{DGender}_{it} \\ & + \beta_{11} \text{DEduc}_{it} + \beta_{12} \text{BUMDes}_{it} + \delta \text{year}_t + \gamma \text{kec*year}_{it} + \varepsilon_{it} \end{aligned}$$

The dependent variable is $\log\text{POV}_{it}$, which is the natural logarithm of the number of low-income families in village i and year t . The independent variable is the realization of spending per sector, which consists of 5 (five) sectors. BidA_{it} is the total percentage of realization of the expenditure on village government administration to the total village funds in the village i and period t , BidB_{it} is the total percentage of realization of spending on village funds to implement village development. BidC_{it} is the total percentage of realization of the expenditure for village community development, BidD_{it} is for community empowerment, and BidE_{it} is for disaster management, emergencies, and urgency of the village.

This study utilized several control variables: $\log\text{Population}_{it}$ is the natural logarithm of the total population in the village, and $\log\text{Area}_{it}$ is the natural logarithm of the area of the village in km^2 . DCovid_{it} is a dummy of the year the COVID-19 pandemic occurred in Indonesia, where 1 is 2020 and 2021, while 0 is 2019. DTypeArea_{it} is a dummy type of area in a village where 1 is highland/mountain, while 0 is other. DGender_{it} is a gender dummy of village heads where 1 is male, and 0 is female. Whereas DEduc_{it} is a dummy variable for the village head's highest educational level where 1 is if the highest educational qualification is high school or more and 0 is the other. BUMDes_{it} is a dummy where BUMDes is where 1 is a village with BUMDes , 0 is a village that does not have BUMDes , and ε_{it} is the error term.

III. Result and Discussion

3.1. Result

Since the enactment of Law No.6/2014, the amount of village funds transferred to the regions has reached IDR 468 trillion. The resulting output is the infrastructure that supports economic activities in village communities and improves the quality of life of people in villages. The main purpose of village funds is to develop and empower village communities (Arifin et al., 2020).

Model 1 in Table 1 shows the results from the regression between the five variables of interest, type of village spending, dependent variable, and the number of low-income families without using a control variable. The data suggest that spending on A and E positively and significantly affects them. Meanwhile, spending on B, C, and D has a significant negative effect on poverty. Models 2, 3, and 4 are the results with added control variables: population, area, year of the COVID-19 pandemic, type of area, gender, level of education, and BUMDes . The coefficients for spending on A and E remain positive and significant, while the expenditure coefficients for B, C, and D also remain negative and significant. In contrast, the population positively and significantly influences the number of low-income families. Area type and gender have a positive effect but are not significant. The area and education level have a negative impact but are not significant. Poverty in villages that have BUMDes is higher when compared to villages that do not have BUMDes . Model 5 is the regression result by adding a year-fixed effect to control for time trends from 2019 to 2021. The results of the five variables of interest are only spending on B and E, which are

significant. Expenditure in B has a negative and significant effect on poverty, while E has a positive and significant impact. Spending on A, C, and D has no significant effect.

