

Examining Community Development Approaches for Rural Development: A Case Study of Mileage Road Network in Luapula Province

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Received 17-01-2025

Revised 19-01-2025

Accepted 24-02-2025

Published 26-02-2025



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Abstract:

Rural development remains central to Zambia's national agenda, with infrastructure development playing a vital role in improving socio-economic conditions. This study examines community development approaches for rural development, using Mileage Road network as a case study in Luapula Province. The study aims to establish the current state of the Mileage Road network, to identify the community development approaches that have been implemented in road improvement initiatives, and to determine challenges associated with community-driven development in rural infrastructure projects. Methodologically, the research adopts a mixed-methods approach, combining quantitative and qualitative data collection techniques. It integrates surveys, interviews with structured questionnaires, and field observations to gather diverse insights from residents, community leaders, and stakeholders. This comprehensive methodology ensures a well-rounded understanding of the effects of community-driven road infrastructure projects. The respondents' results rated the condition of the road very poor at 32%, with 24% using bicycles and 20.33% using public transport as the mode of transportation. When asked if improving the Mileage road network would significantly enhance their quality of life, majority (52%) strongly agreed to the statement. The study suggests that enhancing community participation can significantly improve the effectiveness and sustainability of rural infrastructure development. The recommendations in addressing this issue is to implement a structured, ongoing maintenance plan that ensures that road remain functional year-round. Addressing systematic challenges such as political interference and corruption is equally important for ensuring the success of road development. These insights are valuable for policymakers, development practitioners, and local communities, providing a foundation for scaling successful strategies and informing inclusive, sustainable rural development policies in Zambia.

Keywords: Community Participation, Mileage District, Road Infrastructure, Rural Development, Sustainable Development.

1. Introduction:

1.1 Background:

Rural development has been a central focus of Zambia's national development plans for decades.

The Zambian government has implemented various policies and programs aimed at improving living conditions in rural areas, recognizing the critical role these areas play in the nation's overall development. The Seventh National Development

Plan (7NDP) emphasizes the need for integrated rural development to achieve sustainable economic growth and reduce poverty (Ministry of National Development Planning, 2017). Despite these efforts, many rural areas still face significant challenges, including poor infrastructure, limited access to basic services, and economic marginalization.

One of the stark manifestations of underdevelopment in rural Zambia is the inadequacy of infrastructure, notably road networks. The Milenge District in Luapula Province exemplifies this issue, where the underdeveloped state of the Milenge Road network severely impacts the socio-economic dynamics of the community. In Milenge district, 90% of the roads are gravel and earth roads, and during the rainy season, over 50% of these roads become impassable, effectively isolating the community and stifling economic activities (Zambia Statistics Agency, 2019).

Community development approaches, which involve the active participation of local residents in planning and implementing development projects, have shown promise in addressing these challenges. These approaches emphasize the importance of local knowledge, ownership, and sustainability. By involving community members in decision-making processes, development projects are more likely to address the actual needs and priorities of the community, leading to more effective and sustainable outcomes. Studies have shown that participatory development projects can improve project outcomes by 20-30% compared to non-participatory projects (Mansuri & Rao, 2013).

According to the Central Statistical Office of Zambia, Luapula Province has one of the highest poverty rates in the country, with 81% of the population living below the poverty line as of 2020 (CSO, 2020). Poor road conditions limit transportation options, making it difficult for residents to access markets, healthcare facilities, and educational institutions. This situation exacerbates poverty and restricts economic opportunities, as farmers and traders struggle to

transport their goods to broader markets (World Bank, 2018).

In the context of the Milenge Road network, community development approaches could involve local residents in the planning, construction, and maintenance of roads. This participatory approach ensures that the road network meets the specific needs of the community, such as facilitating access to markets and essential services. Moreover, involving the community in such projects fosters a sense of ownership and responsibility, which can enhance the sustainability of the infrastructure. According to a study by the International Fund for Agricultural Development (IFAD), community-driven development projects have a 20% higher success rate in terms of sustainability compared to top-down approaches (IFAD, 2016).

By examining the Milenge Road network, this study seeks to identify effective community development strategies that can be scaled and replicated in other rural areas. Understanding the successes and challenges of these approaches will provide valuable insights for policymakers and development practitioners aiming to improve rural infrastructure.

1.2 Statement of the problem:

The Milenge District in Luapula Province of Zambia is plagued by poor road infrastructure, significantly hindering its socio-economic development. The Milenge Road network, a critical artery for the region, is in a state of disrepair, negatively impacting transportation, trade, and access to essential services. This situation presents a significant barrier to the overall development of the district and exacerbates the already high levels of poverty. The lack of adequate road infrastructure in Milenge District has several detrimental effects. For instance, farmers face difficulties in transporting their produce to markets, resulting in high post-harvest losses and limited income generation. The problem statement for this study, therefore, is: The Milenge District's inadequate road infrastructure significantly hampers socio-

economic development, affecting agriculture, healthcare, and education. Current development initiatives have been insufficient, necessitating the exploration of community development approaches to improve the road network and enhance overall development outcomes. This study aims to identify community-driven strategies that can effectively address these challenges, ensuring sustainable and inclusive development for the Milenge District.

