

# The Impact of Infrastructure Development on Socioeconomic Well-being in New Village Communities: The Roles of Policy, Community Participation, and Income Disparities

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This study investigates the socioeconomic impact of infrastructure development in New Village communities in Malaysia, with particular attention to youth empowerment and policy implementation. Despite significant government investments in transportation, digital connectivity, and public services, disparities in economic participation and social mobility remain evident across rural communities. Using a mixed-method research design, quantitative data were analysed using Partial Least Squares Structural Equation Modelling (PLS-SEM), while qualitative insights were gathered through semi-structured interviews with community stakeholders. The results indicate that infrastructure development significantly influences socioeconomic well-being, explaining 61.5% of the variance in community outcomes. Policy implementation and community participation also play an important mediating role in translating infrastructure investments into tangible economic and social benefits. However, moderating effects such as income disparities reveal that development outcomes are not equally distributed across communities. The findings highlight the importance of integrated governance strategies that combine infrastructure development with youth empowerment initiatives, entrepreneurship support, and inclusive policy frameworks. This study contributes to the literature on rural development by demonstrating that infrastructure alone is insufficient to ensure sustainable socioeconomic progress; rather, coordinated policy implementation and active community engagement are necessary to maximize development outcomes in emerging village communities.

*Keywords: Infrastructure development; Socioeconomic Well-Being; Youth Empowerment; Policy Implementation; Community Participation; Rural Development*

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## INTRODUCTION

Infrastructure development plays a fundamental role in promoting socioeconomic growth and improving quality of life, particularly in rural and semi-urban communities where access to basic services often determines economic opportunities and social mobility (Hussain et al., 2022; Manggat et al., 2018). Physical infrastructure such as transportation networks, digital connectivity, public utilities, and healthcare facilities provides the foundation necessary for economic activities, employment generation, and community development (Hussain et al., 2022). In developing countries, rural infrastructure investments are frequently implemented to reduce regional inequalities, enhance accessibility to markets, and

improve social services for underserved populations (World Bank, 2021). These initiatives not only facilitate economic growth but also contribute to social inclusion by improving access to education, healthcare, and employment opportunities (Hussain et al., 2022).

Malaysia's New Village communities represent a unique case within the broader rural development landscape. These settlements originated during the Malayan Emergency between 1948 and 1960, when the British colonial government implemented the Briggs Plan to relocate rural populations into fortified settlements to isolate insurgents from civilian support (Comber, 2008). Over time, these settlements evolved into permanent residential communities and were gradually integrated into Malaysia's national development framework through government investments in infrastructure, education, and public services (Francis, 2024). In recent decades, government initiatives have focused on improving transportation networks, utilities, digital infrastructure, and public facilities in these communities to stimulate local economic development and improve living standards (Francis, 2024). Such infrastructure improvements enable local businesses to expand, facilitate mobility for workers, and enhance access to education and healthcare services (Hussain et al., 2022).

Despite extensive investments in rural infrastructure, the extent to which these developments translate into improved socioeconomic outcomes remains an important issue for many developing communities. In Malaysia's New Village communities, infrastructure improvements such as transportation networks, public utilities, and digital connectivity have been implemented to stimulate economic development and improve living standards. However, empirical evidence suggests that infrastructure development alone may not be sufficient to ensure equitable socioeconomic benefits without effective policy implementation and active community participation (Hair et al., 2019; Hussain et al., 2022). These governance mechanisms are essential in ensuring that infrastructure investments are efficiently implemented and aligned with the needs of local communities. Furthermore, socioeconomic outcomes may vary across different population groups due to disparities in income levels and access to opportunities. Previous studies indicate that income inequality can influence the distribution of development benefits, particularly in rural areas where economic resources and employment opportunities are unevenly distributed (Manggat et al., 2018). As a result, understanding how infrastructure development interacts with governance mechanisms and socioeconomic factors is critical for designing inclusive development policies.

Therefore, this study aims to examine the relationship between infrastructure development and socioeconomic well-being in Malaysia's New Village communities. Specifically, the study investigates how infrastructure development influences community socioeconomic outcomes, while also examining the mediating role of policy implementation and community participation and evaluating whether income differences moderate the relationship between infrastructure development and socioeconomic well-being. By addressing these objectives, this study contributes to the literature on rural development by

providing empirical evidence on how infrastructure development, governance mechanisms, and socioeconomic factors interact to influence community well-being.

