

ANALYSIS OF THE RELATIONSHIP BETWEEN VILLAGE DEVELOPMENT AND POVERTY ALLEVIATION: A REVIEW OF VILLAGE DEVELOPMENT INDEX ACHIEVEMENTS IN CENTRAL JAVA PROVINCE

Ibnu Hiban^{1*}, Shanty Oktavilia²

¹²Magister Ilmu Ekonomi Fakultas Ekonomika Dan Bisnis Universitas Negeri Semarang, Indonesia

E-mail: ibnu.hiban89@gmail.com

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Abstract

This study aims to examine the impact of rural development on poverty reduction in Central Java Province using the Village Development Index (Indeks Desa Membangun/IDM) as the primary indicator. A quantitative approach is employed using panel data regression covering 29 districts over the period 2020–2024. The estimated models include pooled Ordinary Least Squares (OLS), fixed effects, and random effects, with model selection conducted using the Chow test and Hausman test. The results indicate that the fixed effects model is the most appropriate specification. Empirically, the Village Development Index has a negative and statistically significant effect on poverty rates, suggesting that improvements in rural development quality contribute to poverty reduction. The relatively high coefficient of determination indicates that variations in poverty over time within regions are substantially explained by changes in IDM. These findings highlight the critical role of rural development as a strategic instrument for place-based poverty alleviation. However, persistent inter-regional disparities suggest that the benefits of rural development are not yet evenly distributed. This study contributes to the literature by reinforcing the place-based development framework, positioning villages as key analytical units in achieving inclusive and sustainable development.

Keywords: rural development, Village Development Index, poverty, place-based development

INTRODUCTION

Village development is considered a key strategy in efforts to alleviate poverty in many countries, including Indonesia. Villages often serve as the foundation of community life, where most residents depend on the agricultural sector and micro- and small-scale enterprises for their livelihoods. Therefore, the quality of village development significantly influences improvements in community welfare and reductions in poverty rates. The quality of village development encompasses various aspects, including infrastructure, education, health, and economic development. Adequate infrastructure, such as roads, healthcare facilities, and educational institutions, facilitates public access to essential services. Furthermore, high-quality education enhances the skills and knowledge of community members, thereby creating employment opportunities and increasing productivity. A strong rural economy, supported by community empowerment programs and the development of local enterprises, has the potential to create new job opportunities and increase household income. Through improvements in development quality, rural communities are expected to reduce their dependence on social assistance and independently address poverty-related challenges. However, despite various efforts, significant obstacles to achieving quality village development remain, including limited budgets, unequal infrastructure distribution, and low levels of community participation. Therefore, it is important to gain a deeper understanding of how the achievement of quality village development contributes to poverty reduction.

To assess village development achievements, the Indonesian government evaluates the quality and level of village self-reliance through the **Village Development Index (IDM)**. The IDM provides a comprehensive overview of village development based on social, economic, and environmental dimensions. Success in the social dimension is measured through the quality of development in healthcare, stunting service convergence, education, social capital, and housing conditions. In the economic dimension, village development is assessed through the availability of economic infrastructure and facilities, access to trade centers, distribution and logistics networks, financial institutions, economic organizations, and regional connectivity. Meanwhile, the environmental dimension is

evaluated based on environmental conditions and disaster risk potential. Based on the evaluation of these three dimensions, villages are classified into one of five categories: highly underdeveloped, underdeveloped, developing, advanced, or independent villages. These classifications serve as an important basis for determining village development policies, including budget allocations and other forms of governmental support. To achieve its objectives, village development must be positioned within the context of empowering village self-reliance (Hutagalung et al., 2022; Puspitawati et al., 2012). This can be accomplished by assisting, mentoring, and facilitating village communities in analyzing and addressing the challenges they face, ultimately enabling them to identify solutions by optimizing the resources available to them (Ndima et al., 2015). Consequently, village development should be directed toward enhancing economic capacity, accelerating development processes, improving both natural and human resources, and maximizing community participation as a means of accelerating poverty alleviation (Soleh, 2017).

