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The Influence Of Village Fund, Village Fund Allocation, And Village Original Revenue On The Village Development Index: A Case Study Of Sukoharjo District, Pringsewu Regency

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Abstract

Village development remains a central priority in Indonesia's national agenda, yet unequal outcomes across villages continue to pose a significant challenge. This study examines the influence of Village Fund (DD), Village Fund Allocation (ADD), and Village Original Revenue (PAD) on the Village Development Index (IDM) across 16 villages in Sukoharjo District, Pringsewu Regency, Lampung Province, during the period 2021–2023. Using a quantitative approach with scatter plot analysis, the findings show that ADD has the most consistent and dominant positive relationship with IDM, while DD shows a positive but inconsistent pattern, indicating that fund management quality outweighs allocation size. PAD shows a negligible relationship with IDM, confirming that most villages remain highly dependent on external government transfers. Overall, this study concludes that village development success is determined more by how funds are managed than by how much is received, and contributes micro-level empirical evidence with practical policy implications for strengthening village fiscal governance in Indonesia.

Keywords: Village Development Index, Village Fund, Village Fund Allocation, Village Original Revenue, Scatter Plot

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INTRODUCTION

Village development is one of the strategic priorities in Indonesia's national development policy. Villages serve as the primary foundation of social and economic life for the majority of the population, while simultaneously functioning as the frontline in efforts to alleviate poverty and achieve equitable welfare (Astuti, 2021). This commitment is explicitly reflected in the National Medium-Term Development Plan (RPJMN) 2020–2024, which targets a significant acceleration in the number of developing, advanced, and self-reliant villages, alongside a systematic reduction in the number of underdeveloped villages. As of 2023, Indonesia comprised 75,261 villages distributed across 36 provinces, 434 regencies/cities, and 6,554 districts, making villages an inseparable part of the country's governmental and economic structure (Ministry of Villages, Disadvantaged Regions and Transmigration, 2023).

In response to this challenge, the government enacted Law Number 6 of 2014 on Villages, which granted villages broad authority to regulate and manage their own development in accordance with their local potential and needs. One of the most significant implications of this legislation was the opening of substantial fiscal transfer channels to villages through two primary instruments: the Village Fund (Dana Desa/DD), sourced from the State Revenue and Expenditure Budget (APBN), and the Village Fund Allocation (Alokasi Dana Desa/ADD), derived from district-level revenue sharing (Mardalena et al., 2023). Both instruments are designed to support basic infrastructure development, improve the quality of public services, and empower local economic activities at the village level. At the national level, the Village Fund budget has grown consistently since its first allocation in 2015, although it experienced fluctuations during the *Covid-19* pandemic due to shifts in the government's fiscal priorities.

Beyond these two transfer instruments, there exists a third revenue source of internal nature, namely Village Original Revenue (Pendapatan Asli Desa/PAD). Based on Law Number 6 of 2014, Article 72 Paragraph (1), PAD is derived from the management of village assets, community economic activities, and other legitimate sources of income. Although PAD plays an important theoretical role in strengthening village fiscal independence, its contribution to total village revenue in practice remains highly limited (Pahlevi et al., 2022). Villages that successfully optimize their local economic potential, including through the strengthening of Village-Owned Enterprises (BUMDes), have greater fiscal space to finance development programs independently without relying entirely on government transfers (Adhibah et al., 2022).

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To comprehensively measure village development outcomes, the Ministry of Villages established the Village Development Index (Indeks Desa Membangun/IDM) as the official assessment instrument. The IDM is a composite index constructed on the basis of three dimensions of village resilience: social resilience, which encompasses education, health, social capital, and settlements; economic resilience, which assesses the diversity of economic activities, market access, and infrastructure quality; and ecological resilience, which reflects environmental quality and the capacity to respond to natural disasters (Yusuf & Khoirunurrofik, 2022). Based on IDM scores, villages are classified into five status categories, ranging from very underdeveloped to self-reliant. The IDM serves as an important reference for village governments in setting development priorities and allocating resources in a more targeted and effective manner (Br Sebayang et al., 2023).