Table 1 Estimation result of village fund spending structure on rural poverty

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
VARIABLES	Log POV	Log POV	Log POV	Log POV	Log POV	Log POV
Bid A	0.00191*** (0.000265)	0.000486* (0.000267)	0.000487* (0.000267)	0.000469* (0.000267)	-3.26e-07 (0.000269)	5.52e-05 (0.000270)
Bid B	0.000932*** (0.000090)	0.000545*** (9.01e-05)	0.000545*** (9.01e-05)	0.000538*** (9.01e-05)	0.000254*** (9.29e-05)	0.000247*** (9.29e-05)
Bid C	-0.000537** (0.000210)	-0.000431** (0.000208)	-0.000431** (0.000208)	-0.000429** (0.000208)	-0.000216 (0.000208)	-0.000220 (0.000208)
Bid D	- (0.000168)	-0.000237 (0.000167)	-0.000236 (0.000167)	-0.000237 (0.000167)	-0.000148 (0.000167)	-0.000133 (0.000167)
Bid E	0.00244*** (8.39e-05)	0.000357*** (0.000110)	0.000357*** (0.000110)	0.000383*** (0.000110)	0.00101*** (0.000120)	0.00101*** (0.000120)
Log Population		0.311*** (0.0111)	0.311*** (0.0111)	0.311*** (0.0111)	0.308*** (0.0111)	0.308*** (0.0111)
Log_Area		-0.0865 (0.135)	-0.0864 (0.135)	-0.0840 (0.135)	-0.0859 (0.135)	-0.0882 (0.135)
Dummy Covid		0.107*** (0.00374)	0.107*** (0.00374)	0.104*** (0.00378)	0.111*** (0.00381)	0.0978*** (0.00561)
Dummy Type Area		0.474 (0.356)	0.474 (0.356)	0.473 (0.356)	0.475 (0.356)	0.475 (0.356)
Dummy Gender			0.00317 (0.0100)	0.00279 (0.01000)	0.00489 (0.00999)	0.00493 (0.00999)
Dummy Education			-0.00394 (0.00984)	-0.00388 (0.00984)	-0.00583 (0.00983)	-0.00591 (0.00983)
Dummy BUMDes				0.0364*** (0.00682)	0.0310*** (0.00683)	0.0313*** (0.00683)
i.year	NO	NO	NO	NO	YES	YES
Kec*year	NO	NO	NO	NO	NO	YES
Constant	4.899*** (0.00626)	2.549*** (0.259)	2.544*** (0.259)	2.495*** (0.259)	2.541*** (0.257)	-10.59** (4.252)
Observations	134,489	134,489	134,489	134,489	134,489	134,489
R-squared	0.029	0.038	0.038	0.039	0.049	0.049
Number of kodedesa	49,192	49,192	49,192	49,192	49,192	49,192

Note: Standard errors in parentheses, *** p<0.01, ** p<0.05, * p<0.1

Table 2 shows the regression results divided between villages that have BUMDes and the ones that do not. The estimation results for villages with BUMDes show that spending on sector B (village development) continues to have a negative and significant effect at the

1% level on the number of low-income families. It means that for every 1% increase in the percentage of realized spending in sector B, the number of low-income families will decrease by 0.0348%. In addition, spending on D (village community empowerment) has a negative and significant effect at the 10% level on the number of low-income families. A 1% increase in the percentage of realized expenditure in sector D will reduce the number of low-income families by 0.0326%. More spending on D is intended to increase the community's understanding and capacity through various types of training held in villages, which is suitable for villages that already have BUMDes. BUMDes improves the village's economy; however, BUMDes development in areas such as capital provision, management, training, products, and marketing is critical (Puri and Khoirunurrofik, 2021). As the community's understanding and capacity improves, it is hoped that community participation will also increase. BUMDes can be exceptionally used if the level of community participation is high (Arifin et al., 2020). Expenditure in sector E still has a positive and significant relationship at the 1% level to the number of low-income families in the village. A 1% increase in realized spending in sector E will increase the number of low-income families by 0.0822%. In villages with no BUMDes, types of spending in the A, B, C, and D sectors do not affect the number of low-income families in the village. Meanwhile, spending in the E sector still has a positive and significant influence at the 1% level on the number of low-income families. A 1% increase in realized spending in sector E will increase the number of low-income families by 0.15%.

3.2. Discussion

The regression model 6 Table 1 above demonstrates that the percentage of actual spending in A does not affect the number of low-income families. Spending in A is mainly used to provide regular income for village officials and expenditures related to the village government's administration. On the other hand, the estimation results for B represent a negative and significant effect at the 1% level on the number of low-income families in villages in Indonesia. Thus, a 1% increase in the percentage of realized spending in B will reduce the number of low-income families by 0.0247%. The data suggest that the expenditures for B that are related to public works and residential areas, health, education, transportation, energy, natural resources, forestry, the environment, and tourism influence the economic activity in the village.