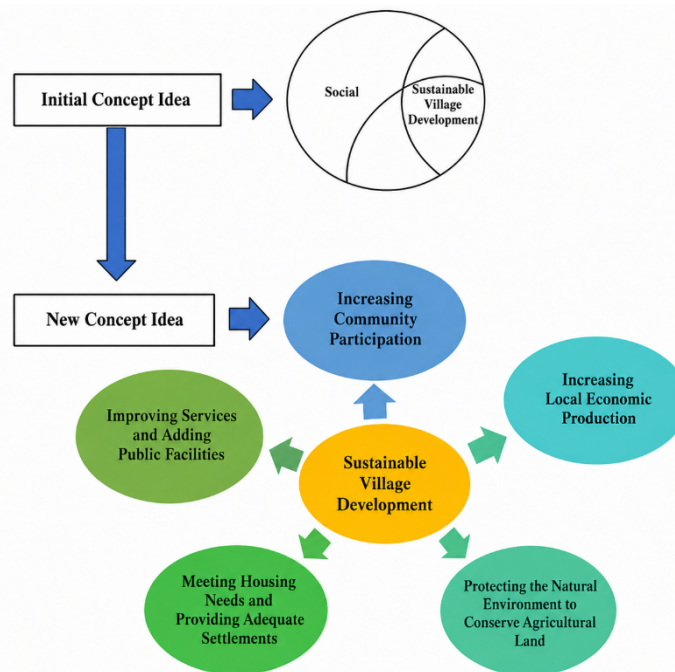
The novelty of this study lies in its focus on examining the relationship between village development and poverty alleviation in rural areas. This research is based on a gap identified in previous studies. For instance, Smas et al. (2025) primarily focused on the effectiveness of the Village Fund Program in reducing extreme poverty in Indonesia, without comprehensively examining the broader implications of village development on poverty alleviation as reflected in the achievements of the Village Development Index (IDM). Therefore, this study seeks to provide a more comprehensive analysis of how village development performance, as measured by the IDM, contributes to poverty reduction in rural communities.

LITERATURE REVIEW

Rural development, also referred to as village development, is a concept that is considered capable of promoting equitable development and reducing regional disparities between urban and rural areas. Rural development became an important aspect of national development policy after World War II, when newly independent countries adopted national development planning policies. Village or rural development plays a fundamental role in achieving sustainable development at the global level, as it has significant impacts on regional economic growth and the integration of urban-rural development (Liu & Wen, 2018; Ostad-Ali-Askar et al., 2018; Wu, 2001). The emergence of the rural development concept can be defined as a series of initiatives aimed at promoting the modernization of rural areas, creating new employment opportunities, enhancing agricultural sustainability and efficiency, and preserving ecosystems (Abreu & Mesias, 2020; Paz Ballivián, 2011). Over the past several decades, rural development has been promoted in various parts of the world. In the European Union, rural development is known as the Second Pillar of the Common Agricultural Policy (CAP), which recognizes agricultural policy as a key component of rural development policy (Beddington, 2011). In China, rural development is implemented through the Rural Revitalization Strategy, which has been in place since 2017 (Liu, 2019; Zhang et al., 2019). China's rural revitalization policy aims to promote rural transformation and achieve urban-rural integration in several critical areas, including industrial development, effective governance, ecological sustainability, rural modernization, and the advancement of modern lifestyles (Chen et al., 2018; Liu et al., 2021; Pirnazar et al., 2018; Ye et al., 2018).

Village development is a complex concept because it depends on local conditions, economic foundations, original development models, and the developmental stage of each village. Over time, the concept has evolved to emphasize integrated approaches that encompass social, economic, and environmental development. Rural development, defined as "a set of activities and actions by diverse actors—individuals, organizations, and groups that collectively lead to progress in rural areas" (Shepherd, 1998), has continuously evolved in response to the development and implementation of sustainability principles (Martínez et al., 2020). This evolution indicates that contemporary village development is no longer limited to physical or territorial development within rural areas. Rather, it increasingly focuses on promoting sustainable rural development (Abreu et al., 2019; Hu et al., 2022; Li et al., 2018; Shepherd, 1998), emphasizing the three fundamental dimensions of sustainability: social, economic, and environmental aspects. However, several studies have further expanded the concept of sustainable village development by emphasizing the interdependence between human communities, natural resources, and economic systems (Dammag et al., 2023; Roseland, 2012). This concept of village development encourages ways of living and development practices that prioritize the protection of agricultural land, infrastructure development, technical capacity building, the enhancement of local potential, and increased community participation in achieving

sustainable village development (Bray, 2013; Brown, 2015; Chen, 2017; Dammag et al., 2023). A conceptual framework of sustainable village development is illustrated in Figure 1.



