

Rural Roads as Catalyst for Inclusive Economic Growth and Sustainable Development of Youths: Evidence from Mkuranga District, Coast Region, Tanzania

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Abstract

This study examines the role of rural roads in promoting economic activities, social inclusion, and youth empowerment in Mkuranga District, Coast Region. Using a mixed-methods approach that combines structured questionnaires, focus group discussions, and key informant interviews, data were collected from 150 youths engaged in small-scale trade, agriculture, and transport-related enterprises. The findings reveal that improved road infrastructure enhances market access, reduces transportation costs, increases employment opportunities, and fosters social cohesion. However, challenges such as limited government funding, poor maintenance, and seasonal flooding undermine the potential benefits. The study concludes that targeted investment in rural road networks, coupled with capacity-building programs, is essential for enabling sustainable socio-economic development and empowering youths in Mkuranga District. The paper recommends a multi-stakeholder approach involving local government, the private sector, and community participation to ensure the sustainability and inclusivity of rural road development projects.

Keywords: *Rural Roads, Economic Growth, Youth Empowerment, Sustainable Development, Mkuranga District.*

1.0 Introduction

Rural infrastructure has long been recognised as a catalyst for socio-economic transformation, particularly in developing countries (World Bank, 2022). Roads are fundamental to rural development because they provide access to markets, health care, education, and financial services. In Tanzania, rural roads are especially crucial for connecting isolated communities with urban centres and regional markets, thereby facilitating trade, employment, and overall livelihoods (Kayunze & Minja, 2023).

Globally, rural roads are considered essential infrastructure for enabling inclusive economic growth, reducing poverty, and promoting sustainable development (Transportation Research Board, 2000 ["The Promise of Rural Roads"]; Biber-Freudenberger et al., 2025). The Rural Access Index (RAI), which measures the percentage of the rural population living within 2 km of an all-season road, is used as a key indicator for SDG 9.1.1, linking road access to development outcomes (Sun, Li, & Zhou, 2023). In many developing regions,

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limited rural road access constrains the movement of goods, people, and services, thereby reinforcing socioeconomic inequalities (Biber-Freudenberger et al., 2025; Mtweve et al., 2025).

In Sub-Saharan Africa, the expansion and maintenance of rural road networks support agricultural value chains, reduce transport costs, and improve access to markets, health, and education (Mtweve et al., 2025; Impacts of road development in sub-Saharan Africa, 2025). However, challenges such as funding shortfalls, weak institutional capacity, and climate vulnerability persist (Mtweve et al., 2025; "The Promise of Rural Roads," TRB, 2000). In Tanzania specifically, the government has launched the Roads to Inclusion and Socioeconomic Opportunities (RISE), a project aimed at improving rural road access, strengthening road institutions, and creating rural employment through road works (World Bank, 2021a; World Bank, 2021b). The RISE program explicitly connects rural roads development to inclusion, enabling better access to markets, social services, and economic opportunities (World Bank, 2021b; World Bank, 2021a).

Empirical studies in Tanzania highlight varied outcomes. For example, Dumas (2025) evaluates a Tanzanian road rehabilitation program and finds measurable gains in rural livelihoods following road upgrades. The IMPARTS study in Tanzania shows that investments in low-volume rural roads improved all-season access. However, uptake in transport services and economic activity was sometimes muted due to low demand and sparse populations (Starkey et al., 2020). These studies suggest that while rural roads have strong theoretical and observed potential as catalysts for inclusive growth, outcomes depend heavily on complementary factors such as local demand, institutional robustness, maintenance regimes, and community engagement.

Despite national and donor-supported efforts, many rural districts in Tanzania, including Mkuranga in the Coast Region, continue to suffer from poorly maintained, weather-vulnerable, or seasonally impassable roads. The limited accessibility constrains rural youth from participating in economic activities, accessing education, markets, health services, and other opportunities. While global and national studies affirm the promise of rural roads, there is insufficient localised empirical evidence on how rural road development specifically affects youth inclusion, employment, and sustainable livelihoods in rural districts of Tanzania. Without this evidence, planning and resource allocation risk overlooking youth-centric outcomes or misaligning interventions with local realities. This study aims to fill that gap by investigating the role of rural roads as catalysts for inclusive economic growth and sustainable youth development in Mkuranga District.

