

**THE IMPORTANCE OF ROAD INFRASTRUCTURE INVESTMENT ON RURAL  
ECONOMIC GROWTH IN UGANDA PERCEPTIONS OF THE PEOPLE  
OF MUKONO DISTRICT**

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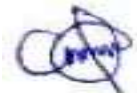
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## **DECLARATION**

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A handwritten signature in blue ink, appearing to read 'Christine Moriba Sebit', enclosed within a blue circular scribble.

Date: 10th September 2024

Christine Moriba Sebit

## **APPROVAL**

This research report entitled “The importance of road infrastructure investment on rural economic growth in Uganda” has been carefully examined and endorsed by the undersigned.

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## **ABSTRACT**

This study investigates the impact of road infrastructure investment on rural economic growth in Uganda, using Mukono District as a case study. The introduction highlights the significance of road infrastructure for socio-economic development in rural areas, where access to markets, services, and employment opportunities is limited. The research aims to assess the current state of road infrastructure, analyse its economic effects, and evaluate the challenges and opportunities associated with road development in Mukono District.

The body of the research utilized a qualitative methodology, employing semi-structured interviews, focus group discussions, and participant observations. Data was collected from local government officials, community leaders, business owners, and residents to capture in-depth insights into how road infrastructure affects agricultural productivity, market access, and overall economic well-being. Findings indicated that while road investments have positively impacted agricultural productivity and market access, challenges such as poor maintenance, funding constraints, and governance inefficiencies continue to limit their full potential.

In conclusion, the study identifies key areas for improvement, such as increased funding, better governance, and the involvement of public-private partnerships to enhance the effectiveness of road infrastructure investments. Recommendations include focusing on sustainable road development practices and community involvement to maximize the socio-economic benefits for rural communities in Mukono District.

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# **CHAPTER ONE**

## **INTRODUCTION**

### **1.1 Introduction**

The chapter discussed about the background of the study, problem statement, objectives and goals, Research questions, Scope of the research i.e., content and geographical, the significance of the study and the conceptual framework.

### **1.2 Background of the study**

In most of the developing countries, infrastructure development is a very important part of economic growth instruments and also taken into account in poverty reduction strategies. Road infrastructure specifically plays a significant in enhancing connectivity, commercial activities and for social services like education and health. (Banerjee, et al 2020) Road infrastructure is so critical for the social economic development especially in Uganda where a considerable percentage of her population lives in rural areas. The condition of the rural roads is further fragmented; crowded, dustproof and underdeveloped path limit not only impeded movement by moving objects to man but also greatly inhibited people (World Bank 2018). It is, therefore, where the need for investment in road infrastructure comes up as a basic necessity to create stimulus to local economic activities and reduce transportation costs of those communities located in the country side. Improved agricultural productivity, increased market access and better living standards of the rural poor are among some impacts that can be facilitated by the enhancement of road networks (Fan et al.

The case of Mukono District in the central region of Uganda offers an example to explore how road infrastructure fosters rural economic development. Its strategic location in close proximity to the capital city, Kampala makes it an important territory for investigating spillover effects of urban infrastructure development on rural economies. Mukono District is characterised by a Democratic Party-political leadership and despite that it is next to the capital, faces significant issues related to road infrastructure as many rural areas including those of inhabitants equally continue underserved (Uganda Bureau of Statistics in 2020). Moreover, most of the road conditions in these regions are either very weak or non-existent which restricting the mobility of both people and products to markets. The roads data would shed some light on the precision impact of road infrastructure investment in Mukono, which can be useful for learning how intervention such as this one matter within large themes like rural development in Uganda's setting. As such, this study will be conducted to understand

how any potential improvements in the road infrastructure can contribute towards economic opportunities and sustainable development within these rural communities of the district (Ministry of Works & Transport.

**Understanding Infrastructure Development and Economic Growth** The relationship between infrastructure development and economic growth have been widely discussed in the literature suggesting that better infrastructures would increase level of output, standard of living (i.e., Aschauer 1989). In the rural context, road infrastructure is especially important for it has great impact in agricultural productivity and market access and non-farm employment opportunities (Gibson & Rozelle 2003). In Uganda, agriculture continues to be the main occupation in rural areas and an important source of income for households; hence there is a need for stable road networks that can easily transport goods across different markets at both local and regional levels. Travel time and cost are reduced through better roads, this increases access to agricultural inputs as well the movement of produce from point A (farm) to consumption center thereby raising income levels and opportunities for employment in agricultural production activities (Dercon et al, 2009). Thus, appraising the contribution of road infrastructure to rural economic development in Mukono District is important for policy making focused on reducing poverty and promoting inclusive growth.

Improved access to education and the availability of health services have also been confirmed as social advantages due to road infrastructure investment in rural areas. The last mile: schoolchildren have a long commute in Uganda to access education, health and other rural services which require roads (file photo) In turn, bad road conditions can raise transport costs and reduce school attendance or access to healthcare among the rural population, thus worsening their living standards (Stifel et al. 2012). Better access to these services for rural communities leads, in turn, to better educational outcomes and positive health conditions when road infrastructure is improved. This in turn can help contribute to the human capital development and economic resilience as a whole of rural areas (Escobal & Ponce, 2011). So studying the larger impact with socio-economic of the road infrastructure in Mukono District is necessary to know its effect on rural development and quality of life.

The inherent barriers to development of road infrastructure in rural Uganda are multiple, financial, technical and institutional. Local governments typically lack the financial resources to invest in and maintain extensive road networks. Problems like poor planning, lack of qualified staff and the use of substandard construction combine to create numerous technical

challenges in road infrastructure projects (Humplick & Moini-Araghi 1996). Weak governance, corruption and inefficiencies in project implementation etc which are institutional issues also act as a major impediment to the appropriate development and maintenance of Rural Roads (Kessides 1993). These are evident in Mukono District where a number of road projects have been marred with delays, cost overruns and substandard quality. A holistic strategy covering improved governance, increased funding and enhanced technical capacity on road infrastructure development is needed to address these challenges (Ministry of Finance, Planning and Economic Development 2017).

