

Farm-to-Market Roads' Implementation, Perceived Benefits, Encountered Difficulties and Residents' Satisfaction in Conflict-Affected Barangays of Tangub City

Kenneth Rey B. Embodo¹  Lovely Jean B. Omandam²  Jessa C. Gingoyon³ 
Mary Grace Sabido⁴  Jay Mar G. Requina⁵ 

Authors' Information:

¹⁻⁵ Institute of Arts and Sciences, Tangub City Global College, Tangub City, Misamis Occidental, Philippines

Correspondence:

jrequina113@gmail.com

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Abstract. Farm-to-Market Road projects have been widely promoted as development interventions that enhance rural accessibility, agricultural productivity, and socio-economic conditions in conflict-affected communities. However, limited empirical evidence exists regarding how local residents perceive the implementation, benefits, and outcomes of these projects and how such perceptions influence their overall satisfaction. This study examines how such infrastructure initiatives are implemented and experienced by local communities and critically analyzes the extent to which perceived benefits and implementation outcomes shape residents' satisfaction in four conflict-affected barangays of Tangub City. A descriptive-correlational research design was employed. Data were collected from 334 residents using a researcher-developed questionnaire and analyzed using descriptive statistics, Pearson correlation, and linear regression. Results revealed that the FMR project was moderately implemented and perceived as highly beneficial, with encountered difficulties reported as less evident. Residents expressed a satisfactory level of satisfaction. Correlation results show moderate positive relationships between project implementation and perceived benefits with residents' satisfaction, while encountered difficulties exhibited no significant relationship. Regression analysis further showed that project implementation and perceived benefits significantly predicted residents' satisfaction. The findings suggest that residents' satisfaction is primarily influenced by the quality of project implementation and the tangible benefits derived from the infrastructure. The study concludes that Farm-to-Market Road projects contribute positively to community perceptions and local development outcomes. Strengthening implementation practices and maximizing community benefits may further enhance the effectiveness and sustainability of infrastructure interventions in conflict-affected areas.

Keywords: Farm-to-Market Road; NTF-ELCAC; Project Implementation; Residents' Satisfaction; Rural Infrastructure

Introduction

The Farm-to-Market Road (FMR) project represents a major infrastructure component of the Barangay Development Program (BDP) implemented under the National Task Force to End Local Communist Armed Conflict (NTF-ELCAC). Established through Executive Order No. 70 in 2018, this initiative seeks to address longstanding insurgency by delivering basic services and infrastructure to formerly conflict-affected barangays. Among its priorities is the construction of FMRs, which aim to boost local economies, reduce isolation, and promote peace through enhanced mobility and accessibility. These projects are funded by the Local Government Support Fund – Support to the Barangay Development Program (LGSF-SBDP) and are carried out in barangays identified based on their former vulnerability to insurgent activities and their need for strategic rural infrastructure.

Tangub City, a 4th class component city in Misamis Occidental, relies heavily on agriculture as its primary economic activity. Yet many of its rural barangays continue to suffer from inadequate infrastructure — especially road access — which restricts the movement of goods and hinders inclusive development. FMRs are rural infrastructure projects designed to facilitate efficient transportation of agricultural products from farms to commercial centers, improving market access and reducing post-harvest losses (Ballesteros & Domingo, 2020). Investments in FMRs reduce post-harvest losses and lower transportation expenses, leading to increased agricultural income (Ballesteros & Domingo, 2020). Improved road networks further enable farmers to sell their produce at competitive prices (Briones, 2021). However, several studies also highlight implementation difficulties such as inadequate funding, poor project management, and weak maintenance

systems and delays in procurement and logistical constraints often hinder timely project completion (Shabir, 2023).

Although previous studies have examined the economic and agricultural impacts of FMRs at the national and regional levels, they largely emphasize output indicators such as income effects, market access, and productivity gains. There remains a limited understanding of how these infrastructure projects are actually implemented at the local level and how beneficiaries themselves evaluate both the implementation process and its outcomes, particularly in conflict-affected settings. Moreover, few studies integrate implementation performance, perceived benefits, encountered difficulties, and satisfaction into a single analytical model, especially within the context of NTF-ELCAC interventions. Moreover, data from the Statement of Work Accomplished revealed that Barangays Baluc and Bongabong were awarded FMR projects between July and October 2024, while Barangays Salimpuno and Matugnao received awards between March and April 2024. Each project was scheduled for 90–120 calendar days; however, contextual gaps such as procurement delays, supply chain disruptions, and adverse weather conditions led to 30–60-day extensions.

This study addresses a clear research gap: the absence of empirical, community-level assessments of NTF-ELCAC's FMR projects in conflict-affected barangays. Specifically, it aimed to: (1) assess project execution in terms of timeline adherence, budget utilization, and stakeholder participation; (2) determine how these outcomes influence perceived community benefits; (3) identify difficulties encountered during implementation; and (4) examine relationships and predictors of residents' satisfaction with FMR projects.

Research Questions

This study aimed to assess the implementation of the Farm-to-Market Road as a component of the Barangay Development Program, identify difficulties encountered during its execution, and evaluate the perceived benefits received by local stakeholders, particularly in relation to residents' satisfaction. Specifically, the study sought answers to the following questions:

1. What is the level of implementation of Farm-to-Market Road (FMR) Project in selected barangays of Tangub City in terms of:
 - 1.1 Adherence to timelines;
 - 1.2 Budget utilization; and
 - 1.3 Stakeholder participation?
2. What is the level of perceived benefits derived from the Farm-to-Market Road (FMR) projects in the selected barangays of Tangub City as assessed by the residents, in terms of:
 - 2.1 Peace and Order;
 - 2.2 Increased market access;
 - 2.3 Reduced transportation costs; and
 - 2.4 Improved quality of life?
3. What is the extent of the major difficulties encountered in the implementation of Farm-to-Market projects in the selected barangays of Tangub City as perceived by residents in terms of:
 - 3.1 Community Acceptance;
 - 3.2 Administrative delays;
 - 3.3 Logistical issues; and
 - 3.4 Funding constraints?
4. What is the level of residents' satisfaction with the (FMR) projects in the selected barangays of Tangub City in terms of:
 - 4.1 Service Delivery;
 - 4.2 Effect on Daily Life; and
 - 4.3 Community Involvement?
5. Is there a significant relationship between the level of Farm-to-Market Road (FMR) project implementation and the level of residents' satisfaction?
6. Is there a significant relationship between the level of perceived benefits and the level of residents' satisfaction?
7. Is there a significant relationship between the level of project difficulties and the level of residents' satisfaction?
8. Among project implementation, perceived project benefits and project difficulties, which variable serves as a significant predictor of residents' satisfaction?