1.3 General objective:

The general objective of this project is to examine community development approaches for rural development, using the Milenge Road network in Luapula Province as a case study. Specific objective of the project include: To establish the current state of the Milenge Road network, to identify community development approaches that have been implemented in road improvement initiative, and to determine challenges associated with community-driven development in rural infrastructure projects.

1.4 Research questions:

- i. What is the current state of the Milenge Road network, and how does it affect the local community?
- ii. What community development approaches have been implemented to improve the Road initiative?
- iii. What are the challenges associated with community-driven development in rural infrastructure projects.

1.5 Theoretical framework:

This study's theoretical framework is based on Participatory Development Theory, which emphasizes the active involvement of communities in planning, decision-making, and implementing development projects. This theory argues that development initiatives are more effective and sustainable when local populations are fully engaged, addressing the limitations of traditional top-down approaches.

Key principles of the theory include empowerment, local knowledge, and social cohesion. Empowerment ensures community

members have a stake in the outcomes, fostering ownership and long-term success. Involving locals in planning and implementation enhances project relevance, increasing sustainability, as seen in rural infrastructure like the Milenge Road network. Utilizing local knowledge ensures interventions are contextually appropriate, addressing genuine needs and avoiding misaligned external solutions. Inclusivity fosters social equity and unity, ensuring that diverse voices, including marginalized groups, are heard and incorporated. In the Milenge Road context, Participatory Development Theory highlights how community engagement can improve road planning, construction, and maintenance. Practical applications include community consultations, involving local labor, and forming maintenance committees to ensure relevance, sustainability, and ownership.

This framework guides research design and analysis, demonstrating the impact of community participation on infrastructure development. It aims to provide actionable recommendations, promoting community-driven approaches to sustainable rural development while improving transportation, access to services, and socio-economic growth.

2. Literature Review:

The condition of rural road networks is pivotal to the development and wellbeing of rural communities. Globally, rural roads are often underdeveloped and poorly maintained, posing significant barriers to economic growth and social development. Improved rural road infrastructure has been shown to lead to enhanced agricultural productivity, better access to markets, and improved socio-economic conditions (Fan & Chan-Kang, 2005). Conversely, poor road infrastructure can perpetuate poverty and limit access to essential services (Bryceson, Bradbury, & Bradbury, 2008). In Sub-Saharan Africa, rural roads are typically in poor condition, often characterized by potholes, erosion, and lack of proper drainage (Porter, 2014). Seasonal weather patterns, particularly heavy rains, exacerbate these conditions, often rendering roads impassable and

further isolating rural communities. The Milenge Road network in Luapula likely faces similar challenges, impacting its functionality and effectiveness.

A study in Uganda highlighted the impact of rural road improvements on health service accessibility. Hine and Rutter (2000) found that better roads reduced travel time to health facilities, leading to increased utilization of health services and improved health outcomes for rural populations. This case underscores the broader social benefits of investing in rural road infrastructure, as it directly impacts health and wellbeing by facilitating easier access to essential healthcare services. Improved roads decrease the time required for patients to reach medical facilities, which is crucial during emergencies.

In Mozambique, research by Gwilliam, Foster, Archondo-Callao, Briceño-Garmendia, Nogales, and Sethi (2008) analyzed the impact of road projects on community development. The findings highlighted that road improvements led to increased economic activities, better access to education and healthcare, and overall improved quality of life for rural populations. This case underscores the multifaceted benefits of road infrastructure projects, which can drive economic growth, enhance social inclusion, and improve access to essential services.

Improved road networks bring more than economic benefits—they also drive cultural and social transformations. According to Srinivasan and Rogers (2020), road access in rural India has increased exposure to urban lifestyles, education, and technology, gradually shifting social norms. For instance, in previously isolated communities, improved connectivity has enabled women to participate in cultural events or educational programs in nearby towns, fostering greater inclusivity and reducing traditional gender barriers. However, these transformations can also create tensions between traditional practices and modern influences, requiring careful management to preserve cultural identities.

Gollin and Rogerson (2014) argue that road infrastructure is essential for integrating rural communities into broader markets. In regions with poor road connectivity, local economies often remain fragmented, limiting the ability of small businesses to grow and compete. For example, in parts of sub-Saharan Africa, small-scale producers struggle to reach larger markets due to high transportation costs, reducing their profitability. Well-connected road networks promote market integration, encouraging rural entrepreneurs to expand their businesses and fostering economic growth at the community level.

The use of digital tools to engage communities in road improvement is increasingly prominent. A study by Alam et al. (2022) on Bangladesh's urban development programs demonstrated the impact of digital surveys and mapping tools in identifying priority areas for road rehabilitation. By integrating geospatial data with feedback collected through mobile apps, planners were able to include marginalized groups such as slum dwellers in the development process. This digital-first approach ensured that road improvement projects addressed actual community needs rather than bureaucratic assumptions, leading to higher satisfaction levels among stakeholders.

Mansuri and Rao (2013) argue that while community-driven development is effective for small-scale projects, it struggles with the complexities of large-scale infrastructure initiatives. A study of community-managed road construction in rural India showed that local stakeholders often underestimated the technical and logistical challenges involved in large-scale road improvements, leading to delays and cost overruns. This mismatch between community capacity and project complexity highlights the importance of complementary support from government agencies or technical experts to guide communities in handling larger, more ambitious projects.