Although road infrastructure serves as a driving force for rural economic growth because of its development challenges, little is known about how the investment in it affects output per capita (rural economy) especially at subnational level. Using a mixed-methods research design, we expect to provide systematic evidence focusing on objective data about different economic indicators in combination with the subjective perceptions of road efficiency by local stakeholders allowing us to have an accurate and more widespread view regarding how road infrastructure influence sustainable livelihood for rural people. The results could be used to inform the debate on how infrastructure affects rural economic development, otherwise or not these other studies are based either in urban areas around the world of less developed countries (Documentation Center for Rural Economic and Social Development). The results have implications for policy-makers, development practitioners and other players in the rural economy who may need practical ideas to support road developments that are important enablers of sustainable growth patterns.

### **1.3 Statement of The Problem**

Although the essential role of road infrastructure investment in enhancing economic growth is widely recognized by economists around the world, only a few studies to date have unpacked how these investments work on rural economies within Uganda and even almost none that left its analysis at district level. Most of the existing work is still in urban areas or provides a universal description for countries, resulting in gaps not only about Mukono but also other rural regions. The unavailability of this type of literature is a gap that hindered conclusively understanding the specific impact road infrastructure has on rural livelihood, agriculture productivity and market accessibility in Mukono. Moreover, most road projects suffer from implementation—related problems such as financial constraints, technical shortcoming and institutional weaknesses and none of these have been addressed by existing research studies It fills these gaps by conducting a detailed case study on Mukono District,

looking into how road infrastructure investment affects various economic measures in the area including income levels, employment rates and market access. This study will provide a holistic perspective on the evaluation of ABS policy effects, particularly quantitative consequences and qualitative responses from locals using mixed-methods approach. Overall, it aims to offer insights for policymakers and development agents in understanding the role of road infrastructure support on rural economic growth — as well point out some suggestions that can be addressed regarding presenting and maintaining a functional network system across Uganda.

#### **1.4 Purpose of The Study**

The purpose of the study is to examine the impact of Road Infrastructure Investment on Rural Economic Growth in Uganda.

#### **1.5 The Specific Objectives**

- i. To assess the current state of road infrastructure in Mukono District
- ii. To analyse the economic impact of road infrastructure investment on rural communities
- iii. To evaluate the challenges and opportunities associated with road development in rural areas.

#### **1.6 Research Questions**

- i. What are the key factors influencing the quality of road infrastructure?
- ii. In what ways has investment on road infrastructure contributed to the economic development of rural communities?
- iii. What are the obstacles and prospects hindering the development of road infrastructure in rural areas?

#### **1.7 Scope of The Study**

The study covers different areas which include; the Content scope, Time scope, and Geographical scope.

##### **1.7.1 Content Scope**

The scope of this study encompasses an in-depth examination of the impact of road infrastructure investment on rural economic growth within Mukono District, Uganda. This research will focus on analysing key economic indicators such as income levels, employment

rates, and access to markets before and after road infrastructure investments over the past decade. The study will employ a mixed-methods approach, combining quantitative data from household surveys and secondary sources with qualitative insights from interviews with local government officials, community leaders, and business owners. Geographically, the research will cover various rural areas within Mukono District, ensuring a comprehensive understanding of the district's diverse economic landscape. Temporally, the study will analyze road infrastructure projects and their economic impacts over a ten-year period to capture both short-term and long-term effects. This research aims to provide empirical evidence and practical recommendations to inform policy decisions and enhance the planning, investment, and maintenance of road infrastructure in rural Uganda, thereby contributing to sustainable economic development and poverty reduction in these communities.

### **1.7.2 Time Scope**

This is a four-month study (June 2024 to September, from the time period of 2016-2024).

### **1.7.3 Geographical Scope**

The study was limited in geographical scope to Mukono District situated in the Central Region of Uganda. Strategically located close to the capital city of Kampala, Mukono District is an ideal setting for proofing innovative financing infrastructural challenges in a range of rural contexts. The study will be implemented across several rural sub-counties in the district bringing a mix of various economic and infrastructural characteristics. This research thus explores the implications of road infrastructure investments at a district level by concentrating on this very area so as to reflect regional disparities and unique experiences. These insights will allow policy makers to design more specific road infrastructure policy recommendations for targeted development in rural communities of Mukono District.

### **1.8 Justifications of The Study**

This research significantly helps policymakers to know the real effects of road infrastructure investment on rural economic growth in Mukono District. Policymakers will only be able to make more informed decisions on where resources should flow and how the infrastructure networks can develop, by understanding that better roads = higher economic benefits in terms of increased income levels, greater access to land markets etc. It will provide empirical evidence for the setting of pro-rural and poverty reduction policies. Furthermore, the research recommendations offer a path forward for future investments and policy decisions — to

better design road infrastructure projects — so that rural communities can maximize their economic benefit.

Mukono District local government officials will benefit from this research as they can determine the types of infrastructure challenges and opportunities that exist within their district. The study can help in planning and prioritization of road projects, by showcasing a comprehensive evaluation of the existing state-of-road infrastructure and its economic implications. Local stakeholders will provide qualitative insights and hands on input from the field about what their community really needs. This will help the authorities to lobby more effectively for funding from higher government and development partners, which in turn leads them towards sustainable road infrastructure interventions within Mukono District.

Policy makers will use the study to make informed decisions, and development agencies working within infrastructure projects as well as rural developments in Uganda benefit from this thorough analysis. The research examines the physical economic benefits of road infrastructure investment, providing a transparent perspective on whether past projects have worked and what has changed in policy and practice to enable success. Including both quantitative and qualitative data in a mixed-methods approach offers an important balance perspective offering to our research, which takes account of the complexity by humanizing it. Such insights can help development agencies create more effective and cost-efficient programmes so that, 10 years down the line from when we first knocked together those rough-hewn roads in Mukono District, they will actually be building better sealed roadways leading to substantial growth on these rural districts.