Scope and Delimitation of the Study

This study evaluated the implementation of the Farm-to-Market Road (FMR) as a Barangay Development Project (BDP) under the National Task Force to End Local Communist Armed Conflict (NTF-

ELCAC) and examined its relationship to residents' satisfaction in selected barangays of Tangub City. Specifically, it investigated project implementation in terms of adherence to timelines, budget utilization, and stakeholder participation; project benefits in terms of peace and order, increased market access, reduced transportation costs, and improved quality of life; project difficulties in terms of community acceptance, administrative delays, logistical issues, and funding constraints; and residents' satisfaction in terms of service delivery, effect on daily life, and community involvement. The respondents were residents of selected barangays where FMR projects had been implemented, chosen as direct beneficiaries who could provide valuable insights into their perceptions and lived experiences. A quantitative approach was employed using a survey checklist questionnaire to gather measurable data on implementation practices, perceived difficulties and benefits, and satisfaction levels.

Literature Review

Project Implementation

Project implementation serves as a foundational determinant in assessing the quality, effectiveness, and overall success of public sector infrastructure initiatives. Recent studies emphasize that successful infrastructure delivery extends beyond the completion of physical outputs and requires effective governance, stakeholder engagement, timely execution, and efficient resource utilization. Brunet and Jobidon (2024) argued that public infrastructure projects generate greater public value when project governance mechanisms effectively coordinate planning, implementation, and accountability processes. Likewise, Endo et al. (2024) highlighted that collaborative governance, institutional coordination, and stakeholder involvement are critical factors influencing the successful implementation of infrastructure projects and the achievement of sustainable development outcomes. Furthermore, Lehtinen and Aaltonen (2024) demonstrated that meaningful stakeholder engagement enhances project legitimacy, community support, and implementation effectiveness, particularly in infrastructure development settings. Similarly, Uddin et al. (2023) found that stakeholder engagement remains one of the most influential factors affecting project performance and implementation success across public sector projects. Xiao and Hao (2021) further emphasized that public participation and stakeholder inclusion have become essential dimensions of contemporary infrastructure governance, contributing to improved project acceptance, transparency, and long-term sustainability. Collectively, these studies suggest that effective project implementation depends on the integration of sound governance practices, stakeholder participation, continuous monitoring, and adaptive management strategies that ensure projects respond to community needs while achieving intended development objectives. In the Philippine local governance context, implementation is further strengthened through institutional oversight mechanisms such as the Project Monitoring Committee (PMC). Mandated under the Local Government Code and reinforced through Department of the Interior and Local Government (DILG) issuances, the PMC serves as a multi-sectoral accountability mechanism that ensures transparency and compliance in project execution. According to DILG Region X (2022), PMC teams conduct regular site inspections, validate accomplishment reports, and recommend corrective measures when deviations occur. This oversight role is particularly relevant in infrastructure projects such as Farm-to-Market Roads (FMRs), where delays, logistical constraints, and coordination gaps frequently affect implementation efficiency. Despite these established frameworks, most existing studies treat project implementation as a technical and administrative process, with limited attention to how implementation quality is experienced and interpreted by end beneficiaries, particularly in politically sensitive or post-conflict environments. This gap becomes more pronounced in conflict-affected communities, where governance dynamics, trust in institutions, and historical marginalization may significantly shape how implementation processes are perceived and evaluated. This study addresses this gap by situating project implementation within both technical performance and community perception dimensions in conflict-affected barangays.

Project Benefits.

This refers to the tangible and direct advantages gained by residents from farm-to-market road (FMR) projects. Recent studies have consistently shown that rural road infrastructure improves agricultural productivity, household income, and market accessibility. The World Bank (2026) reported that the construction and rehabilitation of farm-to-market roads in the Philippines significantly reduced travel time and transportation costs, resulting in increased household incomes and improved market integration among rural communities. Similarly, Marion et al. (2024) emphasized that improved market access enables farmers to participate more effectively in agricultural markets, leading to better economic and food security outcomes. Furthermore, the World Bank (2024) highlighted that rural road investments enhance access to markets, agricultural services, education, and health facilities, thereby contributing to poverty reduction and overall

rural development. These findings suggest that FMR projects generate substantial economic and social benefits for rural residents by improving connectivity, increasing income opportunities, and enhancing access to essential services. There may be an increased sense of safety when traveling, especially in areas previously considered high-risk. Zou and Yu (2022) noted that safe and accessible roads are key to building community resilience in conflict-prone rural zones. The visible presence of law enforcement and local government units may increase post-project, as explained by the Department of the Interior and Local Government (DILG, 2021), which links government visibility to reduced recruitment of vulnerable populations by insurgent groups. Moreover, community participation in peace-building activities such as barangay assemblies and development planning may rise, which described as a positive outcome of improved accessibility and civic confidence in conflict-affected areas. Similarly, Natarajan et al. (2022) emphasized that rural road investments can strengthen social cohesion and support peacebuilding efforts by connecting marginalized communities to economic opportunities and public services. In conflict-affected settings, enhanced infrastructure connectivity has also been associated with increased government legitimacy and improved citizen trust in public institutions, which can contribute to reduced vulnerability to social unrest and insurgent influence (Koehler & Zürcher, 2023). Furthermore, greater accessibility may encourage higher participation in local governance activities, such as community consultations, barangay assemblies, and participatory development planning, thereby fostering civic engagement and strengthening community confidence in government-led development initiatives (Mansuri et al., 2024). Collectively, these findings suggest that beyond their economic functions, farm-to-market roads can generate important social and governance outcomes that contribute to peacebuilding, community resilience, and sustainable rural development. However, most existing literature examines benefits in generalized rural contexts, often assuming uniform development effects. There is limited empirical distinction between ordinary rural communities and conflict-affected areas, where historical insecurity, weakened institutions, and fragmented social trust may alter how benefits are perceived and distributed. This study therefore contributes a more context-sensitive analysis of perceived benefits in conflict-affected barangays.

Project Difficulties

Project difficulties refer to the barriers and constraints that hinder the timely, efficient, and successful completion of public infrastructure projects. Contemporary studies indicate that infrastructure implementation challenges commonly arise from governance issues, administrative inefficiencies, funding uncertainties, logistical constraints, and stakeholder-related concerns. According to Osei-Kyei and Chan (2022), project delays and implementation difficulties are often associated with inadequate coordination among stakeholders, weak institutional capacity, and ineffective risk management practices. Similarly, Lehtinen et al. (2023) emphasized that infrastructure projects frequently encounter challenges when communication mechanisms, stakeholder engagement processes, and project governance structures are insufficiently aligned with local implementation contexts. Funding constraints remain among the most critical challenges affecting public infrastructure delivery. Recent evidence suggests that unstable financing mechanisms, delayed fund releases, and budget reallocations significantly reduce project efficiency and increase the likelihood of implementation delays and cost escalations (World Bank, 2024). In rural infrastructure settings, inconsistent financial flows may compromise construction quality, prolong project completion schedules, and limit the long-term sustainability of project outcomes. Likewise, Love et al. (2023) found that financial uncertainty often disrupts procurement activities, contractor performance, and project monitoring systems, ultimately affecting infrastructure quality and service delivery. Administrative delays also represent a significant implementation barrier. A study by Aghimien et al. (2022) reported that bureaucratic procedures, lengthy approval processes, and weak inter-agency coordination frequently contribute to schedule overruns in public sector projects. These challenges are particularly pronounced in infrastructure initiatives involving multiple government agencies and community stakeholders. Furthermore, logistical issues such as difficult terrain, limited equipment availability, and transportation constraints can adversely affect project execution, especially in geographically isolated rural communities (United Nations Development Programme [UNDP], 2023). The literature further highlights the importance of proactive risk management and adaptive governance in minimizing project difficulties. Effective planning, reliable funding mechanisms, stakeholder collaboration, and continuous monitoring have been identified as critical factors for mitigating implementation risks and ensuring successful project delivery (Aaltonen & Lehtinen, 2024). Consequently, infrastructure programs such as Farm-to-Market Road (FMR) projects require robust financial planning, streamlined administrative procedures, and responsive governance systems to address implementation challenges and sustain development gains over time. While these studies provide strong evidence of implementation constraints, they largely reflect generic infrastructure environments. Less attention has been given to how such difficulties are experienced in conflict-affected settings, where additional layers of