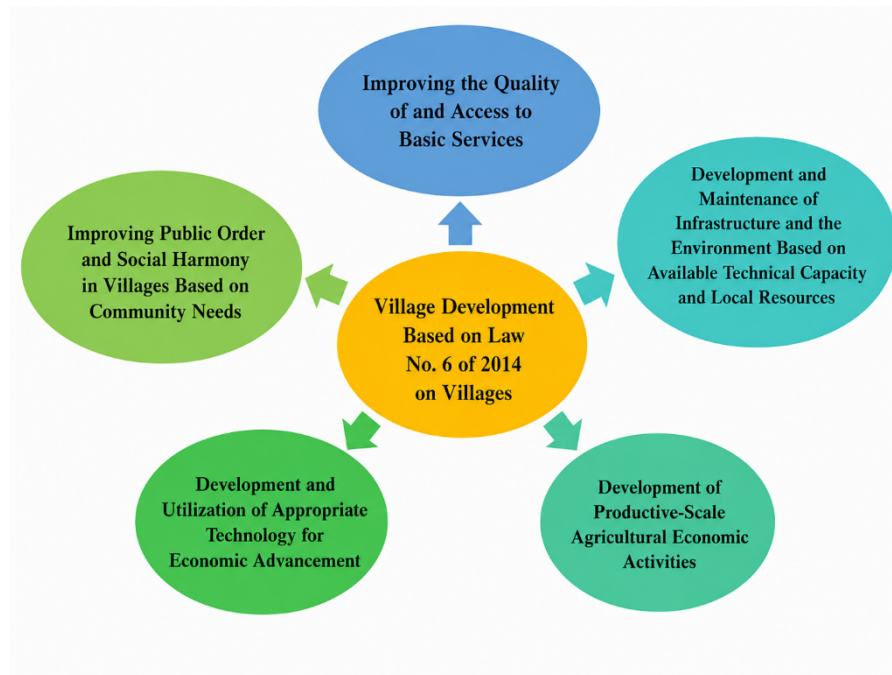
Source: Bray (2013); Brown (2015); Xiaowei Chen (2017); Dammag et al. (202) (Abreu et al. (2019); Hu et al. (2022); Y. Li et al. (2018); Shepherd, (1998); elaborated by the author (2023).

Figure 1. Evolution of the Sustainable Village Development Concept

The concept of village development in Indonesia began to emerge and evolve following the enactment of Law No. 6 of 2014 on Villages. The implementation of this law led to the allocation of village funds as a financial resource to support village development activities. As a result, the focus of development, which had previously been concentrated on urban areas, gradually shifted toward positioning villages as active subjects of development. In its early stages, village development in Indonesia was primarily focused on infrastructure projects, such as the construction of roads, drainage systems, and irrigation channels. However, as village development progressed, its focus diversified according to the unique potential of each village. For example, villages with tourism potential increasingly adopted a tourism-based development approach.

According to Law No. 6 of 2014 on Villages, village development aims to improve the welfare of rural communities and the quality of human life, while reducing poverty through the provision of basic needs, the development of village facilities and infrastructure, the enhancement of local economic potential, and the sustainable utilization of natural and environmental resources. This provision highlights sustainability as a key principle of village development under the law. Accordingly, the evolving concept of village development in Indonesia can be understood as development that integrates the three pillars of sustainability: social, economic, and environmental dimensions. Village development is implemented through three main stages: planning, implementation, and monitoring.

In accordance with the mandate of Law No. 6 of 2014 on Villages, village development must prioritize togetherness, kinship, and mutual cooperation (*gotong royong*) in order to promote peace and social justice. Furthermore, the components of rural development under the law include: (1) improving the quality of and access to basic services; (2) developing and maintaining infrastructure and the environment based on available technical capabilities and local resources; (3) promoting productive-scale agricultural economic development; (4) developing and utilizing appropriate technologies to advance economic growth; and (5) enhancing public order and social harmony in accordance with community needs. The scope of village development as stipulated in Law No. 6 of 2014 on Villages is presented in Figure 2.



Source: Law No. 6 of 2014 on Villages, elaborated by the researcher (2025).

Figure 2. Scope of Village Development under Law No. 6 of 2014 on Villages

Poverty remains predominantly a rural phenomenon, as many of the world's remaining poor populations reside in highly vulnerable rural areas that are particularly susceptible to various shocks. Consequently, achieving the global goal of poverty reduction remains a significant challenge (Cui et al., 2023). In Indonesia, a rural poverty alleviation strategy was introduced in 2016 by targeting village development initiatives, which were expected to contribute to the reduction of absolute poverty.

The measurement of village development performance often varies across countries, as several nations have developed specific rural development indices tailored to their unique contexts (Cloke, 1977). In most developing countries, the Rural Development Degree (RDD) is commonly used to reflect the level of socio-economic development and national modernization (Zhang et al., 2019). Empirical studies conducted by researchers and international organizations, such as the European Union (EU) and the Organisation for Economic Co-operation and Development (OECD), have sought to develop rural indicators and classifications (Cloke, 1977; Communities, 1988; Li et al., 2015; OECD, 2002; Woods, 2013). Several rural development indices have emerged, including the Rural Index for England and Wales (Cloke, 1977; Li et al., 2015), the MSU Rurality Index and Urbanicity Scale in the United States (Dahly & Adair, 2007; Weinert & Boik, 1995), the OECD Rural Indicators (OECD, 2002), the Rurality Index for Small Areas in Spain (Prieto-Lara & Ocaña-Riola, 2010), and the Accessibility/Remoteness Index in Australia (Glover & Tennant, 2003).