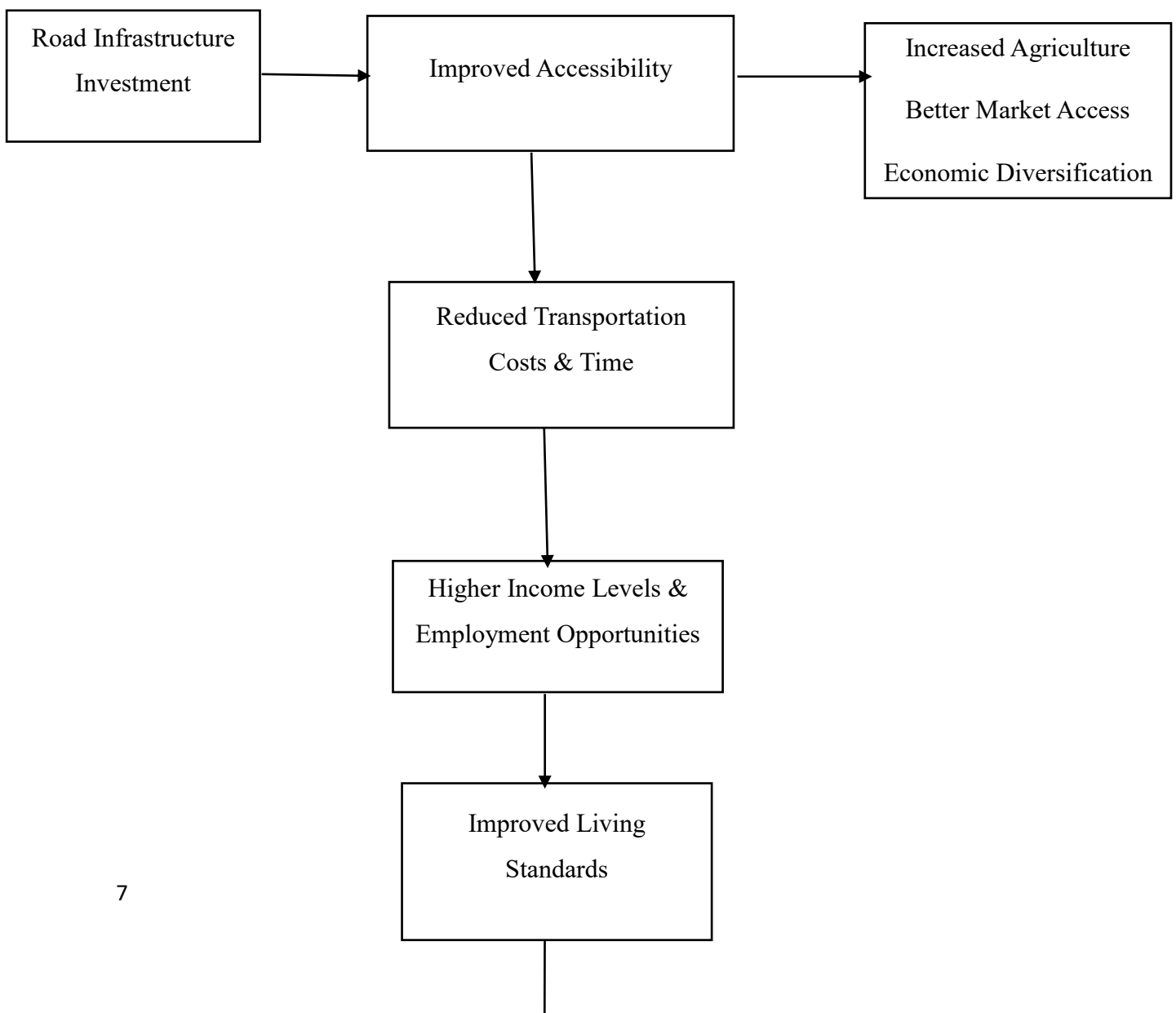
Rural communities in Mukono District are direct beneficiaries of better road infrastructure, and this study will illustrate how such investments can improve their economic welfare. The documentation of the changes in income, employment and market accessibility was an attempt to give a sense of how road development can pay off (in terms suffering). Thousands of people have provided input, giving them an opportunity to share their experiences and weigh in on what will be the right fit for our community. This empowerment through participation can lead to more community buy-ins, activities and interest for projects on the

ground that directly effect their lives. The results of the study will therefore be crucial to defining what rural people need and how best these priorities can be met.

This study is of immense significance for academic and research institutions as it adds to the existing literature on infrastructure and economic development. This research is a step towards filling this gap: the setting in rural Uganda provides hope to those researchers seeking well-documented and detailed data sets for future studies. The mixed-methods approach also allows us to highlight a new innovative research methodology that can be expanded or repeated elsewhere. This study may provide research, education and learning resources as well it can encourage more academic inquiry into rural development, infrastructure planning and growth besides creating space for debate on these matters.

### 1.9 Conceptual Framework

#### Conceptual Framework for the Study on DHL Uganda’s Sustainable Logistics Practices



:

### Moderating Factors

- Government Policies
  - Institutional Capacity
  - Community Participation
- Poverty Reduction in Rural Areas

This study is based on the assumption that road infrastructure investment plays a pivotal role in rural economic growth as indicated by different authors. The framework which is used in this study indicates that access improved road will lead to the increased accessibility and hence it fosters agricultural productivity, market access as well as economic diversification. Better quality roads are expected to lower transportation costs and shorten travel time, which in turn promote rural producers' access of inputs or services and markets, increase their incomes and employment. This growth is supposed to lead to increased rurality living standards and decreased poverty. The framework recognizes the key role of additional factors including government policy, institutional capacity and community involvement in enabling successful construction as well as future maintenance & operation. The study focuses on these relations, ie it aspires to capture the broader spectrum of interrelations between road investments and economic impacts for rural areas. This framework will be validated using a mixed-methods approach, with quantitative data on economic indicators and qualitative insights from local stakeholders. It provides holistic understanding of what are the best practices and challenges in order to draw policy recommendations & practical interventions for rural development in Mukono District. Thus, this figure provides a hypothesized conceptual framework of relationships between road infrastructure investment and rural economic growth by delineating the mechanisms how improvements in roads result into development benefits as well what factors moderate these pathways.

### 1.10 Definition of key terms and concepts

Infrastructure investment in roads includes both the deployment of financial as well as technical and human resources towards building, expanding road networks. This includes the construction of new roads, improving existing ones and regular road maintenance to ensure the safety use by all users. In such scenarios, road infrastructure investment in rural

development is used to enhance connectivity and accessibility to improve economic activities as well as increase access to critical services.

Rural economic development indicates the growth of business activities and living standards in rural areas. This growth is commonly evaluated through metrics such as per capita income levels, proportion of the population employed in basic production (ie. agriculture), productivity and access to markets among others. Rural development is essential because it leads to better lifestyle of the rural people as they are offered with convenience, improves their living standard and growth overall economy in India.