complexity—such as security risks, political sensitivities, and weakened local institutional capacity—may intensify implementation barriers. This study therefore situates project difficulties within the specific realities of conflict-affected barangays to generate more contextually grounded insights.

Residents' Satisfaction

Residents' satisfaction reflects the extent to which community members perceive that Farm-to-Market Road (FMR) projects have improved their daily lives and met their expectations regarding service delivery, accessibility, and community development outcomes. This reflects the perceived effects and overall approval of the FMR projects by the community. Parasuraman et al. (1988) introduced the SERVQUAL model, showing how satisfaction is shaped by expectations and service delivery. In contemporary public administration and infrastructure governance literature, citizen satisfaction is widely recognized as a key indicator of project success because it captures beneficiaries' evaluations of both project processes and outcomes. According to Van de Walle and Migchelbrink (2022), citizens' satisfaction with public services is strongly influenced by perceived service quality, responsiveness of government institutions, and the extent to which public interventions address community needs. Similarly, Porumbescu et al. (2023) found that positive perceptions of government performance and service effectiveness significantly enhance public satisfaction and trust in government initiatives. Recent studies further suggest that infrastructure-related satisfaction extends beyond the physical completion of projects and is shaped by the tangible benefits experienced by communities. Kim and Lee (2021) emphasized that residents tend to evaluate public infrastructure projects based on their perceived contribution to mobility, accessibility, economic opportunities, and quality of life. Likewise, Ingrams and Piotrowski (2024) argued that citizen satisfaction increases when public projects demonstrate transparency, accountability, and responsiveness throughout implementation and service delivery processes. The quality of project outputs also plays a critical role in shaping satisfaction. Residents often associate durable construction, reliable service delivery, and visible improvements in community conditions with successful project implementation. In infrastructure settings, Lehtinen and Aaltonen (2024) reported that stakeholder satisfaction is significantly influenced by perceived project quality, fulfillment of community expectations, and meaningful stakeholder engagement. Furthermore, OECD (2023) highlighted that public satisfaction with infrastructure investments is strengthened when citizens perceive that projects generate lasting socio-economic benefits and contribute directly to community well-being. Taken together, these perspectives suggest that residents' satisfaction with FMR projects is influenced by a combination of service delivery quality, perceived benefits, project responsiveness, and community involvement. Consequently, citizen satisfaction serves not only as an outcome indicator but also as an important measure of the effectiveness, legitimacy, and sustainability of rural infrastructure development initiatives. However, most satisfaction studies are conducted in stable rural settings, with limited exploration of how satisfaction is formed in conflict-affected communities. In such contexts, satisfaction may be shaped not only by service quality but also by governance legitimacy, security perceptions, and historical trust deficits. This study addresses this limitation by examining satisfaction as a multidimensional construct influenced by implementation quality, perceived benefits, and contextual difficulties in conflict-affected barangays.

Methodology

Research Design

This study employed a quantitative descriptive-correlational research design. Quantitative research is appropriate for examining measurable variables through systematic data collection and statistical analysis, enabling researchers to identify patterns, relationships, and trends within a population (Creswell & Creswell, 2023). Descriptive research is used to accurately characterize the status, conditions, or characteristics of a phenomenon as it exists, while correlational research examines the degree and direction of relationships among variables without manipulating them (Cohen et al., 2024). This design is particularly useful when the objective is to investigate naturally occurring associations among variables and generate empirical evidence for policy and program development. The descriptive component of the study was utilized to determine the levels of Farm-to-Market Road (FMR) project implementation, perceived project benefits, project difficulties, and residents' satisfaction in the selected barangays of Tangub City. Meanwhile, the correlational component was employed to examine the relationships among project implementation, perceived benefits, project difficulties, and residents' satisfaction, as well as to identify significant predictors of satisfaction. Given that the study sought to assess existing conditions and analyze relationships among variables without experimental intervention, the quantitative descriptive-correlational design was considered the most appropriate methodological approach.

Sampling Design

Sampling design was employed to ensure the adequacy and representativeness of the sample size. Power analyses were conducted using G*Power 3.1 (Faul et al., 2009) for both correlation and regression analyses. For the correlation analysis, parameters were set at a medium effect size ($r = .30$), $\alpha = .03$, and power = .95 (one-tailed test), yielding a minimum required sample size of $N = 128$; this requirement was exceeded by the actual sample size of 334. For the regression analysis, parameters included a medium effect size ($f^2 = .15$), $\alpha = .05$, power = .95, and three predictors, consistent with the guidelines of Cohen (1988) and Lakens (2022), which indicated a minimum required sample size of $N = 119$. The obtained sample size of 334 was therefore more than sufficient, enhancing the reliability and generalizability of the findings. A stratified random sampling technique was utilized, with respondents proportionally allocated across four barangays to ensure equitable representation. Specifically, 83 respondents were drawn from Baluc (population = 624), 131 from Bongabong (population = 979), 44 from Matugnao (population = 328), and 76 from Salimpuno (population = 565), resulting in a total population of 2,496 and a final sample of 334. This approach minimized sampling bias and improved the accuracy of results across varied community contexts.

Research Locale

This study was conducted in selected barangays of Tangub City, specifically in Baluc, Bongabong, Matugnao, and Salimpuno, located in the province of Misamis Occidental, Northern Mindanao, Philippines. These barangays were selected based on their inclusion as beneficiaries of the FMR projects under the Barangay Development Program (BDP) of the National Task Force to End Local Communist Armed Conflict (NTF-ELCAC). These selected barangays were previously classified as Geographically Isolated and Disadvantaged Areas (GIDAs) and were also former conflict-affected communities influenced by insurgent groups—making them strategic sites for rural development interventions. The implementation of FMR projects in these areas was envisioned not only to improve connectivity and access to markets but also to contribute to peace-building by addressing long-standing socio-economic difficulties that had fueled unrest.

Research Participants

The respondents of this study were the 334 residents from selected barangays in Tangub City who were direct beneficiaries of the Farm-to-Market Road (FMR) projects implemented under the Barangay Development Program (BDP) of NTF-ELCAC. The inclusion criteria for respondents were as follows: (1) they had to be registered voters in the barangay, (2) residents for at least one year, and (3) regular users or direct beneficiaries of the FMR infrastructure.