In general, these indices measure disparities in rural development by assessing factors such as population density, migration and mobility patterns, settlement conditions, local economic structures, accessibility, and rural landscape characteristics (Li et al., 2015). Consistent with the existence of various rural development indices worldwide, Indonesia has also developed several indices to assess village development levels. These include the Village Development Index (IKG), Village Development Potential Index (IPD), Village–Urban Status Classification, and the Developing Village Index (IDM), each representing different phases in the history of village development measurement in Indonesia. The data sources, methodologies, and analytical tools employed by these indices differ, resulting in varying criteria for assessing village development. This study focuses on the achievements of the Developing Village Index (IDM) as a benchmark for evaluating village development performance and subsequently examines its implications for poverty alleviation across regencies in Central Java Province.

METHOD

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This study employs a quantitative approach using econometric methods, specifically panel data regression, to analyze the effect of the Developing Village Index (Indeks Desa Membangun/IDM) on poverty levels across regencies in Central Java Province during the period 2020–2024. The panel data approach was selected because it combines both cross-sectional dimensions (29 regencies) and time-series dimensions (5 years), thereby producing more efficient estimates and enabling control for unobserved heterogeneity among the units of analysis. Consequently, the use of panel data allows for a more comprehensive analysis compared to simple linear regression. The data utilized in this study are secondary data obtained from the Ministry of Villages, Development of Disadvantaged Regions, and Transmigration (Kemendes PDTT), Statistics Indonesia (BPS), and other relevant publications. The variables analyzed consist of the Developing Village Index (IDM) as the independent variable (X), which reflects the level of village self-reliance based on social, economic, and environmental dimensions, and the poverty rate as the dependent variable (Y), measured as the percentage of poor residents in each regency. These variables were selected because they are theoretically closely related within the context of regional development and poverty alleviation.

The basic model employed in this study is a panel data linear regression model represented by the following general equation: $Y_{it} = \alpha + \beta X_{it} + \varepsilon_{it}$ where Y_{it} denotes the poverty rate in regency (i) during year (t), X_{it} represents the IDM value, α is the intercept, β is the regression coefficient, and ε_{it} is the error term. To determine the most appropriate model, three primary panel regression approaches were estimated: the Common Effect Model (CEM) or pooled Ordinary Least Squares (OLS), the Fixed Effects Model (FEM), and the Random Effects Model (REM). The CEM assumes no differences in characteristics across regencies or over time. In contrast, the FEM accommodates time-invariant differences among regencies through varying intercepts for each regency. Meanwhile, the REM assumes that individual differences are random and incorporated into the error component. The selection of the most suitable model was conducted through a series of model specification tests. The Chow test was employed to determine whether the fixed effects model was more appropriate than the pooled OLS model. If the probability value was less than the significance level ($\alpha = 0.05$), the fixed effects model was selected. Subsequently, the Hausman test was applied to choose between the fixed effects and random effects models, under the hypothesis that the random effects model is more efficient. If the Hausman test produced a probability value below 0.05, the fixed effects model was considered more consistent and was therefore selected as the preferred model for this study.

Furthermore, to ensure model validity, several classical assumption tests were conducted, including tests for normality, multicollinearity, heteroscedasticity, and autocorrelation. The normality test was performed to verify that the residuals followed a normal distribution, commonly using the Jarque–Bera test. Multicollinearity was assessed using the Variance Inflation Factor (VIF), although the risk of multicollinearity in this study was relatively low because only one independent variable was included. Heteroscedasticity tests were conducted to ensure constant error variance, while autocorrelation tests were performed to detect potential correlations among error terms across time periods, typically using the Durbin–Watson statistic or the Wooldridge test. Parameter significance was evaluated through the t-test to examine the partial effect of the independent variable on the dependent variable, while the F-test was used to assess the overall significance and suitability of the regression model. The coefficient of determination (R^2) was also employed to measure the explanatory power of the model in accounting for variations in poverty levels. All statistical analyses were performed using software packages such as Stata, EViews, or Python to ensure unbiased, consistent, and efficient estimation results. By employing a panel data regression approach complemented by model selection procedures and classical assumption tests, this study is expected to provide robust empirical evidence regarding the effect of the Developing Village Index on poverty levels. Furthermore, the findings are anticipated to serve as a relevant basis for formulating more effective and sustainable village development policies.