3. Methodology:

3.1 Research design:

This study adopted a mixed-methods research design to investigate community development

approaches for rural road infrastructure improvement in the Milenge District. The design integrated qualitative and quantitative methods to ensure a comprehensive analysis of the effectiveness of community-driven strategies in rural development. Qualitative data were gathered through interviews with key stakeholders, including community leaders, government officials, and development practitioners, alongside content analysis of relevant documents. Quantitative data were collected via surveys of local residents, focusing on demographic details, perceptions of road infrastructure, and socio-economic impacts. This mixed approach ensured robust data triangulation, enhancing the reliability and validity of findings (Creswell & Plano Clark, 2017).

3.2 Sampling design:

The study employed purposive sampling for qualitative data, targeting information-rich participants like leaders and practitioners, while random sampling was used for surveys to ensure representation of Milenge's general population.

3.3 Sample size determination:

To determine the sample size for surveys, a confidence level of 95% and a margin of error of 5% was used. According to Cochran's formula, for a population of approximately 32,000 people (the estimated population of Milenge District), the required sample size is 75 respondents. This sample size will adequately represent the local population, ensuring that diverse perspectives on road infrastructure and community involvement are captured (Cochran, 1977).

3.4 Data collection method:

Data collection tools included structured questionnaires for surveys (75 participants) and semi-structured interview guides (Kvale, 2007), both of which were pre-tested for clarity and relevance.

3.5 Data analysis:

Quantitative data were analyzed using statistical techniques, while qualitative data underwent

thematic content analysis, systematically coding variables to identify patterns and themes.

3.6 Triangulation:

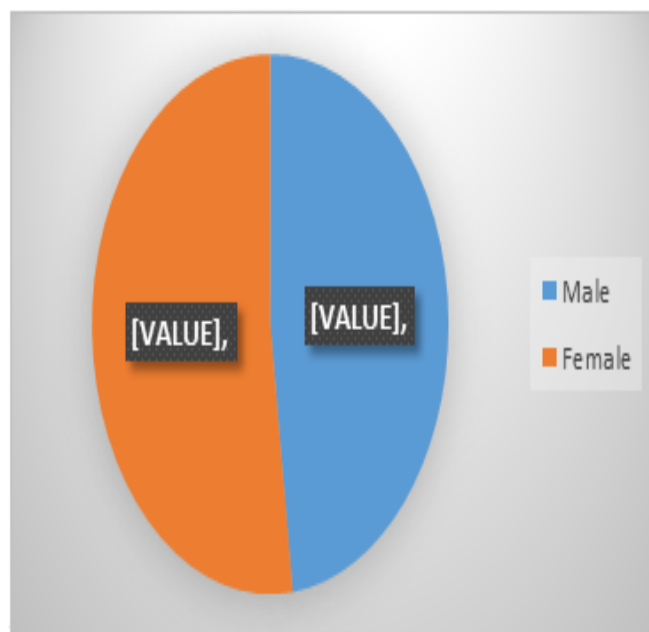
To enhance validity and reliability, this study employs triangulation, combining quantitative survey data, qualitative interview insights, and content analysis. This integrated approach provides a comprehensive understanding of community development approaches for rural infrastructure improvement in Milenge District (Creswell & Plano Clark, 2017), mitigating biases and strengthening research credibility."

3.7 Ethical considerations:

Ethical integrity was central to this research. Informed consent was obtained to ensure participants understood their rights, and confidentiality was strictly maintained.

4. Results and Discussion:

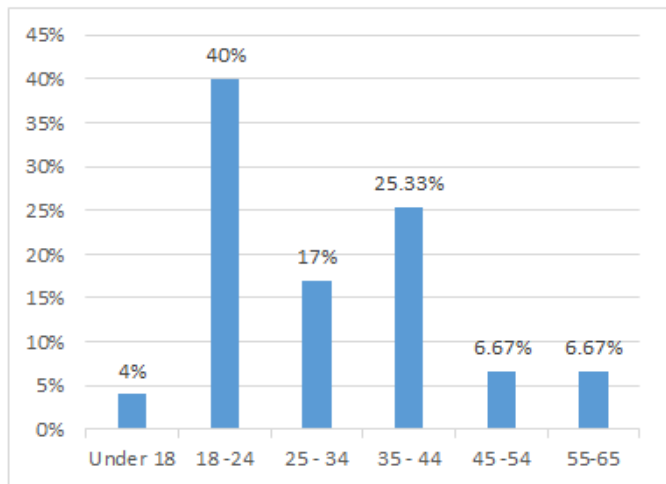
Figure 1: Gender



According to the above figure 1, the survey included a total of 75 respondents, with a nearly equal distribution between male and female participants. Specifically, 48% were male, while 52% were female. This balanced gender representation ensures that the perspectives from both genders are well-reflected in the study, providing a comprehensive understanding of community development approaches and their

impacts on both male and female members of the community.

Figure 2: Age



According to the above figure 2, the age distribution of the 75 respondents shows that the majority fall within the younger age brackets. Specifically, 40% are between the ages of 18-24, followed by 25.33% in the 35-44 age group, and 17.33% in the 25-34 age group. Smaller proportions of respondents are under 18 years old 4%, between 45-54 years old 6.67%, and between 55-64 years old 6.67%, this distribution suggests that the community development approaches in Milenge may be particularly relevant to younger adults, who make up a significant portion of the population.