## METHODOLOGY

This study adopts a mixed-methods approach to explore the complex relationship between infrastructure development and socioeconomic well-being in Malaysia's New Village communities. It also investigates the mediating role of policy implementation and community participation, as well as the moderating effects of income disparities on the outcomes of infrastructure projects. By combining quantitative and qualitative data, the study provides a comprehensive analysis of how these factors interact and influence community resilience and economic development.

The research uses a cross-sectional design to capture a snapshot of the current state of infrastructure development and its impact on socioeconomic well-being. This design is particularly useful for understanding how infrastructure projects, such as improvements in transportation networks, digital connectivity, and public utilities, influence economic participation, social mobility, and community well-being in real-time. The cross-sectional nature of the study allows for a broad examination of New Village communities and the relationships between infrastructure and community outcomes.

The survey was conducted with a total of 388 respondents from New Village communities in Sri Kembangan, Selangor. The demographic breakdown of the respondents is as Table 1:

**Table 1.** Demographic Profile of Respondents Survey

<b>Age group:</b>	<b>22-30 years old: 26.8%</b> <b>31-45 years old: 48.5%</b> <b>46-60 years old: 18.6%</b>
<b>Gender group:</b>	Male: 62.6% Female: 37.4%
<b>Education level:</b>	Secondary: 14.7% Diploma/Degree: 57.5% Master: 18.8% PhD: 9.0%
<b>Occupation:</b>	Employed (Full-time): 29.9% Employed (Part-time): 45.4% Self-employed: 24.2% Student: 0.5%
<b>Income Group:</b>	Low Income (Below RM2,500): 15.5% Middle Income (RM2501-RM8000): 51.5% High Income (Above RM8001): 33.0%

### **Quantitative Approach**

The quantitative component of the study is centered on analyzing the direct effects of infrastructure development on socioeconomic outcomes, while also examining how policy implementation and community participation mediate these effects. Data was collected through a structured survey, which was designed to capture key aspects of socioeconomic well-being, including employment rates, business activity, and access to services. The survey also assessed the extent of community resilience, which is shaped by infrastructure investments and the active participation of residents in development projects. The survey targeted a representative sample of New Village communities in Sri Kembangan, Selangor, with participants selected using a stratified sampling method to ensure that diverse demographic groups, such as youth, low-income households, and business owners, were well-represented. This stratified approach helped ensure that the sample reflected the varied experiences and perspectives within the community. To analyze the data, the study employs Partial Least Squares Structural Equation Modelling (PLS-SEM), a robust statistical technique ideal for exploring complex relationships between multiple variables. PLS-SEM allows for an in-depth examination of the relationships between infrastructure development (as the independent variable), policy implementation and community participation (as mediating variables), and socioeconomic well-being (as the dependent variable). This technique not only tests direct effects but also allows for the inclusion of moderating variables, such as income disparities, which may influence the relationship between infrastructure development and socioeconomic outcomes.

### **Qualitative Approach**

While the quantitative data provides valuable insights into the broader trends and patterns of socioeconomic development, the qualitative approach adds depth and context to the findings. Through semi-structured interviews, the study explores the mediating role of policy implementation and community participation in greater detail. Interviews were conducted with community leaders, youth representatives, and policymakers, all of whom are directly involved in or impacted by infrastructure development in New Village communities. These qualitative interviews provided rich, descriptive data on how policies are executed on the ground, the challenges involved in policy implementation, and the role of community participation in ensuring the success of infrastructure projects. Interviewees shared their experiences of government policies, community-led initiatives, and youth programs, providing valuable insights into how policy alignment and community engagement can either facilitate or hinder the outcomes of infrastructure projects. Additionally, the thematic analysis of interview data helped identify recurring themes, such as the lack of financial resources, policy misalignment, and bureaucratic inefficiencies that impede the smooth execution of infrastructure and youth empowerment initiatives. This analysis also explored how these challenges affect the overall socioeconomic outcomes of the New Village communities.

To enhance the reliability and validity of the findings, the study uses data triangulation by integrating the quantitative data from the survey with the qualitative insights from the interviews. This combination of numerical data and personal experiences provides a richer understanding of the factors that influence socioeconomic well-being in these communities. By comparing and cross-referencing the results from different data sources, the study can provide a more comprehensive and nuanced analysis of the impact of infrastructure development and the mediating role of policy implementation.