This study holds considerable theoretical, policy, and practical significance. Theoretically, it enriches academic understanding of infrastructure and youth dynamics by offering district-level empirical evidence linking rural road improvements to youth inclusion, employment, and livelihood outcomes. By doing so, it helps fill a critical gap in the literature on how physical infrastructure translates into social and economic empowerment for young people in rural Tanzania.

2.0 Literature Review

2.1 Rural Roads and Economic Growth

Infrastructure, particularly roads, is a key determinant of economic growth. Rostow's (1960) stages of economic growth emphasise the need for physical infrastructure as a precondition for take-off and industrial development. In rural economies, roads facilitate the movement of goods and services, reduce transaction costs, and stimulate local entrepreneurship. Empirical studies across East Africa indicate that improved road networks positively influence agricultural productivity and market participation (Misa, 2025; Kayunze & Ninja, 2023).

In Tanzania, rural road improvement programmes have demonstrated mixed results. While paved roads in regions such as Morogoro and Kilimanjaro have boosted agricultural trade, seasonal road deterioration in coastal areas like Mkuranga limits consistent economic benefits (ANSAF, 2024). Youths, in particular, rely on road connectivity to trade agricultural produce, access financial services, and establish small enterprises. Without reliable roads, their economic activities remain localised and constrained.

2.2 Rural Roads and Youth Empowerment

Youth empowerment involves enhancing capabilities, opportunities, and confidence to participate in socio-economic development (UNDP, 2023). Rural roads empower youths by increasing access to markets, education, and employment opportunities. Studies in East Africa have shown that microcredit and youth-focused development programs are more effective when complemented by physical infrastructure (Magali & Mbagwa, 2022).

In Mkuranga, youths often engage in agribusiness, small-scale transportation, and informal trading. The lack of passable roads, particularly during the rainy season, limits mobility and increases production costs. Conversely, improved roads enable expansion of market reach, stimulate innovation, and foster social inclusion, thereby contributing to long-term sustainable development.

2.3 Challenges in Rural Road Development

Despite the recognised benefits, rural road development faces multiple challenges: limited government funding, bureaucratic inefficiencies, and low community participation (CAG, 2022). Seasonal flooding further exacerbates road deterioration in coastal districts, particularly in Mkuranga, creating barriers to sustainable economic growth (World Bank, 2022). Inadequate maintenance and poor planning result in uneven access, undermining roads' potential to support inclusive development.

3.0 Methodology

The study adopted a mixed-methods design, combining quantitative and qualitative approaches to ensure a comprehensive understanding of the role of rural roads. A descriptive and evaluative case study approach was used to capture both statistical trends

and contextual insights from the field (Yin, 2018). Mkuranga district, located approximately 50 km south of Dar es Salaam, comprises 17 wards with a predominantly rural population. The economy is mainly agricultural, supplemented by small-scale trade and fisheries. Road infrastructure is unevenly distributed, with major trunk roads connecting urban centres, while feeder and village roads remain poorly maintained.

The study targeted youths aged 18–35 who were actively engaged in the labour market. A sample of 150 respondents was selected using purposive and stratified sampling techniques to ensure representation across wards and economic sectors. Key informants included local government officials, transport operators, and community leaders. Data were collected through structured questionnaires, focus group discussions (FGDs), and key informant interviews. Questionnaires were used to collect quantitative data on income levels, business growth, and market access. FGDs provided qualitative insights into the perceived benefits of road improvements and the challenges faced by youth. Key informant interviews explored institutional and policy perspectives. Quantitative data were analysed using descriptive statistics, with frequencies, percentages, and means summarising demographic and socio-economic characteristics. Inferential analysis, including correlation and regression tests, assessed relationships between road accessibility and economic outcomes. Qualitative data were analysed thematically, highlighting patterns, perceptions, and contextual explanations.

4.0 Findings

This section presents the study's findings, starting with socio-demographic characteristics, the social and economic benefits rural roads provide directly or indirectly to youths, the social and community impacts of rural roads, and the challenges or limiting factors affecting their impact.