Figure 3: Education

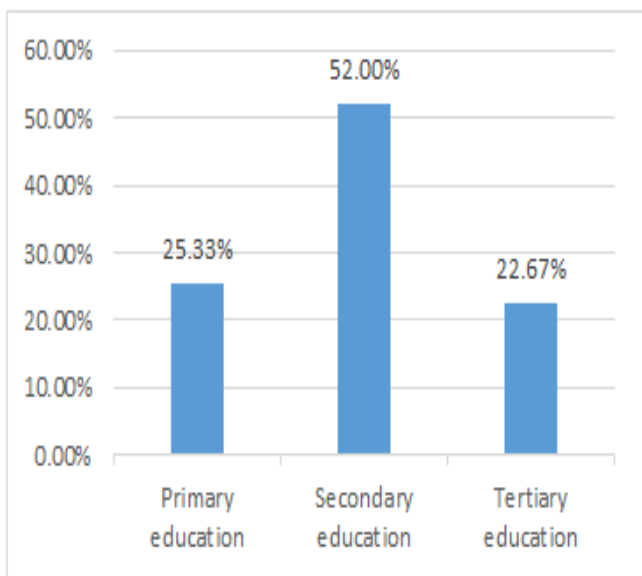
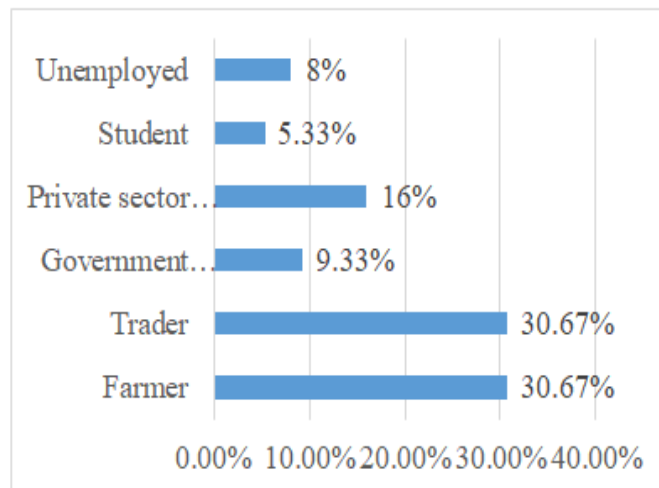


Figure 3 on education level indicates that a majority of the respondents have attained

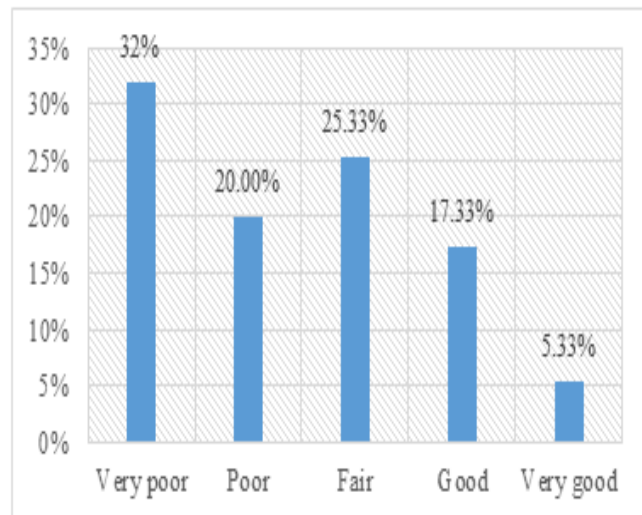
secondary education. Specifically, 52% have secondary education, while 25.33% have completed primary education, and 22.67% have pursued tertiary education. This suggests that most respondents have at least a basic level of education, which could influence their engagement with and understanding of community development initiatives.

Figure 4: Occupation



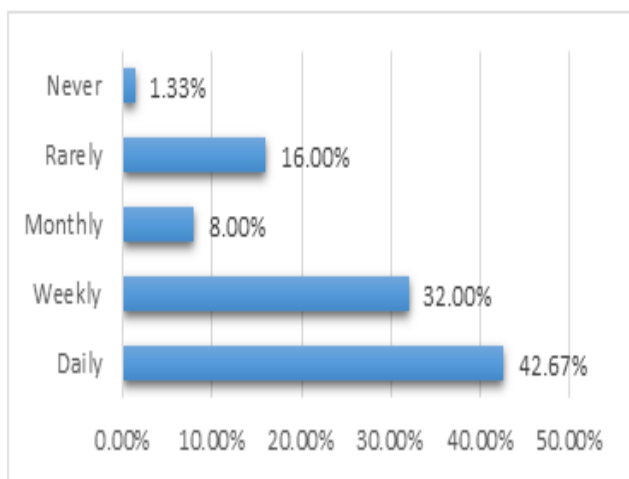
As shown in the above figure 4, the occupation distribution reveals that the largest groups among the respondents are farmers and traders, each representing 30.67%. Following these are private sector employees 16%, government employees 9.33%, students 5.33%, and the unemployed 8%. This distribution highlights the prominence of agriculture and trading in Milenge, which could be key sectors affected by and contributing to the road network development.