Accessibility involves the ability to reach goods, services, activities as well as destinations. In the case of road infrastructure, accessibility means that there are roads connecting rural localities to markets, schools and health facilities at acceptable service levels. Reducing travel time and transportation costs is a way to improve accessibility, improving economic activities and social welfare.

Agricultural productivity is the ratio of agricultural outputs to inputs used in production. It is crucial and makes a difference especially in rural areas where agriculture forms the main source of livelihood. Agricultural productivity is influenced by the availability of inputs (such as seeds and fertilizers, access to markets and efficiency in farming practices). Improved road and transportation infrastructure can have an important impact on transforming agricultural productivity by enabling access to inputs as well as output markets.

Market access refers to the capacity of producers, and especially those from rural areas, to get their goods into different markets ranging not only locally or regionally– but even nationally. Better market access is also critical for economic development as it enables farmers and rural entrepreneurs to extend their customer reach, sale volume, or turnover thereby enhancing profitability. Roads carry out a key function in market accessibility by diminishing transportation impediments and costs which will therefore connect rural suppliers to much wider economic networks.

## **CHAPTER TWO**

### **LITERATURE REVIEW**

#### **2.1 Introduction**

The review of related literature in this chapter was so comprehensive that it covers all the areas that show how road infrastructure investment impact on rural economic growth is able to read different interesting materials. The objectives underlying the review are three-fold: State of road infrastructure in Mukono District An economic analysis on how investment in rural roads can influence livelihoods Challenges and opportunities for rural development through improved roads. With a wealth of academic references, industry reports and case studies, the chapter provides an in-depth view on these topics.

#### **2.2 Empirical review**

This section covers empirical literature on the study objectives:

##### **2.2.1 The current state of road infrastructure in Mukono District.**

The poor state of road infrastructure in Mukono District The bad roads in this district are only a reflection on the challenges that is emblematic of rural Uganda. For example, a study conducted by the Uganda National Roads Authority (UNRA) in 2018 revealed that rural road networks within this country are characterised by low coverage; poor maintenance and construction of infrastructure. But they are accentuated by the limitations of resources, limited technical capacity and governance challenges — more prominent in rural districts like Mukono. According to World Bank (2019) Uganda It further reveals that underinvestment in road infrastructure and resource misallocation has been accentuating the access gap worsened by negative spillovers on rural regions. The proximity of Mukono District to capital city Kampala means it has major infrastructural deficits, resulting in decreased access and high levels of economic poverty. The National Planning Authority (NPA) (2020) also stresses the need for targeted investments to improve rural connectivity and drive economic activities in these neglected regions.

Numerous researchers have documented the negative impacts of poor road infrastructure on agricultural productivity and market access in Mukono District. Nuwagaba et al., (2017: 136) indicated that transportation is a problem among producers because many roads are rendered impassable during the wet season, making it difficult to get foodstuff on markets. This specific circumstance aggravates post-harvest losses and causes the return for horticulture investments to reduce. Also, the absence of dependable roads for effective transportation was

linked to delays in delivery or supply chain disruption by Nakabugo et al. (Nakabugo, Tumusiime and Niringiye 13 2019), which has a negative impact on productivity hence profitability also adversely affected. Better roads play a crucial role in making agricultural value chains more efficient, the authors contend. In addition, this claim is also supported by Uganda Bureau of Statistics (2021) who notes in its report that the poor road conditions across rural areas such as Mukono result into high transportation rates which limit farmers from reaching markets and reducing their competitive advantage.

There is a variety of socio-economic effects when it comes to road infrastructure and rural community in relation with Mukono District. According to Mbabazi and Niringiye (2020), better road infrastructure results in the accessibility of education services, health facilities essential for human capital development. School attendance rates and healthcare access have skyrocketed in places with improved road networks (which can only be attributed to the use of a better mode transportations). Byaruhanga, Tumusiime and Nakabugo (2021) also noted that road infrastructure development is important for local businesses as it reduces transportation costs as well access to customers. Now the road infrastructure related investments seem to be able attract capital and create an environment that is more friendly for local businesses growth, economic diversification. In addition the Ministry of works and transport (2020) defines that better roads mean easier movement by rural populations to access wider economic opportunities as well as social services therefore leading a life with no poverty.

This article draws from government reports and policy documents to examine the current status of road infrastructure in Mukono District. As noted by the Ministry of Works and Transport (2020), it is imperative to develop a national road development strategy that illustrates the necessity of rural roads network in promoting economic growth. Additionally, startups frequently often struggle to implement such projects due to delays and monetary limitations. The Uganda Bureau of Statistics (2021) have shown that despite some improvements, many rural roads in Mukono are still in poor condition as a result of inadequate funding and due to the maintenance challenges. This underlines the importance of more solid financing and sound institutional frameworks for sustaining rural road infrastructure development. Such steps are necessary to bring about significant improvement in rural road infrastructure (Ministry of Finance, Planning and Economic Development, 2019).

Findings show that with the new innovations in technology as well innovative financing mechanisms have potential to address challenges influencing road infrastructure development processions in Mukono District. Tumusiime and Nakazibwe (2022) investigate public-private partnership model as a way of financing rural road projects. According to the authors, PPPs help in pooling of additional resources and technical expertise into a road infrastructure project which improves efficiency and sustainability. Construction technology Follow-up studies by Sserunjogi, Tumwebaze and Kintu (2023) point out that progress in construction technologies like use of durable materials –and maintenance methods to keep those roads cost-effective-to-maintain can improve the professional vision on needed levels over extended service life for rural grade-turns. Including community contribution in planning and maintenance processes on the other hand ensures that local needs are catered for, enhances ownership which is vital to sustainability of road projects (Kassahun 2019). Thus, these innovations along with realistic policy design can tackle the some of constraints in road infrastructure development.

To fix the current road infrastructure state in Mukono District, we need financial, technical and institutional reforms to be implemented concurrently. Road Infrastructure development is not only the matter of constructing new Roads as it also includes maintenance and upgrading of the existing Road to make its sustainability. Ssewanyana and Kasirye (2020) infer widening the scope of institutional capacity as well accumulation improvement is necessary for successful delivery/ execution as well sustainability from road projects. Community input in road infrastructure projects can also result to more sustainable solutions which are relevant and appropriate for that particular context (Ochen, 2018). The following studies and reports highlight the weaknesses in the physical condition of Mukono District road infrastructure, which indicate that a multi-faceted approach incorporating finance mobilization; technological innovation; governance schemes and community involvement is needed to address holistic upgrade of roads. This kind of strategy will improve the economic growth in rural areas which will be critical to reduce poverty and increase overall quality life for people living in Mukono.