4.1 Socio-Demographic Characteristics

Table 4.1 presents the frequencies and percentages for the demographic variables, including gender, education level, and respondents' economic activities. The table shows that males accounted for 60% of the respondents, while females accounted for 40%. In terms of education level, the majority were secondary school leavers (55%), followed by primary leavers (30%), and a minority were college graduates (15%). The number of graduates is fewer than in the former two groups because riding motorbikes is considered a risky job, and they would prefer decent jobs. Unfortunately, employment is a problem. There are fewer decent job opportunities in the market to absorb a great pool of graduates by now.

Table 4.1. Socio-Demographic Characteristics of Respondents

Variable	Frequency	Percentage
Gender		
Male	90	60
Female	60	40
Education level		
Primary	45	30
Secondary	83	55
Tertiary	22	15
Economic activity		
Agriculture	68	45
Trade	45	30
Transport services	37	25

Source: Researcher (2025)

4.2 Economic Benefits of Rural Roads

Respondents reported that improved roads facilitated easier transportation of agricultural produce to urban markets, reducing spoilage and increasing income. Quantitative analysis showed a significant positive correlation ($r = 0.63, p < 0.01$) between road accessibility and average monthly income. Improved roads enabled youth entrepreneurs to expand their businesses, access financial services, and participate in regional trade exhibitions.

To further substantiate the relationship between infrastructure development and economic performance, the study analysed the association between road accessibility and average monthly income among youth entrepreneurs in Mkuranga. As shown in Table 4.2, respondents residing in areas with higher road accessibility reported significantly higher average monthly incomes compared to those in areas with poor road conditions. This supports the correlation result ($r = 0.63, p < 0.01$), indicating a strong positive association between road quality and income generation opportunities.

Table 4.2: The Relationship between Road Accessibility and Youth Income

Road accessibility level	Description	Average monthly income (TZS)	Number of respondents
Low accessibility	Poor roads, limited transport	180,000/=	40
Moderate accessibility	Partially improved roads	310,000/=	45
High accessibility	Paved roads, easy market access	520,000/=	50

Source: Field Research, 2025)

Improving rural road infrastructure has been widely recognised as a catalyst for economic transformation, particularly by enhancing market accessibility, reducing transportation costs, and promoting business expansion. To assess the perceived economic benefits of improved rural roads, respondents were asked to indicate the primary outcomes they have experienced following road rehabilitation projects.

As presented in Table 4.3, the majority (80%) of respondents reported that improved rural roads made access to markets easier. This was followed by reduced transportation costs (73%), increased business growth (63%), and enhanced access to financial and social services (57%). These findings highlight that rural road improvement plays a critical role in facilitating economic linkages and supporting inclusive development.

Table 4.3: Perceived Economic Benefits of Rural Road Improvement

Economic Benefit	Number of Respondents (n)	Percentage (%)
Easier access to markets	120	80
Reduced transportation costs	110	73
Increased business growth	95	63
Access to financial and social services	85	57

Source: Field data (2025).

Note. Percentages represent the proportion of respondents identifying each benefit as a key outcome of rural road improvement in the study area.

4.3 Social and Community Impacts

Rural roads enhanced social cohesion by facilitating mobility for education, health, and community events. FGDs revealed that youths felt more empowered to engage in civic activities, access vocational training, and collaborate with peers. Key informants highlighted that roads reduced isolation, enabling integration of marginalised communities into broader socio-economic networks. For instance, in the interview with one key informant at Vianzi, who commented on Songatini- Marogoro- Vianzi to Vikindu, improvement saying;

"Accessibility and mobility improvement of this road has led to Land value addition – thus within the community some have got chance to sell their plots which allowed them to get capital to start businesses and introduce horticulture farming, it allows community members to produce and sell products to a readily available markets as result of introduced industries and plants along the roads Today, Motorbikes (bajaji) are safe transport mode of transport for pregnant mothers to health services, which has reduced incidences of mothers to give births on roadsides" (FGD Participant in Mkuranga, 2025).

4.4 Challenges Limiting Road Impact

Table 4.4. presents key factors respondents perceive as limiting the effectiveness and impact of rural roads. These challenges include poor maintenance, limited funding, bureaucratic delays, and seasonal flooding. The percentages indicate the proportion of respondents who identified each factor, highlighting variations in perceptions regarding obstacles to rural road infrastructure improvement.