Figure 5: Condition of the Milenge Road network



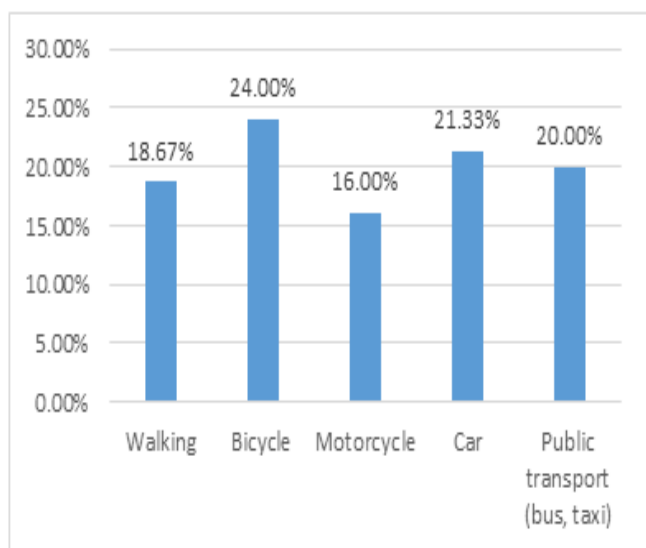
The results on the condition of the Milenge Road network showed that the majority of respondents. 32% rated the road network as "Very poor," and an additional 20% rated it as "Poor." Meanwhile, 25.33% consider the road to be in "Fair" condition. Only a small proportion of respondents rated the road as "Good" 17.33%, or "Very good" 5.33%. This distribution suggests that the Milenge Road network is in need of significant improvements, as the majority of users are dissatisfied with its current state.

Figure 6: Use the Milenge Road



The results on how often respondents use the Milenge Road shows that it has been an essential route for many community members. 42.67% use the road daily, and 32% use it weekly. Monthly users account for 8%, while 16% use the road rarely. Only 1.33% reported never using the road.

Figure 7: Mode of transportation



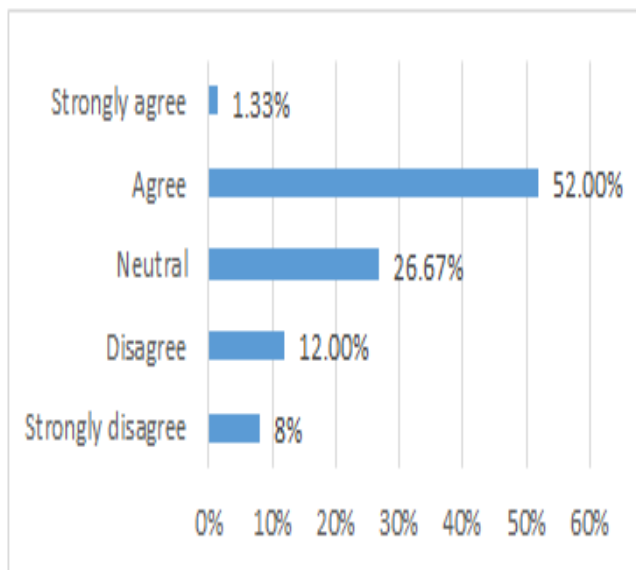
The results show that the most common modes of transportation on the Milenge Road are bicycles 24%, and cars 21.33%. Walking is also a significant mode of transport, used by 18.67%. Public transport, including buses and taxis, is used by 20%, while 16% primarily use motorcycles. This distribution indicates a diverse range of transportation methods, reflecting varying levels of access to motorized vehicles among the community.

Table 1: Main challenges

Main challenges	Frequency	Percentage (%)
Poor road conditions (e.g., potholes, erosion)	27	36%
Lack of maintenance	15	20%
Safety concerns	7	9.33%
Long travel times	7	9.33%
High transportation cost	13	17.33%
Seasonal accessibility issues (e.g., flooding, mud)	6	8%
Total	75	100%

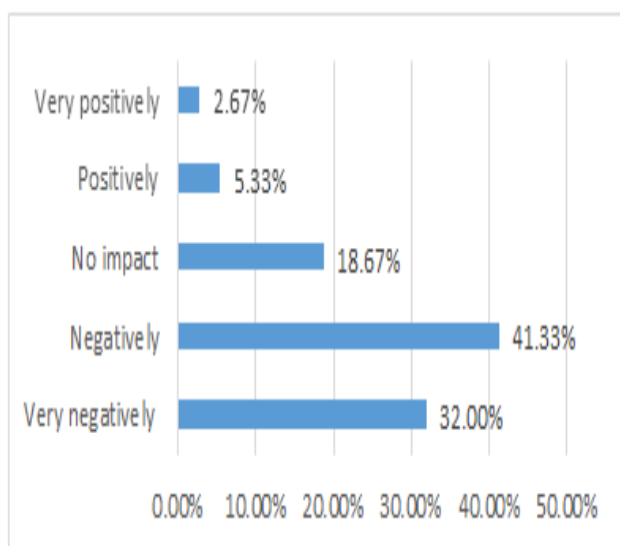
The results show the primary challenge reported by respondents is poor road conditions, with 36% citing issues such as potholes and erosion. These findings highlight the need for regular maintenance and infrastructure improvements to enhance the usability and safety of the Milenge Road network.