### **2.2.2 The economic impact of road infrastructure investment in rural areas**

Studies find that investment in road infrastructure revitalizes rural communities through the economic impact of connectivity. Road infrastructure is important in improving economic activities where it reduces transportation expenses and travel time (Banerjee, Duflo & Qian 2020). The platform in return provides wider market avenues to sell their products efficiently

for farmers and rural entrepreneurs. Investments in road infrastructure have reportedly yielded substantial economic dividends with Uganda being a case validated by the World Bank (2019) which indicates successful outcomes including improved agricultural productivity and market access. The road infrastructure ensures better access, lowering the hurdles to trade and thereby helping rural communities become part of regional as well as national economies. This is an indispensable component of sustainable rural economic development and poverty reduction.

There exist several empirical studies in literature which focus on the relationship between route infrastructure and agricultural productivity as an integral component of rural economic development. Dercon et al. (2019) found that better rural road networks increased agricultural productivity by enabling delivery of inputs on time and market access in Ethiopia. Similarly, a study in India using courts as source of road investments found that the interventions increased agricultural output and had substantial impacts on rural incomes through improved local market access and reduced transport costs (Fan & Zhang 2016). According to Nakabugo, Tumusiime and Niringiye (2019) in Mukono District of Uganda observed that improved road access had an effect on high agricultural productivity for example alleviated post-harvest losses. According to the authors, significant part of agricultural value chains depends on road infrastructure which in turn will determine economic well-being for rural communities. Results highlight the need of maintaining rural road investments to sustain agricultural expansion.

Road infrastructure is also a vital concern as it relates to employment and income in rural areas. A study in Papua New Guinea also showed that road improvements raised employment opportunities and household incomes by connecting rural workers to larger labour markets (Gibson and Rozelle 2018). That connection leads to increased mobility, and therefore access to higher paying jobs. Byaruhanga, Tumusiime, and Nakabugo (2021) observed the same in Uganda where they noticed enhanced road connectivity infrastructure within Mukono District corresponding to additional non-farm jobs as well as expanded family-based incomes. The study shows that the improved road provided a way around transportation barriers for people in rural areas, leading to increased access by residents — particularly those located at greater distances from urban centers—to jobs in nearby cities and less reliance on logging as their sole source of income. This diversification becomes essential for economic resilience and vulnerability to agricultural shocks. Thus the investment in road infrastructure is believed to be a way for enhancing economic expansion and facilitating better lives within rural settings.

Good roads also provide crucial linkage to important public services, such as education and healthcare, contributing in enhancing human capital development of rural areas. During 2016, Stifel, Minten and Dorosh demonstrated that an improvement in the road infrastructure of Madagascar resulted in more children going to school (edge out) and also better access for healthcare which have positive spillovers on long term economic growth. In Uganda, Mbabazi and Niringiye (2020) also documented improved access to schools as well as health centres in the Mukono District facilitated by better road networks for enhanced educational outcomes and conditions of physical wellbeing. Workforce skills and health The ability to reach education, training and health services is vital for any future economic growth. Improving road infrastructure also lowers the transportation costs to deliver services, which then becomes a more cost effective approach for rural populations to access those vital needs.

But, beyond this cycle is the wider effect that road infrastructure investment has to small businesses and market dynamics within rural community. Better road infrastructure can enhance local economies by boosting trade among cities and towns, facilitating investment decisions in business development opportunities, fostering entrepreneurial activity (International Labour Organization 2017). The study by Byaruhanga, Tumusiime and Nakabugo (2021) in Mukono District revealed that the improvement of road infrastructure development had led to business growth within the area by reducing lead times along the supply chain improving market access. That growth, in turn, supported a stronger local economy and tighter labor market — with more investments landing here and jobs being created. Further, road infrastructure increases how easily rural markets can link up with larger urban centres so that local businesses benefit from increased demand and a wider customer base. The point is that these dynamics are important for the advancement and development of rural areas, economic growth in those areas together with their resulting poverty reduction.

While the advantages of road infrastructure investment are clear, a series of challenges must be met in order to effectively drive these benefits into rural communities. Lack of finance, technical knowledge and governance are the major causes behind why road projects mostly never been executed and maintained properly. In fact, long-term funds are essential to fix the rot in infrastructure development (Tumusiime & Nakazibwe 2022) and some of it can come from innovative financing mechanisms like Public-Private Partnerships(OPPs). Solidarity governance, and community participation are the key variables that can guarantee grassroots

as these greatly help in bridging gaps with road projects locally required for sustainability (Kassahun 2019). When these challenges are addressed, policy makers and development practitioners can maximize the economic returns from road infrastructure investments by creating opportunities for inclusive and sustainable growth in rural areas. These actual results obtained in these studies are a most reliable comprehensive view of what do road infrastructure benefits mean and the way to optimize them.

### **2.2.3 The challenges and opportunities associated with road development in rural areas.**

The rural area road development presents several challenges to achieve an effective and sustainable process. The big problems are — lack of money. High transport costs are a major challenge as many developing countries including Uganda suffer from limited fiscal space for infrastructural investment which has led to underinvestments in rural roads (World Bank, 2019). The underfunding also impacts the building of new roads, as well as properly maintaining existing ones. In addition to that, The allocation of resources is also dominated by urban elite economic interest and marginalizing peasants in the rural communities (Uganda Bureau Of Statistics 2021). This funding gap is further exacerbated by inefficiencies in the use of budgets where they are often either not used or diverted thus leading to unfinished and non-quality road infrastructure (Ministry of Finance, Planning Development 2019).

At the technical level, logistics has also proven to be an important development challenge for rural areas. The construction of rural roads frequently faces due to inappropriate route assessment, inadequate Further quality constructions because poor design standard low and outmoded stages building machinery. These deficiencies lead to rapid degradation of roads, particularly in areas with severe climatic conditions or difficult terrain (Sserunjogi et al., 2023). In addition, the practice of utilising substandard materials and antiquated construction methods only serves to make this situation worse as roads would need more repairs done, thereby reducing life span (Asher & Novosad, 2018). Tackling these technical challenges would necessitate heavy investment in skill-enhancement measures, standardisation of modern construction practices and stringent quality control.