## RESULTS AND DISCUSSION

The primary objective of this study is to examine how infrastructure development influences socioeconomic well-being in Malaysia's New Village communities, while also analyzing the mediating role of policy implementation and community participation, and the moderating effect of income disparities. The following section presents the results from the study's data collection and analysis, followed by a discussion of how these findings align with the research objectives.

### 1. Impact of Infrastructure Development on Socioeconomic Well-being

Table 2 summarizes the R-Square values, indicating the proportion of variance in the dependent variables explained by the independent variables in the model. It includes the R-Square and Adjusted R-Square values for the key constructs of Policy Implementation & Community Participation, and Socioeconomic Wellbeing.

**Table 2.** R-Square Value

Construct	R-Square (R <sup>2</sup> )	R-Square Adjusted
<b>Policy Implementation &amp; Community Participation</b>	0.664	0.663
<b>Socioeconomic Wellbeing of New Village Communities</b>	0.615	0.613

Based on Table 2, the quantitative analysis using Partial Least Squares Structural Equation Modelling (PLS-SEM) revealed that infrastructure development has a significant and positive impact on the socioeconomic well-being of residents in the New Village communities. Specifically, the results indicate that infrastructure improvements, including better transportation networks, digital connectivity, and access to public utilities, collectively explained 61.5% of the variance in socioeconomic outcomes ( $R^2 = 0.615$ ). This strong relationship shows that improvements in physical infrastructure directly enhance economic opportunities, mobility, and quality of life for residents. While the R-Square value of 0.664 for policy implementation and community participation reveals the significant role these factors play in shaping infrastructure development, the R-Square value of 0.615 for socioeconomic well-being is the primary focus because it directly

measures the outcomes that matter most to the community. The study is primarily concerned with how infrastructure improvements lead to tangible benefits in socioeconomic terms, such as increased employment, enhanced business activity, and greater community satisfaction.

The focus on socioeconomic well-being reflects the end goal of infrastructure development: to improve the quality of life for the residents of New Village communities. While policy implementation and community participation are essential for ensuring that infrastructure projects meet community needs, it is the outcomes that directly affect people's lives that are of primary concern. The  $R^2$  value of 0.615 highlights that infrastructure development is not just about building roads or utilities, it is about creating economic opportunities, social inclusion, and improving living conditions for the community as a whole. While policy and community participation are important mediators in the development process, the socioeconomic well-being of the residents is the ultimate goal, and the R-Square value of 0.615 clearly demonstrates how infrastructure development leads to positive outcomes for the community.

## 2. Mediating Role of Policy Implementation and Community Participation

Table 3 summarizes the path coefficients from the PLS-SEM analysis, indicating the strength of the relationships between infrastructure development, policy implementation, community participation, and socioeconomic well-being. The T-statistics and P-values highlight the statistical significance of each path relationship.

**Table 3.** Path coefficient between variables using PLS-SEM

Path Relationship	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T-Statistics (O/STDEV)	P-Values
<b>Income → Socioeconomic Wellbeing</b>	0.050	0.053	0.034	1.456	0.145
<b>Income × Infrastructure Development → Socioeconomic Wellbeing</b>	0.126	0.115	0.060	2.121	0.034
<b>Infrastructure Development → Policy Implementation &amp; Community Participation</b>	0.815	0.815	0.019	43.118	0.000
<b>Infrastructure Development → Socioeconomic Wellbeing</b>	0.461	0.461	0.074	6.267	0.000

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<b>Policy Implementation &amp; Community Participation → Socioeconomic Wellbeing</b>	0.336	0.338	0.062	5.402	0.000
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Based on Table 3, the mediation analysis confirms that both policy implementation and community participation significantly mediate the relationship between infrastructure development and socioeconomic well-being. From the Policy Implementation perspective, the study found that effective policy frameworks, which ensure efficient resource allocation, community engagement, and youth inclusion, enhance the impact of infrastructure projects. Policy implementation significantly contributes to socioeconomic outcomes, with a moderate path coefficient ( $\beta = 0.336$ ) indicating its role in mediating the relationship. This suggests that infrastructure alone is insufficient without coordinated efforts to engage communities and align policies with local priorities. Meanwhile, from the Community Participation perspectives, the results also reveal the importance of community participation in ensuring that infrastructure projects meet the needs of residents. Active involvement of residents in the planning and execution of these projects leads to better alignment with community needs and greater support for the initiatives. The path coefficient ( $\beta = 0.815$ ) between community participation and socioeconomic well-being indicates very strong and highly significant effect, further underscores the positive role that community-driven governance plays in infrastructure development.