Figure 8: Enhance quality of life



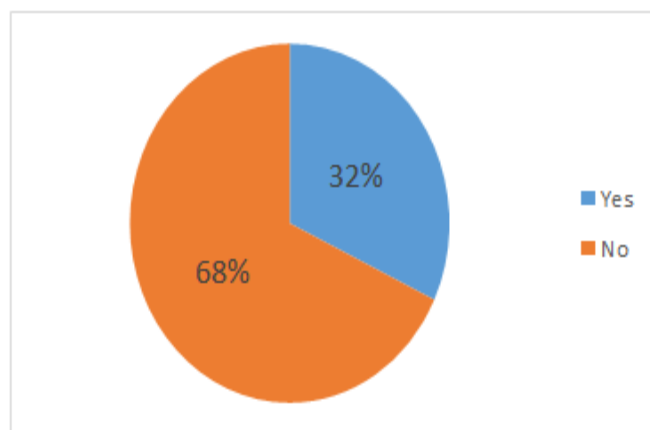
The results indicated that the condition of the Milenge Road has significantly impacted access to essential services such as healthcare, education, and markets. 52% representing the majority agreed that improving the road would enhance their quality of life, and 26.67% of respondents strongly agreed with this statement. On the other hand, 12% of respondents remained neutral. A small proportion disagreed, with 8% disagreeing and 1.33% strongly disagreeing. This distribution of responses highlights the importance of improving the Milenge Road network, as the vast majority of respondents view it as a key factor in enhancing their access to essential services like healthcare, education, and markets.

Figure 9: Impacted access to essential services



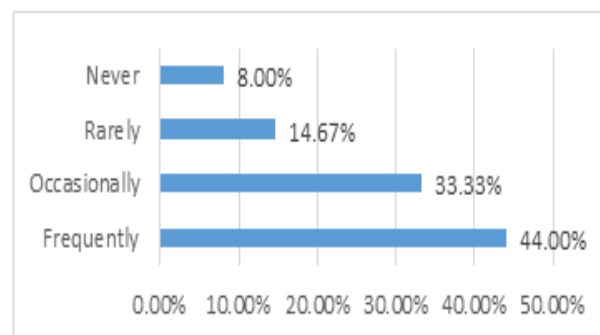
The results showed that the condition of the Milenge Road has significantly impacted access to essential services for the residents. Specifically, 32% of respondents reported that the road conditions have affected their access to services "very negatively," while 41.33% stated that the impact has been "negative." This indicates that the majority of respondents (73.33%) experience some level of difficulty in accessing essential services due to the poor condition of the road. On the other hand, 18.67% of respondents indicated that the road condition has had "no impact" on their access, while a small percentage (5.33%) reported a "positive" impact, and only 2.67% experienced a "very positive" effect.

Figure 10: Local government



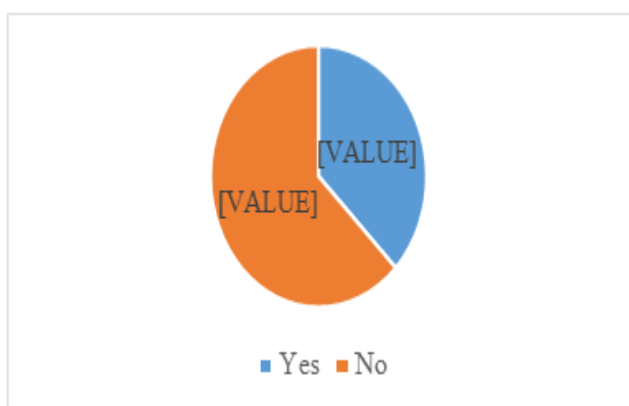
The results showed that the majority of respondents 68% believe that the local government is not doing enough to maintain and improve the Milenge Road. Only 32% feel that the local government's efforts are adequate. This suggests a widespread perception of inadequate government intervention in addressing the road infrastructure needs of the Milenge community.

Figure 11: Delays and disruptions



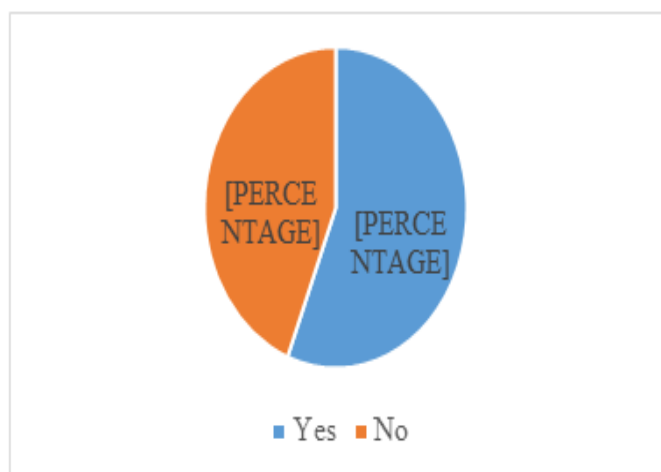
The figure above shows that delays and disruptions in daily activities due to the condition of the Milenge Road are quite common among the respondents. A significant 44% of respondents reported experiencing delays "frequently," and 33.33% indicated they experience such disruptions "occasionally." This means that a combined total of 77.33% of respondents face disruptions in their daily routines because of the road's condition. Meanwhile, 14.67% of respondents said they "rarely" experience delays, and only 8% have "never" encountered disruptions caused by the road conditions.