Research Instrument

The study utilized four researcher-made questionnaires, namely the FMR Project Implementation Questionnaire, FMR Project Benefits Questionnaire, FMR Project Difficulties Questionnaire, and Residents' Satisfaction Questionnaire, all structured using a 4-point Likert scale and developed from an extensive review of related literature, established theories in project management and rural development, and standardized indicators from government infrastructure monitoring frameworks. Instrument development involved systematic item generation based on constructs such as project implementation quality, service delivery outcomes, and community development indicators. The instruments were rigorously validated by five experts in public administration, governance, research methodology, statistics, and rural development, with evaluation focusing on clarity, relevance, and construct alignment; Content Validity Index results exceeded acceptable thresholds ($I-CVI \geq 0.78$; $S-CVI/Ave \geq 0.90$), indicating strong content validity. A pilot test involving 30 respondents not included in the final sample confirmed reliability, with Cronbach's alpha coefficients demonstrating high internal consistency across all constructs: Project Implementation ($\alpha = 0.93$), Project Benefits ($\alpha = 0.93$), Project Difficulties ($\alpha = 0.94$), and Residents' Satisfaction ($\alpha = 0.93$), all exceeding the 0.70 standard. Prior to inferential analysis, diagnostic tests were conducted to ensure compliance with parametric assumptions; normality assessed through Shapiro-Wilk tests ($p = 0.062$ – 0.118), skewness (-0.84 to 0.91), and kurtosis (-0.76 to 1.12) confirmed acceptable distribution ranges, while scatterplot inspection verified linearity, residual plots indicated homoscedasticity, and multicollinearity diagnostics showed acceptable values ($VIF = 1.12$ – 1.38 ; tolerance = 0.72 – 0.89). These results confirmed that all assumptions for parametric testing were satisfied, thereby supporting the validity, reliability, and robustness of the Pearson correlation and multiple regression analyses employed in the study.

Data Gathering Procedure

The data-gathering procedure in this study followed a structured and systematic process to ensure the reliability and validity of the information collected. Formal approval was obtained from the Office of the City

Mayor of Tangub and the Barangay Captains of Baluc, Bongabong, Matugnao, and Salimpuno before data collection. Upon approval, the researchers personally administered the validated survey questionnaires to the identified respondents. The distribution and retrieval of the questionnaires were completed within one to two days to maintain uniformity in administration and to reduce potential external influences. During the administration, the objectives of the study and instructions for answering the questionnaire were clearly explained to the participants. Respondents were assured of confidentiality and anonymity, and only those who voluntarily consented were included in the study. Completed questionnaires were immediately retrieved to safeguard the accuracy and integrity of the data. The responses were then systematically encoded, tabulated, and subjected to statistical analysis using mean, standard deviation, Pearson Product-Moment Correlation (Pearson r), and regression analysis to evaluate the extent of project implementation, perceived benefits, difficulties, and their relationship to residents' satisfaction.

Results and Discussions

Research Question 1: What is the level of implementation of Farm-to-Market Road (FMR) Project in selected barangays of Tangub City in terms of Adherence to timelines, Budget utilization, and Stakeholder participation?

Table 1. Levels of Project Implementation of FMR project in Tangub City

Constructs	Brgy. Matugnao		Brgy. Baluc		Brgy. Salimpuno		Brgy. Bongabong		Overall Grand Mean	
	GM	I	GM	I	GM	I	GM	I		
Adherence to Timelines	2.98	MI	2.74	MI	2.50	LI	2.73	MI	2.74	MI
Budget Utilization	2.97	MI	3.14	MI	2.87	MI	3.02	MI	3.00	MI
Stakeholder Participation	3.05	MI	3.37	HI	3.06	MI	3.51	HI	3.25	MI
Overall Grand Mean	3.00	MI	3.08	MI	2.81	MI	3.09	MI	3.00	MI

Legend: 3.26-4.00 – Highly Implemented (HI), 2.51-3.25 – Moderately Implemented (MI), 1.76-2.50 – Less Implemented (LI), 1.00-1.75 – Not Implemented (NI)

Table 1 indicates that the Farm-to-Market Road (FMR) project implementation across the selected barangays is generally moderately implemented (overall GM = 3.00). Among the three dimensions, Stakeholder Participation obtained the highest rating (GM = 3.25), followed by Budget Utilization (GM = 3.00), while Adherence to Timelines recorded the lowest mean (GM = 2.74). These results suggest that the implementation performance is uneven across functional domains, with stronger outcomes in participatory governance compared to operational execution efficiency. The relatively high level of stakeholder participation reflects the institutionalization of participatory mechanisms under the Barangay Development Program and associated monitoring structures. This suggests that community engagement processes—such as consultations, local coordination, and monitoring participation—are effectively implemented and recognized by residents. In practical terms, this strengthens perceived legitimacy of the project and enhances community acceptance, particularly in geographically and socially sensitive settings such as former conflict-affected barangays. Participation, therefore, functions not only as a procedural requirement but also as a governance mechanism that reinforces trust and accountability. In contrast, the lower performance in adherence to timelines reflects persistent structural and operational constraints in public infrastructure delivery. These include procurement delays, supply chain disruptions, weather-related interruptions, and inter-agency coordination inefficiencies. Such constraints are consistent with the implementation realities of rural infrastructure projects, where external environmental and administrative factors significantly influence schedule compliance. The weaker performance in this dimension suggests that time efficiency remains the principal bottleneck in project execution, limiting the overall effectiveness of implementation despite adequate stakeholder engagement. From a broader analytical perspective, the findings demonstrate that social governance mechanisms are stronger than technical execution systems. Stakeholder participation is relatively well institutionalized, whereas project scheduling and coordination systems remain underdeveloped. This imbalance explains why overall implementation remains at a moderate level despite strong community engagement. These findings are consistent with Heravi et al. (2015) who emphasized that balanced implementation across timeline adherence, budget utilization, and stakeholder participation dimensions is essential for infrastructure project success. Similarly, Matu et al. (2020) identified that stakeholder participation often achieves higher implementation levels in community-based projects, corroborating the study's findings on Stakeholder Participation construct performance. In the context of public infrastructure projects, Prebanic and Vukomanović (2021) demonstrated that stakeholder management effectiveness significantly influences overall project implementation and stakeholder satisfaction. Khan et al. (2021) found

that project governance mechanisms correlate strongly with implementation success and resource optimization outcomes. Erkul et al. (2020) highlighted that consistent implementation across multiple constructs indicates effective project management and coordinated execution strategies. These studies reinforced the table's implication that balanced implementation across all constructs remains essential for comprehensive project success. The results highlight the need for a dual-focused implementation strategy. First, strengthening procurement systems, scheduling discipline, and inter-agency coordination is essential to address persistent timeline inefficiencies. Second, sustaining and further institutionalizing stakeholder participation is critical, as it serves as a stabilizing governance mechanism that enhances legitimacy and community support. Addressing both dimensions simultaneously is necessary to elevate implementation performance from moderate to high effectiveness across all barangays.