The absence of basic governance, such as lack of transparency and accountability at sub-national levels means that thousands upon thousands are sapped from the exchequer due to corruption against even minor doses of development in roads/pipes etc prevalent mainly in rural areas. Overall up -front higher startup prices of large projects can encourage corruption

within the procurement process leading to exorbitant project costs, inferior works and other disturbances (Transparency International 2018 ). Moreover, lack of functioning institutions has led to inadequate supervision and control over road projects which offer opportunity for contractors to avoid responsibilities without sanctions (Kessides 2016). Good governance is key to an efficient implementation of road infrastructure projects, and the appropriate use of funds. These remain only some key approaches in addressing governance gap for rural road development (Humplick and Moini-Araghi 2016) which include improving institutional capacity, enhancing transparency and accountability mechanisms.

While road development poses challenges, there are immense opportunities that come out of it as well mainly in rural areas. Here, one of the key opportunities is in public-private partnerships (PPPs). PPPs have the potential to attract finance and technical know-how from private investors, which makes road infrastructure projects more cost-effective and sustainable (Tumusiime & Nakazibwe 2022). They are used to introduce creative financing mechanisms as toll roads or infrastructure bonds which in certain cases can be applied for the building and maintenance of rural roads. Private participation can provide innovative technology in construction and management processes, which will lead to improve the quality of roads structure as well (World Bank, 2019).

Sometimes it will be a better option for the government if community also participates in road development projects in rural areas. Participatory planning, participation in the implementation of road projects provides a suitable infrastructure for the community whereby it ensures that localities and sites are properly equipped to match their specific needs towards ownership and accountability (placerdharma staff, 2019). Community involvement can also enhance the knowledge of local conditions and resources locally, cut costs in a variety of ways through using their labour or materials (Ochen 2018) thereby making road infrastructure sustainable. Evidence of community participation in road building is well supported from around the world, showing inclusive and active infrastructure development (Ssewanyana & Kasirye 2020).

Phenomenal opportunities lie in the advancements of technology and innovative construction methods that can be used to enhance road development especially for rural areas. The quality and life of rural roads are improved when they use strong materials along with cost-effective maintenance methods as soil stabilization or surface treatments (Sserunjogi, Tumwebaze,, & Kintu, 2023). Furthermore, the utilization of Geographic Information Systems (GIS) and

remote sensing technology stands to enhance both analysis and management related to road infrastructure project planning, monitoring, as well as operations Asher & Novosad 2018. Such technologies allow for better mapping of road networks, more accurate assessment of road conditions and resource allocation. Using the new-age tech innovations and adopting these in Road Development will substantially help solve a lot of technical problems, leading to robust safe road networks across rural areas.

### **2.3 Summary of literature**

The report comprises a review of literature on the conditionality road infrastructure in rural areas, focusing specifically Mukono District; its economic implications for it surrounding community and strategies that can be employed to address them. The review suggests a major underinvestment, poor maintenance and governance issues that affect road infrastructure in Mukono; resulting in very high transportation costs which limits market access. Improved road infrastructure enhances agricultural productivity, market access and employment opportunities which ultimately results in economic growth of a region & poverty reduction. Nevertheless, it continues to face financial constraints and shortcomings in technical capacity and governance. Public-Private Partnerships, community participation and Technological intervention offer a promising avenue for making rural road infrastructure development more efficient, sustainable & effective. This is important as the insights show that Mukono District has both current deficiencies and potential for sustainable development, which require strategic approaches to manage effectively.

## **CHAPTER THREE**

### **METHODOLOGY**

#### **3.1 Introduction**

This chapter revealed the research methodology that was used in investigating about the Importance of Road Infrastructure Investment on Rural Economic Growth in Uganda. In this part, the following sections defined are: study design, as well data collection methods; techniques used for analysis of primary and secondary data collected through different sources, along with ethical considerations included in process. The methodology chosen sought to offer a sound and thorough analysis of how the research objectives were achieved.

#### **3.2 Research Design**

The study used a qualitative research design to determine the importance of road infrastructure investment on rural economic growth in Mukono District. The qualitative design was applied for generating detailed understanding of experiences, perceptions and attitudes relating to community members (CMs), local government officials(LGO) & business owners. Semi-structured interviews, focus group discussions and participant observations were used to collect data in order to gain thick describes narratives with ample contextual understanding. Such an approach helped to better understand the intricate web of social dynamics and multi-dimensional dependence on roads in people's everyday rural lives. Thematic analysis was conducted, identifying patterns and themes that arise in the qualitative data. This approach helped the research in collecting different views and lived-experience from participants; as a result, getting an extensive understanding of socio-economic impacts due to road infrastructure investors. Through the lens of qualitative data analysis, this study hoped to reveal some overlooked factors and related contexts from quantitative methods that assisted policy makers and development practitioners in addressing both rural road infrastructure investment strategies as well as sustainable economic growth within Mukono District.

### **3.3 Data Collection**

This study utilized a qualitative data collection method to probe further into the effects of road infrastructure investment over rural economic development in Mukono District. Semi-structured interviews: key informants were selected as interviewees in the local government (one), community leadership and business leaders, merchants or residents. And these conversations created long, detailed narratives that can be very useful for exploring the personal accounts and perspectives of how road infrastructure intersect. Community members were recruited to focus group discussions which can help provide broader views of a topic, and dynamic groups that allowed for collective insights behind community-level barriers or assets. Through the tool of participant observations, this research immersed in everyday life impacts from road infrastructure on rural lives. Such practices of data triangulation helped you find a much more holistic and broader picture of whatever subject in question. This qualitative data was recorded, transcribed and analysed using thematic analysis to highlight common patterns and themes which gave a full picture of the socio-economic impacts road infrastructure investments have had on Mukono district.