Figure 12: Community development initiatives



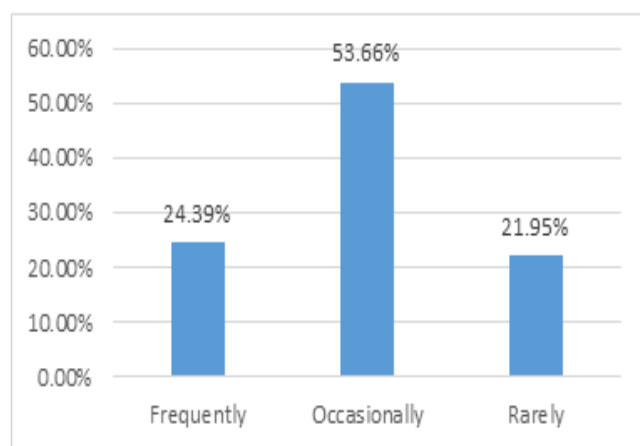
The results provided, a significant majority of the respondents, 62.67% (47 out of 75), are not aware of any community development initiatives aimed at improving the Milenge Road network. This suggests a gap in communication or engagement between the initiatives and the broader community.

Figure 13: Participated in any community meetings



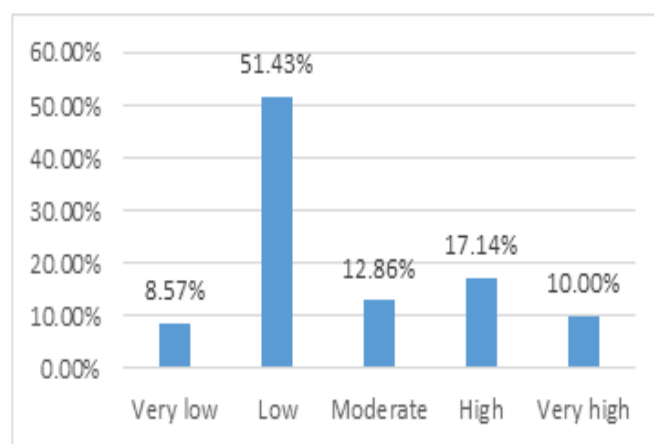
More than half of the respondents, 56%, have participated in community meetings or activities related to road development, while 44% have not. This level of participation indicates a relatively active engagement from the community in discussions or activities regarding road development, which is crucial for the successful implementation of community-driven initiatives.

Figure 14: Frequency of participation



Among those who have participated, 53.66% do so occasionally, 24.39% frequently, and 21.95% rarely participate. The variation in participation frequency highlights different levels of commitment and involvement among community members, suggesting that while there is a core group of frequently engaged individuals, broader consistent engagement may be needed to ensure widespread community input and support.

Figure 15: Community involvement



The assessment of community involvement levels shows a predominance of lower involvement, with 51.43% rating it as low and 8.57% as very low.

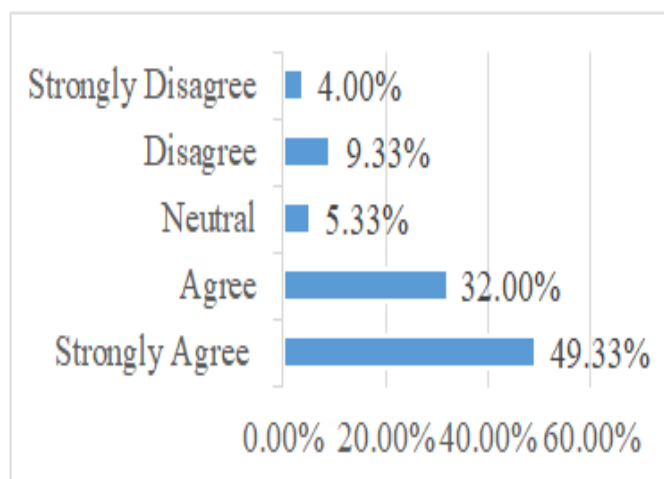
Only 17.14% believe involvement is high, and a smaller percentage, 10%, rate it as very high. 12.86% view it as moderate.

Table 2: Challenges to implementing community development

Main challenges to implementing community development projects	Frequency	Percentages
Luck of funding	31	41.33%
Poor planning	14	14.67%
Luck of community participation	10	13.33%
Political interference	13	17.33%
corruption	7	9.33%
Total	75	100%

Results shows the main challenges in implementing community development projects for road infrastructure in Milenge are primarily centered on a lack of funding.

Figure 16: Importance of community participation



According to the above data, the majority of respondents believe that community participation is crucial for the success of road development projects. 49.33% strongly agree with this sentiment, and 32% agree. Only a small fraction of the community is neutral 5.33%, disagrees 9.33%, or strongly disagrees 4%.

Table 3: Types of support or resources

Types of support or resources	Frequency	Percentage (%)
Financial support	11	14.86%
Technical expertise	14	18.92%
Training and capacity building	10	13.51%
Government support and policies	32	43.24%
Improved communication and information	7	9.46%
Total	74	100%

The community identified several types of support and resources that would facilitate better involvement in road development projects. Government support and policies are seen as the most critical, with 43.24% highlighting it as essential. This is followed by technical expertise 18.92%, financial support 14.86%, training and capacity building 13.51%, and improved communication and information sharing 9.46%.