Table 4.4: Challenges Limiting Road Impact

Challenges	Respondents reporting	Percentage (%)
Poor maintenance	98	65
Limited funding	85	57
Seasonal flooding	75	50
Bureaucratic delays	60	40

Source: Own Research (2025)

5.0 Discussion of Findings

The findings confirm that rural roads serve as a critical enabler of inclusive economic growth and youth empowerment. Improved infrastructure reduces transaction costs, increases market accessibility, and stimulates entrepreneurial activity, thereby supporting Tanzania's broader development agenda (ANSAF, 2024; World Bank, 2022). Youth empowerment is enhanced not only economically but also socially. Access to educational and vocational opportunities, as well as increased mobility, fosters self-confidence and social integration, aligning with UNDP (2023) perspectives on sustainable youth development. Road maintenance in Tanzania continues to face persistent challenges, and rural roads are becoming increasingly vulnerable due to seasonal flooding, even when financial resources are available.

The problem is primarily attributed to limited technical expertise, inadequate equipment, and weak institutional capacity rather than insufficient funding. According to the Controller and Auditor General (CAG, 2022), many rural and urban roads remain in poor condition despite substantial budgets allocated to maintenance activities. Similarly, the Tanzania Rural and Urban Roads Agency (TARURA) reports that maintenance delays are often caused by logistical challenges, limited machinery, and inadequate technical supervision (TARURA, 2023).

Interviews conducted with key informants revealed that engineers within TARURA possess adequate theoretical knowledge and professional competence; however, they often lack practical opportunities to exercise and enhance their skills due to systemic constraints, including bureaucratic delays. In practice, the design, construction, and significant maintenance of road infrastructure are frequently outsourced to external contractors. This limits local engineers' involvement in critical project stages, leading to a gradual erosion of technical confidence and a reduction in the capacity for independent implementation. Consequently, despite the availability of qualified personnel, TARURA's engineers are not fully empowered to apply their expertise in road management and maintenance (Kayunze & Minja, 2023).

The findings further indicate that this over-reliance on external contractors undermines local ownership, knowledge transfer, and long-term sustainability. Respondents emphasised that increasing the participation of TARURA engineers in project planning, design, and maintenance would significantly improve the efficiency and quality of rural road

infrastructure. Furthermore, investment in modern equipment, continuous professional development, and performance-based maintenance systems could strengthen institutional capacity and reduce dependence on external actors (CAG, 2022; TARURA, 2023).

Overall, the findings suggest that improving road maintenance outcomes in Tanzania requires not only adequate funding but also deliberate strategies to build and utilise local technical expertise. Strengthening TARURA's internal capacity is therefore essential for achieving sustainable, cost-effective road infrastructure management, strengthening good governance, and enabling comprehensive infrastructure planning.

Challenges such as poor road maintenance and flooding highlight the need for integrated infrastructure planning that combines construction with sustainable maintenance strategies. Community participation, private sector engagement, and technological innovations (e.g., flood-resistant road designs) are essential to ensure long-term benefits.

6.0 Conclusion

This study demonstrates that rural roads significantly contribute to inclusive economic growth and sustainable development for youths in the Mkuranga district. Improved road networks facilitate trade, reduce costs, enhance access to services, and empower youths to engage in socio-economic development. However, infrastructural benefits are constrained by poor maintenance, inadequate funding, flooding, and bureaucratic inefficiencies. To maximise the impact of rural roads, a multi-stakeholder approach is recommended, involving local government, the private sector, and community participation. Investments in both road construction and maintenance, coupled with youth-focused capacity-building programs, are crucial for fostering sustainable development and ensuring that youths fully benefit from improved rural infrastructure.

7.0 Recommendations

Sustainable road maintenance is essential to ensuring year-round accessibility, which can be achieved through regular maintenance programs that involve community participation. This approach should be complemented by mentoring a pool of local engineers to equip them to manage national road maintenance effectively. Additionally, integrating youth capacity-building through entrepreneurial and vocational training alongside infrastructure development can significantly enhance young people's economic participation. To address the challenges posed by seasonal flooding, it is crucial to adopt flood-resilient road construction designs that mitigate impacts on usability. Furthermore, fostering public-private partnerships (PPPs) will encourage private-sector investment in both road construction and maintenance, thereby enhancing overall infrastructure. Finally, establishing robust monitoring and evaluation systems will allow for tracking the socio-economic impact of rural roads on youth livelihoods, ensuring that the benefits of improved infrastructure are effectively realised.

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