RESULTS AND DISCUSSION

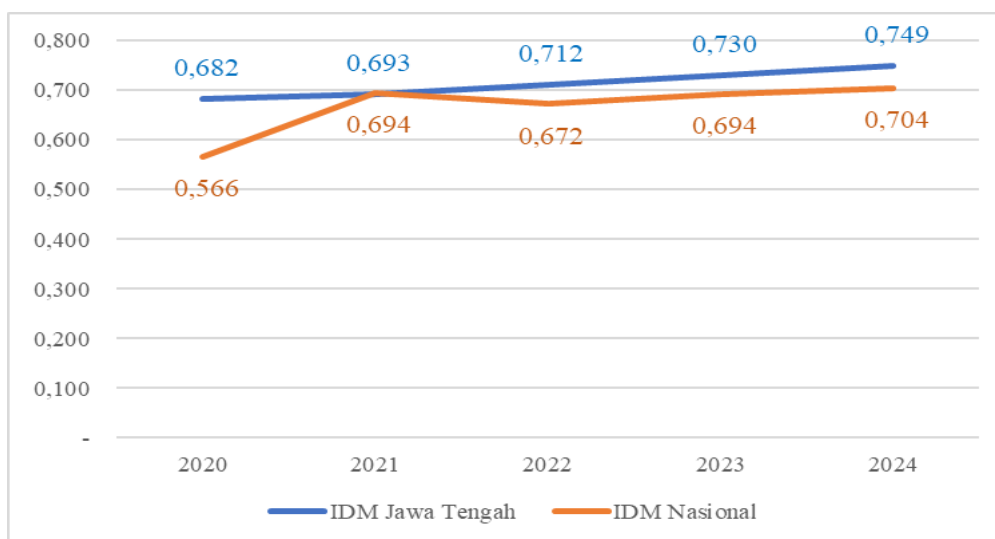
This section presents the data collection process, the study period, the research location, and the results of the data analysis. The findings may be supported by illustrations in the form of tables or figures rather than raw data. The discussion should provide an explanation of the relationship between the results and the underlying theoretical concepts and/or the outcomes of hypothesis testing (if applicable). It should also address the consistency or inconsistency of the findings with those of previous studies, along with their respective interpretations. Furthermore, this section may include the implications of the research findings, both from theoretical and practical perspectives. The Achievement of Village Development in Central Java Provinc.

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In the context of achieving self-reliant villages, the Developing Village Index (IDM) emphasizes three key dimensions as the primary focus of development: Social Resilience, Economic Resilience, and Environmental Resilience (Ministry of Villages, Development of Disadvantaged Regions, and Transmigration, 2023). The IDM was developed by the Ministry of Villages, Development of Disadvantaged Regions, and Transmigration. It serves not only as a tool for assessing the development status of each village but also as an instrument for monitoring development targets and facilitating coordination among ministries and government agencies involved in village development.

The IDM consists of three sub-indices: the Social Resilience Index (IKS), the Economic Resilience Index (IKE), and the Environmental Resilience Index (IKL). These dimensions represent the development priorities outlined in Article 74, Paragraph (2) of the Village Law (Law No. 6 of 2014 on Villages) (Law No. 6 of 2014 on Villages, 2014). Over the past five years, the Developing Village Index (IDM) in Central Java Province has shown a consistent upward trend. In 2024, the IDM reached 0.749, increasing from 0.730 in 2023. The growth trajectory of Central Java's IDM is consistent with the national IDM trend; however, the province's performance has been relatively stronger than the national average.



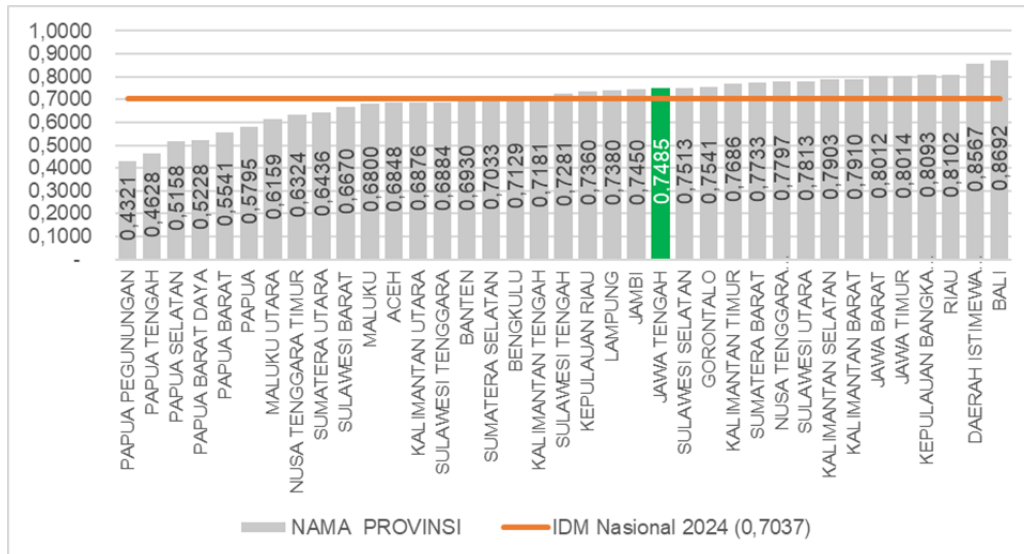
Source: Ministry of Villages, Development of Disadvantaged Regions, and Transmigration (Kemendes PDTT), processed by the author (2025).