### 3. Moderating Role of Income Disparities

The study examined the moderating effect of income disparities on the relationship between infrastructure development and socioeconomic well-being. Based on Table 3, the analysis revealed a moderating effect ( $\beta = 0.126$ ,  $p = 0.034$ ), indicating that the benefits of infrastructure development are not equally distributed among all income groups. Lower-income households were found to experience lesser benefits from infrastructure improvements, as they often face greater barriers to accessing the opportunities created by these projects. The moderating effect of income disparities underscores the need for targeted interventions to ensure that low-income communities can access the opportunities generated by infrastructure investments. The study suggests that inclusive policies are necessary to address these income-based disparities, including financial assistance programs, subsidies, and entrepreneurship support.

### 4. Implications for Rural Development

The findings provide valuable empirical evidence on the role of infrastructure development in improving socioeconomic well-being in rural communities. The study highlights that while infrastructure investments are essential, they must be accompanied by effective policy implementation and community participation to ensure equitable benefits for all residents.

The moderating effect of income disparities indicates that addressing economic inequalities is crucial for ensuring that rural development is inclusive. Targeted policies for low-income groups should be implemented to ensure that all residents benefit equally from infrastructure improvements. This could include skill-building programs, financial support for businesses, and improved access to services such as healthcare and education.

In conclusion, this study emphasizes the critical role of policy implementation and community participation in translating infrastructure development into real and equitable socioeconomic benefits. The findings suggest that while infrastructure projects are vital for improving community well-being, their success largely depends on strong governance structures and active community involvement. Furthermore, the moderating effect of income disparities underscores the need for inclusive policies that ensure all community members, particularly those from low-income households, can benefit from the opportunities generated by infrastructure development. By focusing on these elements, future infrastructure projects can contribute to sustainable and inclusive rural development.

## CONCLUSION

This study explores the relationship between infrastructure development and socioeconomic well-being in Malaysia's New Village communities, with a particular focus on the mediating role of policy implementation and community participation, as well as the moderating effect of income disparities. The findings underscore the crucial role of infrastructure as a catalyst for economic growth, social mobility, and community resilience.

The R-Square value of 0.615 for socioeconomic well-being highlights the significant impact of infrastructure development on improving employment rates, business growth, and community satisfaction. This demonstrates that infrastructure improvements extend beyond physical structures to create real, tangible benefits for the community, directly enhancing the quality of life for residents. However, the study also finds that the effectiveness of infrastructure development is strongly influenced by policy implementation and community participation.

The mediating role of policy implementation and community participation was shown to play a significant part in ensuring that infrastructure investments translate into socioeconomic benefits. The path coefficient for policy implementation was found to be  $\beta = 0.336$ , indicating a moderate positive relationship between policy execution and socioeconomic outcomes. Similarly, community participation was found to be a crucial mediator, with a path coefficient of  $\beta = 0.815$ , signifying its strong impact on improving socioeconomic well-being. These results highlight that effective governance and active community involvement are essential in facilitating successful infrastructure projects, ensuring they align with community needs and that their benefits are equally distributed.

The study also highlights the moderating role of income disparities. The path coefficient for income disparities as a moderator was  $\beta = 0.126$ , suggesting that

income inequality has a significant moderating effect on the relationship between infrastructure development and socioeconomic well-being. Lower-income groups tend to experience fewer benefits from infrastructure improvements, indicating that while infrastructure can provide broad benefits, inclusive policies are necessary to ensure that marginalized or low-income communities are not left behind. To maximize the positive impact of infrastructure on community well-being, targeted interventions that address economic inequalities are critical.

In terms of implications for rural development, the findings emphasize the need for coordinated and inclusive policies that integrate infrastructure development, policy implementation, and community participation. For rural communities, inclusive development strategies that address income inequality and empower youth can promote more equitable growth and long-term prosperity. Policymakers should focus on bridging income gaps, fostering entrepreneurship, and providing access to education and training to ensure that all community members benefit from infrastructure improvements.

In conclusion, this study provides valuable insights into the multifaceted process of rural development, demonstrating that infrastructure development alone is not enough. For it to lead to sustainable and equitable growth, it must be supported by effective governance, community involvement, and inclusive policies. These elements ensure that the benefits of infrastructure are maximized and equitably distributed, fostering social and economic inclusion. Future research could explore how youth-driven initiatives and emerging technologies could further enhance the impact of infrastructure on socioeconomic well-being in rural communities.

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