Research Question 2: What is the level of perceived benefits derived from the Farm-to-Market Road (FMR) projects in the selected barangays of Tangub City as assessed by the residents, in terms of Peace and Order, Increased market access, Reduced transportation costs, and Improved quality of life?

Table 2. Levels of Project Benefits of FMR project in Tangub City

Constructs	Brgy. Matugnao		Brgy. Baluc		Brgy. Salimpuno		Brgy. Bongabong		Overall Grand Mean	
	GM	I	GM	I	GM	I	GM	I		
Peace and Order	3.43	HB	3.26	HB	3.40	HB	3.06	B	3.29	HB
Increased Market Access	3.37	HB	3.39	HB	3.65	HB	3.30	HB	3.43	HB
Reduced Transportation Costs	3.07	B	3.23	B	2.88	B	2.92	B	3.03	B
Improved Quality of Life	3.29	HB	3.35	HB	3.31	HB	3.15	B	3.28	HB
Overall Grand Mean	3.29	HB	3.31	HB	3.31	HB	3.11	B	3.26	HB

Legend: 3.26-4.00 – Highly Beneficial (HB), 2.51-3.25 – Beneficial (B), 1.76-2.50 – Less Beneficial (LB), 1.00-1.75 – Not Beneficial (NB)

Table 2 shows that the Farm-to-Market Road (FMR) project is perceived as highly beneficial overall (Grand Mean = 3.26), indicating that the intervention generated substantial multidimensional improvements in the selected barangays. Among the four benefit domains, Increased Market Access obtained the highest rating (GM = 3.43), followed by Peace and Order (GM = 3.29) and Improved Quality of Life (GM = 3.28), while Reduced Transportation Costs recorded the lowest mean (GM = 3.03), though still interpreted as beneficial. The consistently high rating for increased market access indicates that the most immediate and dominant effect of FMR infrastructure is the enhancement of spatial and economic connectivity. This reflects the functional role of rural roads in reducing travel barriers between production sites and commercial centers, thereby enabling farmers and traders to participate more efficiently in local and regional markets. The strength of this dimension suggests that economic accessibility is the primary mechanism through which infrastructure benefits are perceived in rural communities. Similarly, the high ratings for peace and order imply that improved road accessibility contributes to enhanced mobility of government services and increased visibility of state presence in formerly disadvantaged or conflict-affected areas. This supports the interpretation that infrastructure development produces not only economic outcomes but also reinforces perceptions of safety and governance reach. In such contexts, roads function as both economic and institutional infrastructure, strengthening state–community relations. These findings are consistent with Raymund and Caelian (2024) who emphasized that infrastructure projects generate multidimensional benefits including social, economic, and quality of life improvements, directly supporting the study's comprehensive benefit assessment approach. Similarly, Kaiser et al. (2022) identified that market access improvements often produce the most significant economic benefits in rural infrastructure projects, corroborating the study's findings on Increased Market Access construct performance. In the context of developing regions, Moses Naiim Fuseini (2024) demonstrated that peace and order benefits frequently emerge from improved infrastructure connectivity and community accessibility. Kaiser et al. (2022) found that transportation cost reductions vary significantly based on usage patterns and local economic conditions, explaining the moderate performance in this construct. Tiongson and Caelian (2024) highlighted that quality of life improvements serve as comprehensive indicators of successful infrastructure interventions. These studies reinforced the table's implication that multidimensional benefit assessment remains essential for comprehensive project impact evaluation. The results indicate the need for a more integrated benefit-enhancement strategy. While market access and social benefits are already strong, policy attention should focus on strengthening economic efficiency outcomes, particularly transportation cost reduction. This may be achieved through complementary interventions such as transport subsidies, improved logistics systems, and livelihood support programs. Strengthening these areas

would help ensure that infrastructure investments translate into more balanced and comprehensive rural development outcomes across all barangays.

Research Question 3: What is the extent of the major difficulties encountered in the implementation of Farm-to-Market projects in the selected barangays of Tangub City as perceived by residents in terms of Community Acceptance, Administrative delays, Logistical issues, and Funding constraints?

Table 3. Levels of Project Difficulties of FMR project in Tangub City

Constructs	Brgy. Matugnao		Brgy. Baluc		Brgy. Salimpuno		Brgy. Bongabong		Overall Grand	
	GM	I	GM	I	GM	I	GM	I	Mean	
Community Acceptance	3.00	E	2.20	LE	2.08	LE	2.15	LE	2.36	LE
Administrative Delays	2.80	E	2.22	LE	2.16	LE	2.27	LE	2.36	LE
Logistical Issues	2.10	LE	2.49	LE	2.28	LE	2.01	LE	2.22	LE
Funding Constraints	3.00	E	2.23	LE	2.14	LE	2.27	LE	2.41	LE
Overall Grand Mean	2.72	E	2.28	LE	2.17	LE	2.18	LE	2.34	LE

Legend: 3.26-4.00 – Highly Evident (HE), 2.51-3.25 – Evident (E), 1.76-2.50 – Less Evident (LE), 1.00-1.75 – Least Evident (LE)

Table 3 presents the perceived extent of difficulties encountered in the implementation of the Farm-to-Market Road (FMR) project. Overall, the results indicate that implementation difficulties are generally less evident (Grand Mean = 2.34), suggesting that challenges exist but are not severe enough to substantially hinder project execution. Among the four dimensions, Community Acceptance (GM = 2.36), Administrative Delays (GM = 2.36), and Funding Constraints (GM = 2.41) emerged as the most pronounced difficulties, while Logistical Issues recorded the lowest mean (GM = 2.22). The relatively higher ratings for community acceptance in selected barangays, particularly Matugnao (GM = 3.00), suggest that resistance or limited engagement may still be present in certain local contexts. This may reflect varying levels of community readiness, trust in government interventions, or differences in perceived project relevance. In contrast, the generally low ratings in other barangays indicate that community resistance is not widespread but rather localized, pointing to uneven social acceptance across implementation sites. From an explanatory standpoint, the overall pattern suggests that difficulties in FMR implementation are systemic rather than technical in nature. The dominance of administrative and governance-related constraints over logistical challenges indicates that institutional efficiency is the primary determinant of implementation friction. Importantly, despite the presence of these difficulties, they do not significantly disrupt overall project implementation, as reflected in earlier findings of moderate implementation performance. These findings align with Erkul et al. (2020) who stressed that project difficulties vary significantly across implementation sites based on local conditions, community characteristics, and management capacity, directly supporting the study's findings on differential difficulty patterns across barangays. Similarly, Collinge (2020) identified that community acceptance difficulties often correlate with inadequate stakeholder engagement and communication strategies. In the context of infrastructure projects, Mok et al. (2015) demonstrated that funding constraints and administrative delays frequently emerge as primary implementation difficulties in public sector projects. Khan et al. (2021) found that logistical issues vary based on site accessibility, resource availability, and coordination effectiveness. Nguyen et al. (2021) highlighted that effective difficulty management requires targeted approaches that address specific challenge patterns in different implementation contexts. These studies reinforced the table's implication that comprehensive difficulty assessment and management remain essential for successful project implementation. The results suggest that improving FMR implementation requires targeted institutional reforms rather than field-level operational adjustments. Priority should be given to streamlining administrative procedures, accelerating fund disbursement systems, and strengthening inter-agency coordination mechanisms. At the same time, localized community engagement strategies should be strengthened in barangays where acceptance-related concerns are more evident. Addressing both systemic and localized constraints will ensure smoother implementation without necessarily affecting the already low perception of difficulties across most areas.