Figure 3. Trends in the Developing Village Index (IDM) in Central Java Province and Indonesia, 2020–2024

At the national level, the provinces with the highest village development performance in 2024 were Bali, the Special Region of Yogyakarta, and Riau. Central Java Province recorded an IDM score above the national average of 0.703 in 2024, placing it 15th among the 37 provinces in Indonesia. Overall, the level of village development in Central Java was higher than the national average, indicating relatively stronger village development performance compared to most provinces in the country.

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Source: Ministry of Villages, Development of Disadvantaged Regions, and Transmigration (Kemendes PDTT), processed by the author (2025).

Figure 4. Comparison of Provincial IDM Scores in Indonesia, 2024

Based on the Developing Village Index (IDM) data for regencies in Central Java during the 2020–2024 period, all regencies demonstrated a consistent increase in IDM scores over time. This trend suggests that village development efforts in Central Java have been relatively successful, as evidenced by improvements in the social, economic, and environmental dimensions of village resilience. Furthermore, none of the regencies recorded a decline in IDM performance during the observation period, indicating the continuity of village development policies and the effectiveness of government interventions, particularly through the allocation of Village Funds and various community empowerment programs.

Table 1. Developing Village Index (IDM) Scores by Regency in Central Java Province, 2020–2024

No	Nama Kabupaten	Indeks Desa Membangun				
		2020	2021	2022	2023	2024
1	Banjarnegara	0,6651	0,6707	0,6871	0,6950	0,7073
2	Banyumas	0,6988	0,7033	0,7163	0,7323	0,7477
3	Batang	0,6705	0,6766	0,6855	0,6930	0,7049
4	Blora	0,6510	0,6539	0,6665	0,6693	0,7074
5	Boyolali	0,6970	0,7233	0,7349	0,7505	0,7707
6	Brebes	0,6661	0,6708	0,6850	0,6915	0,7044
7	Cilacap	0,6911	0,7017	0,7247	0,7455	0,7679
8	Demak	0,6416	0,6906	0,7162	0,7323	0,7458
9	Grobogan	0,6693	0,6770	0,6959	0,7259	0,7499
10	Jepara	0,6903	0,6927	0,7209	0,7383	0,7597
11	Karanganyar	0,6919	0,6937	0,7078	0,7162	0,7379
12	Kebumen	0,6709	0,6861	0,7094	0,7442	0,7766
13	Kendal	0,7095	0,7190	0,7299	0,7363	0,7447
14	Klaten	0,6853	0,6925	0,7034	0,7160	0,7280
15	Kudus	0,7244	0,7416	0,7675	0,7999	0,8135
16	Magelang	0,6877	0,6953	0,7135	0,7238	0,7342
17	Pati	0,6993	0,7105	0,7293	0,7529	0,7748
18	Pekalongan	0,6601	0,6668	0,6746	0,6781	0,7048

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No	Nama Kabupaten	Indeks Desa Membangun				
		2020	2021	2022	2023	2024
19	Pemalang	0,6962	0,7167	0,7361	0,7554	0,7719
20	Purbalingga	0,6785	0,6919	0,7078	0,7784	0,7902
21	Purworejo	0,6764	0,6934	0,7135	0,7230	0,7352
22	Rembang	0,6770	0,6895	0,7057	0,7245	0,7417
23	Semarang	0,6817	0,6889	0,7167	0,7242	0,7377
24	Sragen	0,6986	0,7035	0,7208	0,7455	0,7593
25	Sukoharjo	0,7156	0,7230	0,7410	0,7698	0,7946
26	Tegal	0,6549	0,6624	0,6752	0,6850	0,6956
27	Temanggung	0,6860	0,6962	0,7213	0,7530	0,7810
28	Wonogiri	0,7035	0,7120	0,7503	0,7683	0,7983
29	Wonosobo	0,6895	0,6980	0,7436	0,7748	0,7931

Source: Ministry of Villages, Development of Disadvantaged Regions, and Transmigration (Kemendes PDTT); author's calculations (2025).

More specifically, several regencies remained in the high-poverty category as of 2024, including Kebumen (15.71%), Brebes (15.60%), Wonosobo (15.28%), Pemalang (14.92%), Banjarnegara (14.71%), and Purbalingga (14.18%). These regencies consistently ranked among those with the highest poverty rates throughout the observation period, indicating that poverty in these areas is largely structural in nature. Consequently, more comprehensive interventions are required, including improvements in human capital, expansion of employment opportunities, and the strengthening of local economic sectors based on regional comparative advantages. In contrast, several regencies recorded relatively low poverty rates, including Jepara (6.09%), Tegal (6.81%), Semarang (6.96%), Kudus (7.23%), and Sukoharjo (7.47%) in 2024. These regencies have demonstrated relatively strong performance in poverty alleviation, which may be attributed to stronger economic structures, higher levels of industrialization, and better access to education, healthcare, and infrastructure services. Furthermore, notable reductions in poverty were observed in areas such as Tegal and Jepara, both of which achieved substantial declines in poverty rates over the past five years.