Previous research found that village funds in the economic dimension are used more frequently for infrastructure or regional expansion (Yusuf and Khoirunurrofik, 2022). Developing infrastructure and public services in rural areas boosts information literacy to prevent urbanization and swells employment and economic growth in rural areas (Hidayat et al., 2022). Spending on education and health reduces poverty (Hidalgo and Iturbe, 2018). Fan et al. (2000) also stated that spending on agriculture, irrigation, road infrastructure, and education significantly reduces rural poverty in India. Ministerial Decree (SKB) of 3 Indonesian Ministers (Minister of Home Affairs, Minister of Finance, and Minister of Village) requires each village to implement a cash-intensive program in which 30% of development activities are used for community wages to generate jobs and enlarge income. This confirms Suryahadi's (2018) study suggesting that the creation of productive employment opportunities and income growth are essential for achieving poverty alleviation.

Table 2. Estimation result of village fund spending structure based on BUMDes ownership

VARIABLES	BUMDes	NO BUMDes
	Log POV	Log POV
Bid A	-0.000135 (0.000303)	0.000636 (0.000624)
Bid B	-0.000348*** (0.000106)	3.24e-05 (0.000213)
Bid C	-0.000262 (0.000225)	-0.000322 (0.000610)
Bid D	-0.000326* (0.000187)	0.000576 (0.000406)
Bid E	0.000822*** (0.000135)	0.00150*** (0.000286)
Log population	0.263*** (0.0137)	0.413*** (0.0213)
Log Area	YES	YE S
<i>Dummy</i> Area Type	YES	YE S
<i>Dummy</i> Covid	YES	YE S
<i>Dummy</i> gender	YES	YE S
<i>Dummy</i> Education	YES	YE S
i.year	YES	YE S
Kec*year	YES	YE S
Constant	-16.72*** (4.736)	10.8 7 (10.63)
Observations	106,763	27,72 6
R-squared	0.045	0.05 8
Number of kodedesa	40,472	13,44 8

Note: Standard errors in parentheses, *** p<0.01, ** p<0.05, * p<0.1

Another finding suggested that the estimation results for C do not affect the number of low-income families in the village. This spending is used for public peace and order, coaching, and training for the community. Likewise, the results for D do not affect the number of low-income families in the village. Expenditure in D increases the understanding

and capacity of the community through various types of training. Nonetheless, the percentage of realized spending in E shows a positive and significant relationship at the 1% level to the number of low-income families in the village. A 1% increase in the percentage of actual spending in sector E will increase the number of low-income families by 0.10%. Even though E includes the provision of BLT (Direct Cash Assistance) during a pandemic, this is barely anticipated. Providing the poor with social assistance will only maintain purchasing power/consumption levels, but there must be job creation and increased income to make it more effective (Suryahadi, 2018). Spending in the E sector is more widely used for disaster aspects.

In terms of control variables, the population in the village has a positive and significant effect on the number of low-income families. Every 1% increase in population will increase the number of low-income families by 0.308%. The higher the number of people, the more jobs are needed. If this is not fulfilled, it will increase the number of unemployed and the number of low-income families in the village. Furthermore, the villages that have BUMDes have a more significant number of low-income families compared to villages that do not have any BUMDes. The BUMDes in the village does not contribute to productive employment opportunities. The establishment of BUMDes after 2015 has not been proven to increase employment opportunities for the community (Arifin, 2020). Therefore, community participation is critical to optimize BUMDes' services (Arifin, 2020). In addition, it is necessary to develop BUMDes' programs embracing capital, management, training, products, and marketing (Puri and Khoirunurrofik, 2021).

We realized that it is possible that there is potential for endogeneity or reverse causality in this study because the poverty rate also affects village funds allocation, while at the same time, village funds equally affect poverty rates. However, this potential can be minimized if there is a small portion of the poverty rate in allocating village funds. In addition, there are differences in the basis for calculating the poverty rate for allocating village funds and for poverty in the IDM data. The poverty rate in village fund allocation from the central government used poverty data from Statistics Indonesia. In contrast, poverty in IDM data is gathered directly from village observations, collected by the Ministry of Village, Development of Disadvantaged Regions, and Transmigration.