This study is situated in Sukoharjo District, Pringsewu Regency, Lampung Province, which consists of 16 villages with diverse socio-economic characteristics and varying fiscal capacities. This district presents a compelling research setting due to an unusual dynamic: despite receiving a substantial flow of Village Funds, with total allocations reaching IDR 16.27 billion in 2021 and gradually declining to IDR 15.06 billion in 2023, the IDM outcomes across villages varied considerably. The district's average IDM improved consistently from 0.717 in 2021 to 0.750 in 2023, yet beneath this aggregate trend lies a more complex reality: villages with the largest fund allocations did not always produce the highest IDM scores. In contrast, Sukoharjo III Village achieved self-reliant status with an IDM of 0.928 in 2023, despite receiving a Village Fund allocation that was not among the highest in the district. Meanwhile, PAD across most villages remained negligible and inconsistent, with several villages recording zero PAD in one or more years of observation, indicating a persistently high level of fiscal dependency on government transfers (Azkiya et al., 2025).

Despite the growing body of literature on village fiscal transfers and development outcomes, most existing studies have focused on regency or provincial levels of analysis, leaving a significant gap in micro-level evidence at the sub-district scale. Furthermore, findings across studies remain inconsistent particularly regarding the roles of Village Fund and Village Original Revenue suggesting that the effectiveness of each fiscal instrument is highly context-dependent and cannot be generalized without location-specific investigation. To date, no study has specifically examined the simultaneous influence of DD, ADD, and PAD on IDM at the village level within Sukoharjo District, Pringsewu Regency, making this research both timely and necessary. Therefore, this study aims to

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analyze the influence of Village Fund (DD), Village Fund Allocation (ADD), and Village Original Revenue (PAD) on the Village Development Index (IDM) across 16 villages in Sukoharjo District, Pringsewu Regency, during the period 2021–2023. The findings are expected to provide specific micro-level empirical evidence and concrete policy recommendations for village and district governments in promoting more equitable and sustainable village development.

THEORETICAL FOUNDATION

Fiscal Decentralization and Village Government

The theoretical underpinning of this study draws from fiscal federalism theory, particularly as articulated by Oates (1999), which posits that decentralizing fiscal authority to lower levels of government enhances allocative efficiency when local governments are better positioned to understand and respond to the preferences and needs of their constituents. In the Indonesian context, the fiscal decentralization of village governance operationalized through the 2014 Village Law represents a deliberate policy effort to leverage this theoretical advantage.

Musgrave's (1959) three functions of government allocation, distribution, and stabilization further contextualize the role of village fiscal transfers. The allocation function is most immediately relevant: by channeling funds to villages for basic infrastructure, health, and education, both DD and ADD serve as instruments for correcting market failures in the provision of local public goods. The distribution function is also at play, as ADD distributions often incorporate equity criteria to address fiscal disparities between villages with different populations and development needs.

Village Development Index (IDM)

The Village Development Index is a composite measure that aggregates scores from three sub-indices: the Social Resilience Index (IKS), the Economic Resilience Index (IKE), and the Environmental Resilience Index (IKL). IDM scores range from 0 to 1, with higher scores indicating greater village resilience and development. Villages are classified into five categories based on their IDM score, as presented in Table 1.

Table 1. IDM Village Classification

IDM Score Range	Village Status
IDM < 0.491	Very Underdeveloped

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0.491 ≤ IDM < 0.599	Underdeveloped
0.599 ≤ IDM < 0.707	Developing
0.707 ≤ IDM < 0.815	Advanced
IDM ≥ 0.815	Self-reliant

Source: Ministry of Villages, Regional Development and Transmigration (2023)

Prior Research

A growing body of empirical literature has examined the determinants of IDM across Indonesian regions, with largely consistent evidence that Village Fund transfers exert a positive influence on village development outcomes. Telaumbanua and Ziliwu (2022) and Firmansyah et al. (2025) found that variation in Village Fund budgets correlates with differences in IDM scores across villages. Tambunan et al. (2020) documented the positive role of village funds in advancing IDM in Sibolangit District, North Sumatra. Similarly, Br Sebayang et al. (2023) confirmed positive impacts of village fund shares on IDM in Bogor Regency.

For Village Fund Allocation, Agusta and Khoirunurrofik (2024) demonstrated that careful expenditure structuring of ADD contributes significantly to rural poverty reduction, particularly through economic capacity building and local infrastructure development. Niswatun Rukyat et al. (2023) further found that increases in ADD, when distributed effectively, serve as a primary driver of comprehensive village development quality.

Evidence on Village Original Revenue (PAD) is more mixed. While Pahlevi et al. (2022) and Ningsih and Zaidi (2024) argue that villages should leverage local potential to grow PAD, Azkiya et al. (2025) caution that fiscal dependency remains high and local economic management capacity is not yet optimally developed in most Indonesian villages. Iftitah and Wibowo (2022) found a positive and significant effect of PAD on IDM in Gowa Regency, though the relatively low levels of PAD in many villages limit its observed impact in aggregate studies.