When examining the magnitude of poverty reduction during the 2020–2024 period, nearly all regencies experienced meaningful improvements. Significant declines were recorded in Purbalingga (from 15.90% to 14.18%), Kebumen (from 17.59% to 15.71%), and Wonosobo (from 17.36% to 15.28%). These trends indicate tangible progress in poverty reduction efforts, although the pace of improvement still needs to be accelerated. Meanwhile, regencies such as Kudus and Sukoharjo experienced relatively smaller declines, largely because their poverty rates had already been comparatively low at the beginning of the observation period. Despite the overall improvement, substantial disparities in poverty levels persist across regencies. In 2024, the gap between the regency with the highest poverty rate (Kebumen: 15.71%) and the regency with the lowest poverty rate (Jepara: 6.09%) reached approximately 9.62 percentage points. This disparity suggests that economic and social development in Central Java has not been evenly distributed, highlighting the need for more targeted affirmative policies aimed at regions with persistently high poverty levels.

Overall, poverty conditions in Central Java during the 2020–2024 period exhibited a positive recovery trend following the pressures experienced in 2021. Nevertheless, significant challenges remain, particularly the persistently high poverty rates in several regencies and the considerable disparities across regions. Therefore, a more integrated, place-based poverty alleviation strategy is needed, focusing on strengthening local economies, improving human capital quality, and expanding access to employment opportunities. Such efforts are essential to accelerate and equalize poverty reduction across all regencies in Central Java.

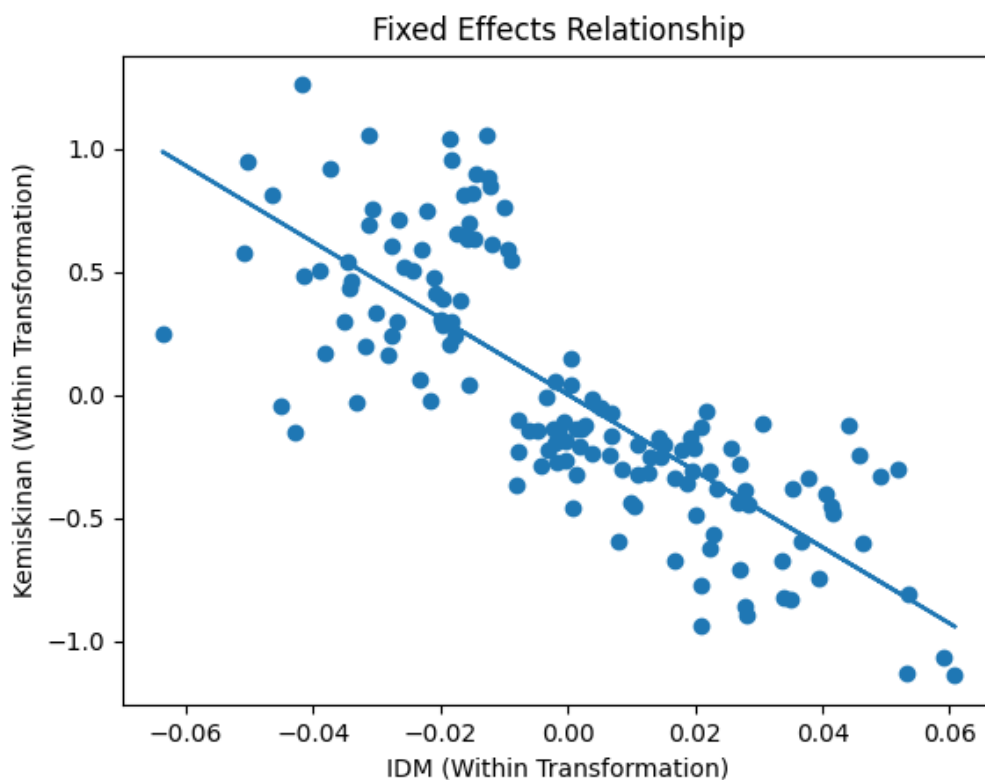
Analysis of the Relationship Between Village Development and Poverty Levels Based on the Developing Village Index (IDM)

Based on panel data analysis covering 29 regencies/municipalities in Central Java Province during the 2020–2024 period, the relationship between the Developing Village Index (IDM) as the independent variable and the poverty rate as the dependent variable exhibited a consistently negative pattern. The panel estimation results indicate that the fixed effects approach is more appropriate than the pooled Ordinary Least Squares (OLS) model, as it effectively controls for unobserved time-invariant regional characteristics that may influence poverty levels.

The fixed effects model produced a negative IDM coefficient of -15.493 , with a within R^2 value of 0.619 . This finding suggests that changes in IDM over time within each regency are strongly associated with reductions in poverty after controlling for region-specific characteristics. In other words, improvements in village development performance, as measured by the IDM, tend to contribute significantly to poverty reduction within the same locality over time.