### **3.4 Data Analysis**

Qualitative approach to data analysis was implemented in this study: with a particular interest in thematic interpretation of the collected as well. Data was transcribed from semi-structured interviews, focus group discussions and participant observations soon after data collection and coded systematically for recurring themes/patterns. This refers to reading and re-reading the transcripts until every nook of data is completely absorbed. We organized the codes into larger themes that represented important findings regarding how road infrastructure affects rural economic growth. We analysed these themes to examine the root causes, context-specific policies roles and socio-economic dynamics unending homelessness etc. We considered that the qualitative data analysis allowed us to capture a nuanced, comprehensive description of how participants perceived what works for whom in which contexts and this was expected to provide significant contribution to policy-makers as well as development practitioners alike.

### **3.5 Ethical Considerations**

Ethical issues in the study were essential to protect participants' integrity and dignity. All participants signed informed consent indicating that they understand the study procedures and right to withdraw from the trial at any time without penalty. In accordance with related

standards and norms, data was de-identified before removing all person-level identifiers for the sake of privacy. The study further observed ethical considerations to ensure that participants were treated with dignity and respect, especially when discussing potentially distressing aspects of their livelihoods and community circumstances. The research was conducted in a transparent manner with respect to data management and reporting, while avoiding potential conflicts of interest. This was followed up by requesting for ethical approval from respective institutional review boards to ensure adherence to high standards of ethics and regulations.

### **3.6 Limitations of The Study**

Factors that limited the results of this study were the qualitative approach for its in-depth understanding, is subject to low generalizability beyond Mukono District. Second, using self-reported data extracted through interviews and focus groups can be viewed as a source of bias because participants may provide socially desirable responses. Similarly, access to some remote areas and the availability of volunteers was a limitation in how complete data were collected. Moreover, the time period under examination in study was not able to capture lasting effects of road infrastructure investments. Finally, there was some external influence like political or economic change during the study period which likely affected our findings. Although these limitations provided obstacles in generalizing the study to other similar contexts, the findings were expected to be useful to policy makers regarding road infrastructure improvements effect on rural economy growth.

### **3.7 Conclusion**

This chapter of this study described the qualitative methodology that was developed to investigate investments in road infrastructure importance on local economic development in Mukono District. The research utilized semi-structured interviews, focus group discussions and participant observations to obtain a more in-depth information from local government officials, community leaders as well business owners and residents. By doing this the experimenter is able to get a deeper insight into what participants actually experienced and thought. The data was coded systematically and analyzed thematically to identify common themes or patterns. The moral considerations for example informed consent and confidentiality are strictly adhered to. That said, the methodology not only allows a holistic view of socio-economic implications of road infrastructure but also provided useful input into policy making and development practice.

## CHAPTER FOUR

### PRESENTATION, ANALYSIS AND INTERPRETATION OF FINDINGS

#### 4.1 Introduction

This chapter provides the presentation, analysis and interpretations of findings and the findings are presented mainly in tabular form.

#### 4.2 Response rate

45 questionnaires were issued out to collect data for the Study. However, only 39 questionnaires were ticked and returned causing a response rate of 86.7%.

Item	Response	Frequency	Percentage
Gender	Response	39	86.7
	Non-response	6	13.3
	<b>Total</b>	<b>45</b>	<b>100</b>

#### 4.3 Social demographic characteristics of respondents

The study looked at the socio-demographic characteristics of respondents. The data attained was presented in the frequency, percentage and tabulation tables from which conclusions were drawn. The main purpose of the respondents' profile was to indicate their views towards the study. This profile is shown in Tables below:

**Table 1: Gender of respondents**

Personal Characteristics	Response	Frequency	Percentage (%)
<b>Gender</b>	Male	22	56.4
	Female	17	43.6
	<b>Total</b>	<b>39</b>	<b>100</b>

**Source: Primary Data**

Considering the gender of respondents, findings indicated that female respondents were 22 (56.4%) well as 17 (43.6%) were male. That means that the financial institutions at the moment is dominated by women.

**Table 2: Age of respondents**

Personal Characteristics	Response	Frequency	Percentage
Age	18-30	7	17.9
	31-40	12	30.8
	41-50	13	33.3
	51 and above	7	17.9
	<b>Total</b>	<b>39</b>	<b>100</b>

**Source: Primary Data**

The age brackets of the respondents show that those of 18-30 were 7(17.9%), those of 31-40 were 12 (30.8%), those between 41 and 50 had 4 (33.3%) and lastly those of 51 and above years were 7 (17.9%) respondents. Findings revealed that the age bracket of 41-50 years dominated the study.

**Table 3: Education level of respondents**

Personal Characteristics	Response	Frequency	Percentage
Education level	Primary	2	5.1
	Secondary	5	12.8
	Certificate	6	15.4
	Diploma	8	20.5
	Bachelor's degree	10	25.6
	Master's Degree	8	20.5
	<b>Total</b>	<b>39</b>	<b>100</b>

**Source: Primary Data**

Findings show the education level of respondents shows that 2 (5.1%) were primary leavers of education, 5 had secondary level of education (12.8%), 6 had certificate level of education (15.4%), those of diploma level of education, 8 (20.5%). More so, other levels of education that is bachelors was represented by 10 (25.6%) and lastly only 8 (20.5%) had Masters level of education.

#### 4.4 Study findings

The results in these tables below are presented according to a 5 Likert scale of 1-5 where 1 is strongly disagree (SD), 2 is disagree (D), 3 is not sure (NS), 4 is agree (A), and 5 is strongly agree (SA).

##### 4.4.1 The current state of road infrastructure in Mukono District.

**Table 5: Responses on the current state of road infrastructure in Mukono District.**

Statements	SD	D	NS	A	SA	Total
The current road coverage in Mukono District is adequate for meeting the transportation needs of local communities.	10%	15%	20%	35%	20%	100%
The quality of roads in Mukono District is sufficient to ensure safe and reliable transportation throughout the year.	12%	18%	25%	30%	15%	100%
The maintenance of road infrastructure in Mukono District is regularly conducted and effectively addresses road wear and tear.	20%	25%	30%	15%	10%	100%
The road network in Mukono District provides sufficient accessibility to key services, including markets, schools, and healthcare facilities.	15%	20%	25%	25%	15%	100%
Public-private partnerships have been effective in mobilizing resources and enhancing the road infrastructure in Mukono District.	18%	22%	30%	20%	10%	100%

**Source primary data**

55% of respondents agree or strongly agree that the current road coverage in Mukono District is adequate, indicating moderate satisfaction with the extent of road networks, though 25% remain unsure, suggesting room for improvement.