RESEARCH METHOD

This study employs a quantitative approach using data from 16 villages in Sukoharjo District, Pringsewu Regency, Lampung Province, covering the period 2021–2023, resulting in 48 observations (16 villages × 3 years). Data were obtained from the Directorate General of Fiscal Balance (DJPK) of the Ministry of Finance, individual village

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budget realization reports (APBDes), and the Ministry of Villages, Disadvantaged Regions and Transmigration (Kemendes PDTT). In analyzing the data, this study employs scatter plot diagrams to visualize the relationship patterns between the independent variables (Village Fund, Village Fund Allocation, and Village Original Revenue) and the dependent variable (Village Development Index).

Variables

The dependent variable is the Village Development Index (IDM), measured on a continuous scale from 0 to 1. The three independent variables are:

(1) Village Fund (DD): Annual budget allocation from the national government (APBN) to each village, in thousands of Indonesian Rupiah (IDR).
(2) Village Fund Allocation (ADD): Annual allocation from the district budget (APBD) to each village, in thousands of IDR.
(3) Village Original Revenue (PAD): Internally generated village revenue from village-owned assets, economic activities, and other legitimate sources, in thousands of IDR.

Analytical Method

This study employs scatter plot diagrams as the analytical method to examine the relationship patterns between each independent variable, namely Village Fund (DD), Village Fund Allocation (ADD), and Village Original Revenue (PAD), and the dependent variable, namely the Village Development Index (IDM). The scatter plot is used to visually identify the direction and consistency of the relationship between variables across 16 villages in Sukoharjo District during the period 2021–2023.

RESULTS AND DISCUSSION

Descriptive Statistics

Table 2 presents the descriptive statistics for all study variables across the 48 observations.

Table 1. Descriptive Statistics

Statistic	DD (IDR 000)	ADD (IDR 000)	PAD (IDR 000)	IDM
Mean	976,664.5	480,656.6	1,456.96	0.7268

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Maximum	1,263,975	606,481	5,487	0.929
Minimum	750,042	394,940	0	0.678
Std. Dev.	136,503.8	54,357.68	1,717.89	0.04862
Observations	48	48	48	48

Source: EViews 12 Output (processed data)

The descriptive analysis reveals important characteristics of each variable. Village Fund (DD) averaged IDR 976,664.5 thousand, with its mean substantially exceeding its standard deviation (IDR 136,503.8 thousand), indicating a relatively normal and stable distribution. The highest DD allocation (IDR 1,263,975 thousand) was received by Pandan Sari Village in 2022, while the lowest (IDR 750,042 thousand) was recorded in Sinar Baru Village in 2023.

Village Fund Allocation (ADD) averaged IDR 480,656.6 thousand with a comparatively low standard deviation (IDR 54,357.68 thousand), suggesting a more equitable and consistent distribution across villages. The highest ADD (IDR 606,481 thousand) was received by Sukoharjo III Barat Village in 2023; the lowest (IDR 394,940 thousand) by Panggung Rejo Utara Village in 2022.

Village Original Revenue (PAD) shows the greatest variability, with a mean of IDR 1,456.96 thousand and a standard deviation of IDR 1,717.89 thousand that exceeds the mean—indicating a highly unequal distribution. Several villages recorded zero PAD in one or more years, while Sukoharjo IV Village recorded the highest at IDR 5,487 thousand in 2022. This dispersion confirms that most villages remain fiscally dependent on central and regional transfers. The IDM had a mean of 0.727 with a low standard deviation of 0.049, indicating that most villages clustered around the "Advanced" category threshold, with scores concentrated near the district average.

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Scatter Plot Analysis

The scatter plot analysis of Village Fund (DD)