Research Question 4: What is the level of residents' satisfaction with the (FMR) projects in the selected barangays of Tangub City in terms of Service Delivery, Effect on Daily Life, and Community Involvement?

Table 4. Levels of Residents' Satisfaction of FMR project in Tangub City

Constructs	Brgy. Matugnao		Brgy. Baluc		Brgy. Salimpuno		Brgy. Bongabong		Overall Grand Mean	
	GM	I	GM	I	GM	I	GM	I		
Service Delivery	2.96	S	3.02	S	2.91	S	3.07	S	2.99	S
Effect on Daily Life	3.43	HS	3.27	HS	3.24	S	3.24	S	3.30	HS
Community Involvement	3.11	S	3.11	S	3.02	S	2.99	S	3.06	S
Overall Grand Mean	3.17	S	3.14	S	3.05	S	3.10	S	3.12	S

Legend: 3.26-4.00 – Highly Satisfactory (HS), 2.51-3.25 – Satisfactory (S), 1.76-2.50 – Less Satisfactory (LS)
1.00-1.75 – Not Satisfactory (NS)

Table 4 shows that residents' satisfaction with the Farm-to-Market Road (FMR) project is generally satisfactory (Grand Mean = 3.12), indicating that the project meets community expectations to a reasonable extent but has not yet reached an optimal or highly satisfactory level. Across the three dimensions, Effect on Daily Life obtained the highest rating (GM = 3.30, Highly Satisfactory), followed by Community Involvement (GM = 3.06) and Service Delivery (GM = 2.99), both interpreted as satisfactory. The consistently high rating for effect on daily life indicates that satisfaction is primarily driven by direct functional improvements in residents lived experience, particularly in mobility, access to basic services, and ease of travel. This suggests that residents evaluate infrastructure success based on tangible changes in daily routines rather than administrative or procedural aspects of project delivery. In practical terms, the more visible and immediate the improvement in daily living conditions, the stronger the satisfaction response. In contrast, service delivery recorded the lowest mean across barangays, suggesting perceived gaps in implementation efficiency, responsiveness, or communication during project execution. This implies that while the physical outputs of the project are appreciated, the processes through which the project was delivered—such as responsiveness to concerns, transparency, and timeliness of service—are less consistently experienced by residents. Such a pattern indicates that satisfaction is being shaped more by outcomes than by implementation experience. These findings are consistent with Moura et al. (2022), who found that infrastructure users tend to evaluate public projects based on their contribution to daily mobility, accessibility, and social well-being, making quality-of-life improvements a critical determinant of citizen satisfaction. Similarly, Nguyen et al. (2021) identified that daily life improvements often generate the highest satisfaction levels in rural infrastructure projects, corroborating the study's findings on Effect on Daily Life construct performance. In the context of developing countries, Khan et al. (2021) demonstrated that service delivery quality significantly influences overall project satisfaction and long-term community acceptance. Moreover, Santos and Albuquerque (2023) demonstrated that meaningful community participation strengthens project legitimacy, increases stakeholder ownership, and contributes positively to satisfaction outcomes. Likewise, United Nations Development Programme (UNDP, 2022) highlighted that participatory infrastructure governance enhances both project effectiveness and public confidence by ensuring that development interventions address community priorities. The results suggest that improving satisfaction requires strengthening both service delivery systems and participatory governance mechanisms, while sustaining the strong positive impact on daily life outcomes. Priority should be given to improving responsiveness, transparency, and communication during project implementation, as these are the weakest satisfaction dimensions. At the same time, maintaining and enhancing infrastructure usability and accessibility is essential, as these remain the primary drivers of resident satisfaction.

Research Question 5: Is there a significant relationship between the level of Farm-to-Market Road (FMR) project implementation and the level of residents' satisfaction?

Table 5. Significant Relationship Between Project Implementation and Residents' Satisfaction

Variables	r – value	Remarks	P – value	Remarks
Project Implementation and Resident Satisfaction	0.520	Positive Moderate Linear Relationship	<.001	With Significant Relationship

Table 5 presents the relationship between Farm-to-Market Road (FMR) project implementation and residents' satisfaction based on 334 respondents. The results reveal a moderate positive and statistically significant relationship between the two variables ($r = 0.520$, $p < .001$), indicating that higher levels of perceived implementation quality are associated with higher levels of resident satisfaction. In practical terms, this relationship suggests that satisfaction is not an independent perception but is closely shaped by how effectively the project is implemented at the community level. The moderate strength of the correlation indicates that improvements in implementation—particularly in areas such as stakeholder participation,

budget utilization, and timeline adherence—contribute meaningfully to satisfaction, but do not fully determine it. This implies that residents evaluate FMR projects through a combination of implementation experience and perceived outcomes. Among the implementation dimensions identified in earlier results, stakeholder participation likely exerts the strongest influence on satisfaction, as it enhances transparency, inclusiveness, and perceived legitimacy of the project. Meanwhile, weaknesses in timeline adherence may temper overall satisfaction despite generally positive implementation ratings. This pattern explains why the relationship is moderate rather than strong: positive governance and participation elevate satisfaction, while operational delays limit its maximum potential. Recent empirical literature supports these findings. Nguyen et al. (2021) found that infrastructure implementation quality significantly influences community satisfaction, particularly when projects demonstrate efficiency and responsiveness in delivery. Similarly, Cepiku and Mastrodascio (2021) emphasized that participatory governance and transparency in public service delivery are critical determinants of citizen satisfaction in infrastructure programs. Furthermore, Billones (2025) asserted that public infrastructure initiatives that demonstrate competent implementation practices tend to receive significantly more positive evaluations from citizens, thereby fostering trust and community endorsement. Collectively, these studies corroborate the conclusion that effective project implementation plays a pivotal role in enhancing resident satisfaction, emphasizing the value of sound management practices in achieving desirable development outcomes. The results suggest that enhancing residents' satisfaction requires strengthening implementation systems, particularly in timeline management and service responsiveness, while sustaining strong participatory governance mechanisms. Policymakers should prioritize improving execution efficiency without weakening community engagement structures, as both jointly shape public perception and acceptance of infrastructure interventions.

Research Question 3: Is there a significant relationship between the level of perceived benefits and the level of residents' satisfaction?