In contrast, although the pooled OLS model also revealed a negative relationship between IDM and poverty, its explanatory power was relatively low. This indicates that, without accounting for individual regional effects, the relationship between village development and poverty appears considerably weaker. Therefore, controlling for regional heterogeneity is essential for accurately capturing the impact of village development on poverty alleviation.

Overall, these results provide empirical evidence that improvements in village development, as reflected in higher IDM scores, are associated with lower poverty rates across regencies in Central Java. The findings further highlight the importance of village development policies as a strategic instrument for poverty reduction, particularly when regional differences in socioeconomic conditions are taken into account.



Substantively, these findings indicate that improvements in the quality of village development, as reflected by increases in the Developing Village Index (IDM), tend to be accompanied by reductions in poverty levels. This relationship is reasonable, given that the IDM represents various dimensions of village development, including social, economic, and environmental resilience. An increase in IDM scores suggests that villages are becoming more capable of providing better basic services, strengthening local economic activities, improving community access to business and employment opportunities, and enhancing household capacity to escape poverty and vulnerability. Therefore, village development should be understood not merely as an administrative agenda but also as a structural instrument that contributes to broader and more sustainable improvements in community welfare.

From a methodological perspective, the use of panel data regression offers advantages over simple cross-sectional regression because it is able to capture both temporal dynamics and regional heterogeneity. In the context of this study, the fixed effects approach helps isolate the impact of changes in the IDM from time-invariant factors inherent to each regency, such as geographical conditions, local economic structures, and social characteristics. Consequently, the findings strengthen the argument that poverty reduction strategies in Central Java should focus on accelerating improvements in IDM performance across all regions, particularly in areas where poverty rates remain

relatively high. In other words, the stronger the quality of village development, the greater the potential for achieving sustainable poverty reduction.

CONCLUSION AND RECOMMENDATIONS

This study provides strong empirical evidence that village development, as represented by the Developing Village Index (IDM), is a significant determinant of poverty reduction in Central Java Province. During the 2020–2024 period, the consistent improvement in IDM across all regencies indicates the occurrence of a structural transformation in rural development, particularly in the social, economic, and environmental dimensions. The main findings reveal that IDM has a negative and statistically significant effect on poverty levels, with the fixed effects approach identified as the most appropriate model for controlling unobserved regional heterogeneity. The relatively large coefficient and the high within R^2 value further confirm that changes in poverty levels within a region are substantially explained by improvements in the quality of village development.

Conceptually, these findings reinforce the place-based development framework, which positions villages as the primary locus of policy intervention. Improvements in IDM reflect enhanced access to basic services, strengthened local economic capacity, and increased socio-ecological resilience, all of which simultaneously reduce household vulnerability to poverty. Nevertheless, this study also identifies the persistence of regional disparities in both IDM achievements and poverty levels. This suggests that although village development has been effective in aggregate terms, the distribution of its benefits remains uneven. Therefore, the effectiveness of village development in reducing poverty is conditional upon local capacity, regional economic structures, and the quality of village development governance.

As a means of improving future development outcomes, village development policies should be reoriented from a generic approach toward a more place-based and evidence-based policy framework. The Developing Village Index (IDM) should be utilized not only as a performance measurement tool but also as a strategic instrument for determining more precise development priorities. In this context, local governments should focus resources on areas characterized by a combination of low IDM scores and high poverty rates through multidimensional interventions, including the strengthening of basic infrastructure, improvement of human capital, and promotion of local economic development based on each village's comparative advantages.

Furthermore, the effectiveness of village development is strongly influenced by the quality of governance and institutional capacity at the village level. Therefore, strengthening the capacity of village officials, enhancing transparency and accountability in Village Fund management, and optimizing the role of local economic institutions such as Village-Owned Enterprises (BUMDes) are crucial factors in ensuring that improvements in village development directly contribute to poverty reduction. In addition, best practices from regions with high IDM achievements and low poverty rates should be systematically replicated through interregional learning mechanisms and strengthened coordination across different levels of government.

Moreover, poverty alleviation in rural areas requires the integration of cross-sectoral policies within a comprehensive rural transformation framework. Synergy between village development policies and the education, health, employment, and social protection sectors is essential to ensure that development impacts are not merely partial but capable of generating sustainable structural change. To support this objective, the government should strengthen data-driven monitoring and evaluation systems based on panel data analysis that can more accurately capture spatial and temporal dynamics. Such an approach would enable policy decisions to become more adaptive and responsive to changing conditions on the ground.

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ANALYSIS OF THE RELATIONSHIP BETWEEN VILLAGE DEVELOPMENT AND POVERTY ALLEVIATION: A REVIEW OF VILLAGE DEVELOPMENT INDEX ACHIEVEMENTS IN CENTRAL JAVA PROVINCE

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