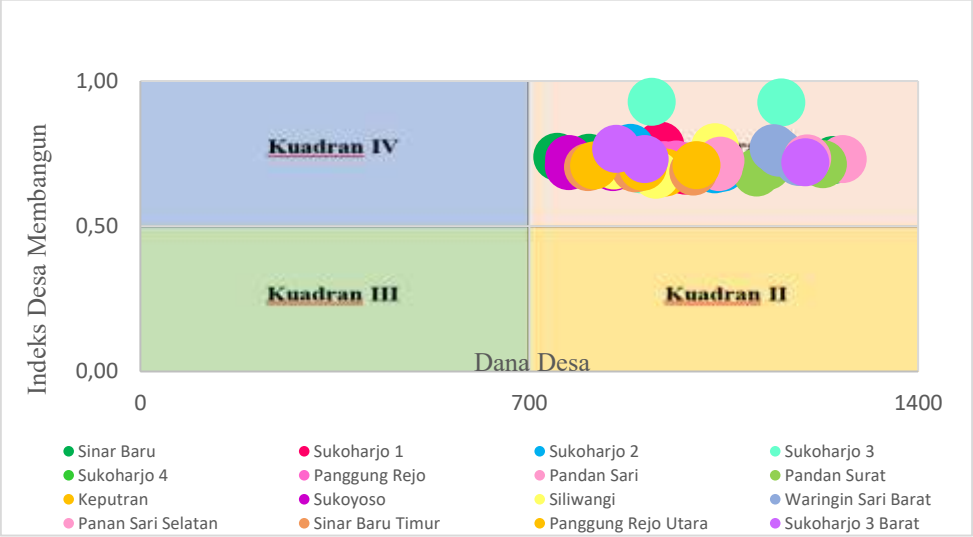


Figure 1. Scatter Plot of Village Fund Against Village Development Index
Source: Microsoft Excel Output (processed data)

The scatter plot analysis of Village Fund (DD) against the Village Development Index (IDM) across 16 villages in Sukoharjo District during 2021–2023 shows that most data points are clustered in Quadrant I, with DD allocations ranging between IDR 700 million and IDR 1,300 million and IDM values between 0.65 and 0.95. This pattern suggests a generally positive relationship between DD and IDM. However, the relationship is not perfectly linear, indicating that factors beyond fund size also influence development outcomes. Notably, villages with similar DD allocations displayed markedly different IDM scores. Pandan Surat Village, for instance, received the highest average DD (IDR 1,155 million) yet recorded one of the lowest average IDM scores (0.703), while Sukoyoso Village receiving the lowest average DD (IDR 797.5 million) achieved an IDM of 0.715. This evidence confirms that the quality of fund management, rather than the size of the allocation, is the primary determinant of village development outcomes.

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The scatter plot of Village Fund Allocation (ADD)

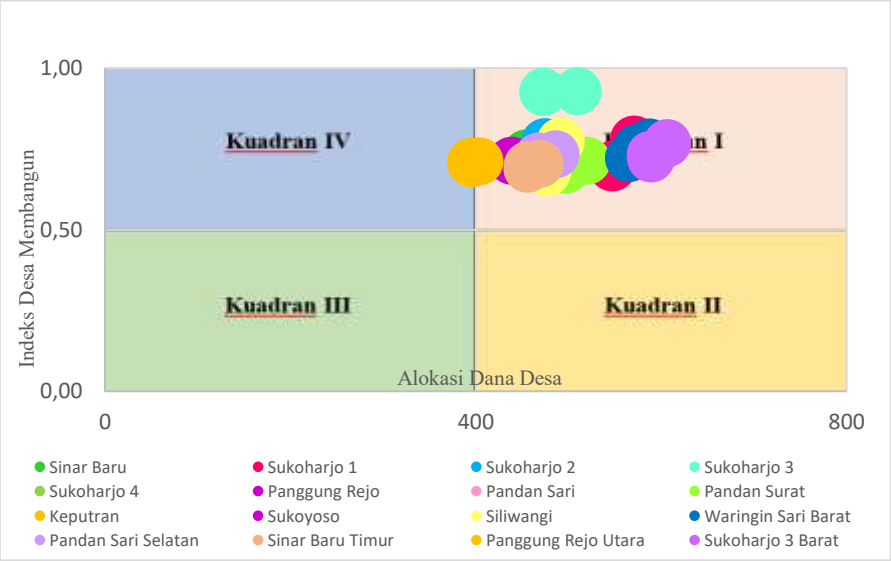


Figure 2. Scatter Plot of Allocation Village Fund Against Village Development Index
Source: Microsoft Excel Output (processed data)

The scatter plot of Village Fund Allocation (ADD) against IDM reveals a more consistent positive pattern compared to DD. Villages that received stable and increasing ADD allocations generally demonstrated steady IDM improvements over the study period. Sukoharjo III Barat Village, which received the highest average ADD (IDR 594.5 million per year), maintained consistent IDM growth despite a significant reduction in DD. Conversely, Panggung Rejo Utara Village, which received the lowest average ADD (IDR 398.0 million per year), still managed to improve its IDM each year demonstrating that even modest ADD, when managed effectively, can generate meaningful development outcomes. These findings confirm that ADD is the most dominant and consistent fiscal instrument in supporting village development, particularly when DD experiences downward pressure.