Even though the village poverty rate is part of the allocation formula for allocating village funds, it does not mean the type of spending on village funds will significantly affect poverty reduction in rural areas. The poverty rate is used as a weight in the allocation of the calculation formula based on each Regency/City government so that there may be differences in the standard of calculation. In addition, the current formula allocation is still relatively small compared to the basic allocation, which results in village funds not having a significant impact on poverty. The basic allocation needs to be reduced, and the formula allocation needs to be increased to align village funds with village needs (Khoirunurrofik et al., 2021).

Another finding from this study is related to data uniformity. Data from the Ministry of Finance and Ministry of Villages do not all have the uniformity of village codes according to the Ministry of Home Affairs. Accordingly, this issue causes difficulties for data users in evaluating current government policies. In addition, data validation from filling in the IDM of the Ministry of Villages through self-assessment of village officials is still not optimal. It can be seen from several irrelevant data entries that require data cleaning.

IV. Conclusion and Recommendation

One of the government's initiatives to reduce rural poverty is to provide village funds. Village funds, as depicted in regulations, have utmost priority for village communities' development and empowerment. Village fund spending consists of five foremost areas: 1) government administration; 2) village development; 3) village community development; 4) village community empowerment; 5) disaster management, emergencies, and village urgency.

This study addressed this research question 'Which type of spending exceptionally affects rural poverty?'. This research aimed to investigate and identify the types of village fund expenditures that have the most significant relationship in reducing rural poverty in Indonesia. Previous studies have not paid attention to the structure of spending in the village and simply focused on the total amount of the expenditure on village funds according to the budget; hence, this study filled this void. The concerned poverty in this study is short-term poverty, whose intervention is through consumption, not structural poverty that changes behavior.

The panel data used in this study were collected from approximately 49,192 village units from 2019 to 2021, with a total of 134,489 observations. The regression results using the fixed effect method showed that of the five types of spending, only village development spending demonstrated a negative and significant effect on the number of low-income families in the village. This result is supported by a policy of obligatory use of village funds for work-intensive cash programs (PKTD) for the community to create employment opportunities and increase the villagers' total income. Expenditures for disaster management, emergencies, and village urgency positively affect the number of low-income families. Even though BLT was covered in this expenditure during the pandemic, this was just an anticipation. The BLT is mainly directed at disaster management and urgent situations. At the same time, the other three spendings have no relationship with rural poverty.

In villages with BUMDes, spending on village development and community empowerment has reduced the number of low-income families. Meanwhile, in villages that do not have BUMDes, none of the expenditure types reduces the number of low-income families. The formula allocation in allocating village funds is still relatively small compared to the basic allocation; therefore, it needs improving to enable the significant impact of village funds on the poor. In addition, the data uniformity from each ministry and data validation from data owners remain unsatisfactorily. These issues contribute to data users' difficulties in evaluating government policies.

The village government is aware of the community's potential and needs for their development and aids in improving cash-intensive programs. Thus, the villagers can participate in village development initiatives while simultaneously obtaining jobs and earning an income. To increase the village's economy, the village government needs to develop mutual understanding between themselves and the villagers, capacity building, and support the community's MSMEs, BUMDes, and business groups that create job opportunities to increase the rural communities' income.

This study raises the possibility that the government recuperates a uniform system of data measuring, recording, and reporting. In addition, improved data validity is fundamental for future researchers in evaluating government policies. The government is called for escalating the number of formula allocations incorporating the weighted poverty rates to ensure the effective use of village funds leading to significant poverty reduction in the village.

Since the period used in this study was limited to only three years, from 2019 to 2021, the poverty analysis was only focused on this short-term, whose intervention was through consumption. The results may be different in a longer period of study depending on the infrastructure development and the village's economic structural changes. Future research is expected to have a longer time span so that structural poverty analysis can better describe the relationship between village expenditure structure and poverty in the village.

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