Table 6. Significant Relationship Between Project Benefits and Residents' Satisfaction

Variables	r – value	Remarks	P – value	Remarks
Project Benefits and Resident Satisfaction	0.513	Positive Moderate Linear Relationship	<.001	With Significant Relationship

Table 6 presents the relationship between perceived benefits of the Farm-to-Market Road (FMR) project and residents' satisfaction among 334 respondents. The results show a moderate positive and statistically significant relationship between the two variables ($r = 0.513$, $p < .001$), indicating that higher levels of perceived benefits are associated with higher levels of resident satisfaction. This relationship suggests that satisfaction is strongly shaped by the extent to which residents experience tangible and meaningful improvements from the infrastructure project. In practical terms, the findings indicate that as FMR projects generate more visible and functional benefits—such as improved market access, enhanced mobility, and better quality of life—residents are more likely to evaluate the project positively. Conversely, when perceived benefits are limited or unevenly experienced, satisfaction correspondingly declines. Among the identified benefit domains in earlier analyses, increased market access and daily life improvements appear to be the most influential drivers of satisfaction, as these benefits directly affect household productivity and daily convenience. This explains why the relationship is moderate rather than weak: benefits are central to satisfaction formation, but they operate alongside other determinants such as implementation quality and governance experience. This result is consistent with Moura et al. (2022), who found that infrastructure investments significantly enhance user satisfaction when they translate into measurable improvements in accessibility and quality of life, particularly in rural development contexts. Similarly, Cepiku and Mastrodascio (2021) emphasized that public value creation—reflected through visible and experienced benefits—is strongly associated with higher levels of citizen satisfaction in public infrastructure and service delivery systems. In addition, Santos and Albuquerque (2023) demonstrated that infrastructure projects that deliver inclusive and community-relevant outcomes significantly improve stakeholder trust, satisfaction, and perceived legitimacy of government interventions. The results suggest that improving resident satisfaction requires strengthening the tangible delivery of project benefits, particularly in enhancing market connectivity and daily life functionality. Policymakers should ensure that infrastructure investments are complemented by supporting interventions that maximize the usability and economic value of completed projects. Sustaining visible and meaningful benefits is essential for reinforcing community trust and ensuring long-term acceptance of development initiatives.

Research Question 7: Is there a significant relationship between the level of project difficulties and the level of residents' satisfaction?

Table 7. Significant Relationship Between Project Difficulties and Residents' Satisfaction

Variables	r – value	Remarks	p – value	Remarks
Project Difficulties and Resident Satisfaction	0.106	Positive Negligible Linear Relationship	0.052	No Significant Relationship

Table 7 presents the correlation between project difficulties and residents' satisfaction, revealing a very weak positive relationship ($r = 0.106$) that is not statistically significant ($p = 0.052$). This indicates that project difficulties, as experienced during implementation, do not meaningfully influence residents' satisfaction levels in this study context. The weak relationship may be explained by the fact that residents tend to evaluate infrastructure projects based on final functionality and observable benefits rather than procedural constraints. Difficulties such as administrative delays, logistical constraints, and funding challenges are largely internal to project implementation systems and may not be directly experienced by end users unless they significantly affect output quality or accessibility. This interpretation is supported by recent empirical literature. Nguyen et al. (2021) found that citizen satisfaction in infrastructure projects is weakly affected by implementation constraints when final project outputs remain functional and accessible. Similarly, Cepiku and Mastrodascio (2021) emphasized that public satisfaction is more strongly shaped by perceived service value and responsiveness than by internal administrative or operational difficulties. In rural development contexts, Moura et al. (2022) reported that infrastructure users tend to overlook implementation challenges when projects deliver tangible improvements in mobility and quality of life. Likewise, Santos and Albuquerque (2023) highlighted that stakeholder satisfaction is primarily driven by perceived benefits and participatory outcomes rather than procedural inefficiencies encountered during project execution. From a policy perspective, these results suggest that while minimizing implementation difficulties remains critical for efficiency and sustainability, residents' satisfaction is primarily outcome-driven rather than process-sensitive. This underscores the importance of prioritizing performance delivery and benefit realization while maintaining robust internal project control systems.

Research Question 8: Among project implementation, perceived project benefits and project difficulties, which variable serves as a significant predictor of residents' satisfaction?

Table 8. Regression Analysis for Determining Predictors of Residents' Satisfaction

Model	R	R ²	Adjusted R ²	SE	F-value	p-value
1	.520 ^a	.271	.268	0.455	123.169	<.001
2	.623 ^b	.389	.385	0.417	105.252	<.001
3	.624 ^c	.390	.384	0.417	70.186	<.001

Table 8 show that there is a significant overall relationship of the model wherein project implementation is the independent variable, and resident satisfaction is the dependent variable ($R = .520, p < .001$). Additionally, another significant overall relationship of the model is found comprising the project implementation and benefits as the independent variables ($R = .623, p < .001$). Lastly, there is also a significant overall relationship of the model consisting of project implementation, benefits, and difficulties as the independent variables and resident satisfaction as the dependent variable ($R = .624, p < .001$). Considering the R^2 statistic, "Model 3" the best model among the three in predicting resident satisfaction with three predictors because it accumulated the highest value of 0.390 known as the coefficient of determination which indicates the proportion of variance of the dependent variable (resident satisfaction) that can be explained by the variation that also occurs in all independent variables (project implementation, benefits, and difficulties). In this case, approximately 39% of the variation in resident satisfaction can be explained based on the amount of variation that occurs among the three predictors, collectively, $F(3,330) = 70.186, p < .001$. The "Std. Error of the Estimate" indicates the amount of dispersion for the prediction equation. More notably, a significant result has been established. In this case, the statistical value confirms that resident satisfaction can be accounted for by the three predictors— project implementation, benefits, and difficulties as a whole. These findings align with project performance literature emphasizing that stakeholder satisfaction is best predicted by a combination of execution quality and benefit realization rather than implementation constraints alone. Practically, the results underscore that policy and management efforts should prioritize strengthening benefit

delivery mechanisms and implementation effectiveness, as these factors jointly account for the majority of satisfaction outcomes in FMR interventions.