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The scatter plot of Village Original Revenue (PAD)

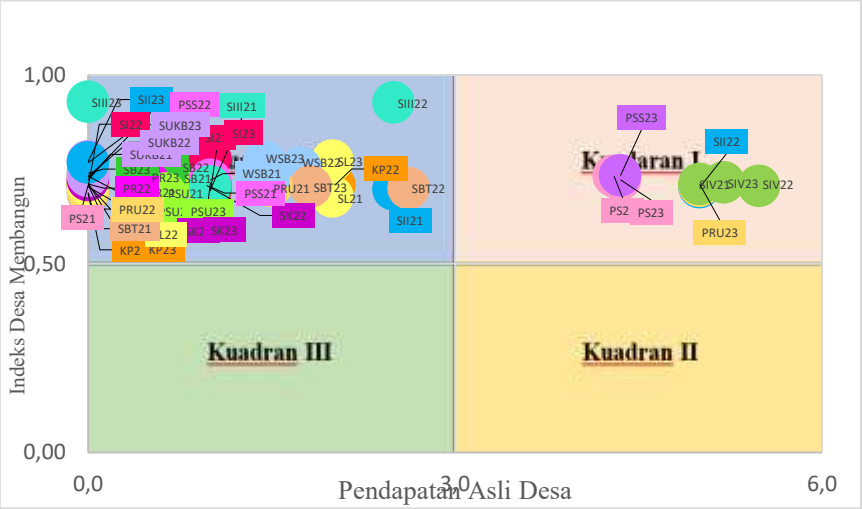


Figure 3. Scatter Plot of Village Original Revenue Against Village Development Index
Source: Microsoft Excel Output (processed data)

The scatter plot of Village Original Revenue (PAD) against IDM reveals that the majority of observations are concentrated in the low-PAD, high-IDM quadrant, indicating that village development in Sukoharjo District during the study period was not driven by internally generated revenue. Several villages recorded zero PAD in one or more years, yet still achieved relatively high IDM scores. The most striking case is Sukoharjo III Barat Village, which recorded zero PAD throughout the entire study period yet demonstrated one of the strongest IDM improvement trajectories in the district. This pattern confirms that PAD has not yet reached a sufficient scale to independently influence IDM outcomes, and that village development remains predominantly sustained by central and regional government fiscal transfers.

CONCLUSION

This study examined the influence of Village Fund (DD), Village Fund Allocation (ADD), and Village Original Revenue (PAD) on the Village Development Index (IDM) across 16 villages in Sukoharjo District, Pringsewu Regency, during the period 2021–2023. Based on the scatter plot analysis conducted, three main conclusions can be drawn.

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First, Village Fund (DD) shows a positive relationship with the Village Development Index, as indicated by the concentration of data points in Quadrant I of the scatter plot. However, this relationship is not perfectly linear, as villages with larger DD allocations did not always produce higher IDM scores. This confirms that the quality of fund management and the precision of program targeting are more decisive than the nominal size of the allocation received.

Second, Village Fund Allocation (ADD) demonstrates the most consistent and dominant positive relationship with the Village Development Index among all variables examined. Villages that received stable ADD allocations showed steady IDM improvements over time, even when their Village Fund allocations declined. This finding underscores the strategic importance of ADD as a fiscal instrument that is more locally responsive and effectively targeted toward village-specific development needs.

Third, Village Original Revenue (PAD) has not yet contributed meaningfully to Village Development Index outcomes in Sukoharjo District. Most villages recorded negligible or zero PAD throughout the study period, yet still achieved relatively high IDM scores confirming that village development in this district remains predominantly dependent on external fiscal transfers rather than internally generated revenue. This condition highlights the urgent need to strengthen Village-Owned Enterprises (BUMDes) and optimize village asset management to gradually build genuine fiscal self-reliance.

Overall, these findings suggest that the success of village development is determined not merely by the size of funds received, but more fundamentally by how those funds are planned, managed, and directed toward programs that genuinely address community needs. This study has several limitations that should be acknowledged. The analysis is confined to 16 villages in a single district over a three-year period (2021–2023), which limits the generalizability of the findings to broader regional or national contexts. Additionally, the use of scatter plot as the sole analytical method, while effective for visualizing relationship patterns, does not allow for statistical inference regarding the significance and magnitude of each variable's influence on the Village Development Index. Future research is therefore encouraged to expand the geographical scope to the regency or provincial level, extend the observation period, and employ more robust statistical methods to generate more comprehensive and generalizable findings.

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