5. Conclusions:

The Milenge Road network is vital for residents' daily lives, providing access to essential services, economic activities, and connectivity with surrounding areas. This study reveals that its poor condition significantly hinders the community, with over 73% of respondents experiencing negative impacts on accessing healthcare, education, and markets. Frequent delays and disruptions affect 77.33% of residents, creating a bottleneck for economic productivity—especially for farmers and traders facing higher costs and longer travel times. Seasonal issues like flooding exacerbate these challenges, impeding economic

activity and forcing reliance on alternative routes. The road's deterioration not only limits the flow of goods and services but also hampers the overall development of the district, highlighting an urgent need for intervention.

Despite some community development initiatives aimed at improving the road, there is a significant gap in awareness and engagement, as only 37.33% of respondents are aware of these efforts. The lack of effective communication and limited participation hinder the success of these projects. Over 81% of respondents agree that community involvement is essential, yet the perceived level of involvement is low. To address these issues, the community emphasizes the need for stronger government support, technical expertise, financial assistance, training, and improved communication. A multi-pronged approach is necessary—improving the physical infrastructure, fostering deeper community engagement, and addressing systemic challenges like funding and planning deficiencies. By strengthening the community's role and providing necessary support, the Milenge Road network can transform into a catalyst for economic growth and improved quality of life in Milenge District.

Acknowledgments:

I gratefully acknowledge the support and contributions of my supervisor, Dr. Kelvin Chibomba for expert guidance and invaluable feedback. My colleagues and peers, for stimulating discussions and insightful suggestions. The Milenge Town Council community, for providing a supportive research environment. Participants in this study, whose willingness to share their experiences enriched this research. Special thanks to; my husband, Mr. Paul Kalikuwa Ndhlovu, for his unwavering encouragement and support. My parents Mr. and Mrs Chasaya, for their love, motivation and sacrifices.

References:

1. Alam, M. A., Khan, M. A. & Rahman, M. S. (2022). *Climate Change and Sustainability*. Springer Nature.

2. Brycesson, D. F., Bradbury, A. & Bradbury, R. (2008) 'Disappearing peasantries? Rural labour redundancy in the Neo-Liberal era: a case study from Tanzania', *Journal of Peasant Studies*, vol. 35, no. 2, pp. 271-298.
3. Bryman, A. (2016). *Social Research Methods* (5th ed.). Oxford University Press.
4. Central Statistical Office (CSO). (2020): *Population and Demographic Projections Report*. Referenced for population statistics of Zambia.
5. Cochran, W. G. (1977). *Sampling Techniques* (3rd ed.). John Wiley & Sons
6. Creswell, J. W., & Creswell, J. D. (2018). *Research Design: Qualitative, Quantitative, and Mixed Methods Approaches* (5th Ed.). SAGE Publications.
7. Creswell, J. W., & Plano Clark, V. L. (2017): *Designing and Conducting Mixed Methods Research* (3rd ed.). Used for the mixed-methods research approach.
8. Cornwall, A. (2008): *Unpacking 'Participation': Models, Meanings, and Practices*. Referenced for participatory approaches in development.
9. Fan, S. & Chan-Kang, C. (2005) 'Road development, economic growth, and poverty reduction in China', *Journal of Development Studies*, vol. 41, no. 4, pp. 615-636.
10. Gollin, D. & Rogerson, R. (2014) 'Productivity, transport costs and subsistence agriculture', *Journal of Development Economics*, vol. 107, pp. 38-48.
11. Gwilliam, K., Foster, V., Archondo-Callao, R., Briceno-Garmendia, C., Nogales, A. & Sethi, A. (2008) 'The highways sector in Mexico: a review of progress and opportunities for

- improvement'. World Bank, Washington, D.C.
12. Hine, J. & Butter, M. (2000) Sustainable Rehabilitation of Rural Infrastructure. *Transport Reviews*, 20(2), pp. 153-172.
 13. International Fund for Agricultural Development (IFAD). (2016): Rural Development Report 2016. Relevant to sustainability discussions in community-driven approaches.
 14. Kvale, S. (2007) *Doing interviews*. Sage Publications.
 15. Mansuri, G., & Rao, V. (2013): *Localizing Development: Does Participation Work?*. Referenced for participatory development theory and limitations of community-driven approaches.
 16. Ministry of National Development Planning (2017): *Seventh National Development Plan (7NDP)*. Critical for the contextual framework of Zambia's development goals.
 17. Porter, G. (2014) 'Transportation and logistics in developing countries', in *Handbook of Transportation*, vol. 4, pp. 159-176.
 18. Taylor & Frances. Nel, H., (2015). An integration of the livelihoods and asset-based community development approaches: A South African case study. *Development Southern Africa*, 32(4):511-525.
 19. World Bank (2018): *Zambia Economic Brief: Raising Revenue for Economic Recovery*. Relevant for economic and poverty context in Zambia.
 20. World Bank (2020): *Global Rural Accessibility Index*. Relevant to road infrastructure challenges and access.