Table 9. Statistics Associated with the Predictors of Residents' Satisfaction in the Multiple Regression Analysis

Model		Unstandardized Coefficients		Standardized Coefficients	t	p-value
		B	SE	Beta (β)		
1	(Constant)	1.113	.181		6.133	<.001
	Project Implementation	0.662	.060	.520	11.098	<.001
2	(Constant)	0.329	.193		1.706	.089
	Project Implementation	0.487	.059	.382	8.252	<.001
	Benefits	0.407	.051	.370	7.998	<.001
3	(Constant)	0.381	.209		1.824	<.001
	Project Implementation	0.496	.061	.390	8.162	<.001
	Benefits	0.407	.051	.370	7.991	<.001
	Difficulties	−0.035	.054	−.029	−0.650	.516

Looking at the unique individual contributions of the predictors, table 9 shows that project implementation ($B=0.496, t=8.162, p<.001$), and benefits ($B=0.407, t=7.991, p<.001$), positively predict or are directly related to resident satisfaction based on the "Unstandardized Coefficient" for Model 3. It can be observed that one independent variable, which is difficulties, has no contribution individually or is not a unique significant predictor of resident satisfaction ($p=.516$). The coefficient values can be plugged into the regression equation used to plot the line of regression. This equation is $Y_1 = a + b_1X_1 + b_2X_2 + b_3X_3 + b_4X_4$. To determine the value of resident satisfaction, take the sum of the constant, the product of the coefficient of project implementation and its actual value based on the implementation scale, the sum of the actual value of the benefits coefficient based on the results. By using the formula, Resident Satisfaction = $0.381 + 0.496$ Project Implementation + 0.407 Benefits. For a Project Implementation Score of 3.5, and Benefits Score of 4, Resident Satisfaction = $0.381 + 0.496 (3.5) + 0.407 (4)$, predicts resident satisfaction score of 3.745. Thus, project implementation and benefits significantly predict resident satisfaction. Overall, the regression results establish that residents' satisfaction is jointly and significantly determined by implementation effectiveness and perceived benefits, with difficulties contributing no unique predictive value. This reinforces a structurally robust interpretation: satisfaction is fundamentally outcome-oriented and implementation-sensitive, but largely insulated from operational constraints unless these constraints materially affect perceived benefits.

Ethical Considerations

This study adhered to the ethical standards governing quantitative social science and educational research to ensure the protection of participants' rights, dignity, and welfare throughout the research process. Prior to data collection, ethical clearance was obtained from the appropriate institutional authority of Tangub City Global College, and permission to conduct the study was formally secured from the Local Government of Tangub City and the respective barangay officials of Baluc, Bongabong, Matugnao, and Salimpuno. Participation in the study was strictly voluntary. Respondents were fully informed about the purpose of the research, the nature of their involvement, the procedures for data collection, and their rights as participants. Informed consent was obtained from all participants prior to their inclusion in the study. They were explicitly informed that they could refuse participation or withdraw at any point without penalty or adverse consequence. Confidentiality and anonymity were rigorously maintained throughout the research process. Respondents' identities were protected through the use of coded identifiers, and no personally identifiable information was included in any part of the analysis, reporting, or publication of findings. Access to raw data was restricted solely to the researchers and was handled in accordance with institutional data protection protocols. In compliance with the Data Privacy Act of 2012 (Republic Act No. 10173), all collected data were securely stored using password-protected digital files and, where applicable, locked physical storage. Data were used exclusively for academic and research purposes and were not shared with unauthorized individuals or entities. Finally, the study ensured that no form of physical, psychological, or emotional harm was imposed on participants. All survey instruments were non-invasive and designed to minimize discomfort. Throughout the research process, the principles of fairness, transparency, objectivity, and academic integrity were strictly upheld.

Conclusion

This study examined the implementation of Farm-to-Market Road (FMR) projects in selected barangays of Tangub City, focusing on project implementation, perceived benefits, implementation difficulties, and residents' satisfaction. Overall, the findings show that FMR projects were implemented at a generally satisfactory level, although variations across barangays indicate uneven implementation performance, particularly in adherence to timelines and budget utilization. These results suggest that while implementation systems are functioning, there remains a need for more consistent and context-responsive project management practices across implementation sites. In terms of outcomes, residents reported high levels of perceived benefits from the FMR projects, particularly in improving market access, enhancing quality of life, and contributing to peace and order conditions. These findings highlight that the projects have produced meaningful socio-economic gains at the community level, reinforcing the developmental role of rural infrastructure in both economic improvement and local stability. Although certain benefits such as reduced transportation costs were rated comparatively lower, the overall benefit profile remains strongly positive. The study also identified implementation challenges, including community acceptance issues, administrative delays, logistical constraints, and funding-related difficulties. However, these difficulties were generally perceived as less influential in shaping overall satisfaction, suggesting that their effects are mitigated when project outputs and benefits are clearly realized by the community. Statistical analyses further revealed that residents' satisfaction is significantly influenced by both project implementation quality and perceived benefits, while implementation difficulties do not exert a meaningful direct effect. Among the predictors, perceived benefits emerged as the strongest determinant of satisfaction, followed by implementation quality. Together, these variables explain a substantial proportion of satisfaction variance, underscoring that residents evaluate infrastructure projects primarily based on tangible outcomes and lived improvements rather than procedural constraints alone. The study contributes to the literature in three key ways. Theoretically, it supports and refines the understanding that satisfaction in public infrastructure projects is shaped by both process and outcome dimensions, with greater weight placed on perceived benefits. Methodologically, it demonstrates the usefulness of an integrated predictive model combining implementation, benefits, and difficulties to explain satisfaction in rural development contexts. Practically, it provides evidence-based guidance for local government units to prioritize benefit realization and strengthen implementation governance to enhance community satisfaction. For future research, it is recommended that studies explore longitudinal impacts of FMR projects to assess sustainability of benefits over time. Further investigation may also examine additional predictors of satisfaction such as political trust, community engagement intensity, and environmental impacts, which were not covered in this study. Comparative studies across multiple municipalities or regions are also encouraged to enhance generalizability and deepen understanding of rural infrastructure effectiveness in different socio-political contexts.

Recommendations

Based on the findings, Local Government Units (LGUs) are encouraged to institutionalize standardized project monitoring systems and strengthen inter-agency coordination mechanisms to minimize implementation variability, administrative delays, and budget inefficiencies. Capacity-building programs, particularly mandatory project management training for barangay officials, should be prioritized to improve adherence to timelines, financial accountability, and participatory governance practices. LGUs should also prioritize FMR investments that directly enhance market access and reduce transportation costs, given their strong influence on residents' satisfaction and alignment with Sustainable Development Goals (SDGs), particularly SDG 1 (No Poverty), SDG 2 (Zero Hunger), and SDG 11 (Sustainable Communities). Farmers and community members are encouraged to actively engage in participatory governance mechanisms by organizing community monitoring groups, participating in consultations, and supporting post-project maintenance activities. These initiatives strengthen transparency, accountability, and long-term sustainability of infrastructure gains. Non-government organizations (NGOs) may complement government efforts by providing technical assistance in project monitoring, developing benefit-tracking systems, facilitating community organizing, and supporting cooperative-based maintenance systems. For NTF-ELCAC, future implementation strategies should further position FMR projects as integrated development and peacebuilding instruments that promote inclusive growth, reduce vulnerability, and strengthen institutional trust in conflict-sensitive areas. Community leaders and practitioners are likewise encouraged to adopt standardized engagement tools such as community scorecards, structured consultations, and peer-learning mechanisms to improve consistency in project delivery and responsiveness. The general public is encouraged to sustain support for rural infrastructure initiatives, recognizing that their long-term benefits significantly outweigh implementation challenges in improving livelihoods and local development outcomes. Finally, future

researchers are advised to conduct longitudinal and mechanism-focused studies to examine the sustainability of FMR benefits, threshold effects on satisfaction, and the evolving role of governance in post-conflict rural development contexts, with greater integration of conflict-sensitive and SDG-aligned frameworks.

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