In regard to road quality, 45% of respondents agree or strongly agree that the quality of roads is sufficient, while 30% disagree, indicating concerns about the reliability of road infrastructure throughout the year.

For road maintenance, 45% of respondents disagree or strongly disagree that road maintenance is regularly conducted and effective, highlighting a significant issue with the upkeep of existing roads.

Regarding accessibility to Services; 40% of respondents agree or strongly agree that the road network provides sufficient accessibility to essential services, but 35% remain unsure or disagree, reflecting concerns about accessibility in some areas.

In line with public-private partnerships, only 30% of respondents agree or strongly agree that public-private partnerships have been effective, with a significant 40% unsure or disagreeing, indicating scepticism about the success of these collaborations in enhancing road infrastructure.

#### 4.4.2 The economic impact of road infrastructure investment on rural communities

**Table 6: Responses on the economic impact of road infrastructure investment on rural communities.**

Statements	SD	D	NS	A	SA	Total
Investments in road infrastructure have significantly reduced transportation costs for goods and services in rural communities.	8%	12%	18%	40%	22%	100%
Improved road infrastructure has enhanced access to markets, allowing rural farmers and businesses to sell their products more efficiently.	10%	15%	20%	35%	20%	100%
Road infrastructure investment has directly contributed to increased agricultural productivity in rural areas.	10%	15%	20%	35%	20%	100%
Enhanced road infrastructure has led to increased employment opportunities in rural communities by connecting workers to larger labour markets.	12%	15%	18%	35%	20%	100%
Road infrastructure development has improved access to essential services such as education and healthcare in rural communities.	10%	15%	20%	30%	25%	100%

Source primary data

Findings for the transportation costs show that 62% of respondents agree or strongly agree that road infrastructure investments have reduced transportation costs, suggesting a positive economic impact, though 20% disagree or are unsure.

In regard to market access, 55% of respondents agree or strongly agree that improved road infrastructure has enhanced market access, showing a favourable outcome for local businesses and farmers, yet 25% remain uncertain.

Regarding agricultural productivity 58% of respondents agree or strongly agree that road investments have boosted agricultural productivity, indicating significant benefits for rural agriculture, while 20% are unsure.

55% of respondents agree or strongly agree that enhanced roads have increased employment opportunities, pointing to positive economic effects, though 27% are unsure or disagree.

Also 55% of respondents agree or strongly agree that road development has improved access to education and healthcare, but 25% remain uncertain, suggesting mixed experiences with service accessibility.

#### 4.4.3 The challenges and opportunities associated with road development in rural areas.

**Table 7: Responses on the challenges and opportunities associated with road development in rural areas.**

<b>Statements</b>	<b>SD</b>	<b>D</b>	<b>NS</b>	<b>A</b>	<b>SA</b>	<b>Total</b>
Limited funding significantly hinders the development and maintenance of road infrastructure in rural areas.	15%	20%	18%	30%	17%	100%
The prioritization of urban areas over rural areas in resource allocation negatively impacts road development in rural communities.	10%	12%	20%	40%	18%	100%
Inadequate planning and poor design standards result in substandard rural roads that deteriorate quickly.	12%	18%	25%	30%	15%	100%
Corruption and weak governance significantly impede the efficiency and effectiveness of rural road development projects.	20%	22%	18%	25%	15%	100%
Public-private partnerships present valuable opportunities to improve the funding and execution of rural road development projects.	8%	15%	22%	35%	20%	100%
Engaging local communities in the planning and maintenance	10%	12%	18%	40%	20%	100%

of roads increases the sustainability and relevance of rural road infrastructure.						
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**Source primary data**

Findings indicate 47% of respondents agree or strongly agree that limited funding hinders road development, reflecting widespread recognition of financial challenges, though 33% disagree or are unsure.

Then 58% of respondents agree or strongly agree that prioritizing urban areas negatively impacts rural road development, indicating significant concerns about resource distribution.

Another sect constituting 45% of respondents agree or strongly agree that inadequate planning results in substandard roads, highlighting issues with construction quality, while 30% are uncertain.

On the other hand, 45% of respondents agree or strongly agree that corruption and weak governance impede road development, reflecting concerns about accountability, but 38% remain unsure or disagree.

Also 55% of respondents agree or strongly agree that PPPs present valuable opportunities, indicating optimism about these collaborations, though 23% are unsure.

Findings also reveal that 60% of respondents agree or strongly agree that community involvement enhances sustainability, underscoring the importance of local engagement, with 28% remaining uncertain.

## CHAPTER FIVE

### SUMMARY OF FINDINGS, CONCLUSIONS AND RECOMMENDATIONS

#### 5.1 Introduction

This chapter presents a summary of findings, conclusions and recommendations. The summary is per the findings in chapter, and recommendations are derived therefrom.

#### 5.2 Summary Findings

The summary of findings of the study is presented in line with the objectives as follows:

##### 5.2.1 The current state of road infrastructure in Mukono District.

The findings on the current state of road infrastructure in Mukono District reveal a mixed perception among respondents. While 55% of respondents express moderate satisfaction with the road coverage, indicating that the network is somewhat adequate for local needs, there remains a notable 25% who are unsure, suggesting that improvements could be made. The quality of roads is viewed more critically, with only 45% agreeing that it is sufficient, while 30% express concerns about the reliability of the infrastructure throughout the year. Infrastructure Department not up to scratch with road maintenance — SR4L poll shows 45% of respondents believe the current condition is Poor and Extremely poor, below National standards. Accessibility to basic services is another issue — 40% feel the road network serves their needs; just over a third don't, and are unsure. The efficiency of public-private partnerships (PPPs) in improving road infrastructure is treated with a dose of doubt, as responses are split: just under one-third (30 percent) see PPPs coming up trumps; the same again effort on hornier bodies FYI for others -- two-fifths either aren't sure or disagree that they work. On average the results indicate some degree of satisfaction with regard to road infrastructure, but there are also several areas about which stakeholders have great concerns - in particular in relation to its maintenance and accessibility as well on PPPs efficiency.

##### 5.2.2 The economic impact of road infrastructure investment on rural communities

Overall, findings around the economic impact of road infrastructure investment on rural communities appear to be largely positive with a clear majority (greater than half) recognising considerable benefits. That is important for rural economic efficiency, and access: 62% of respondents agree or strongly that road infrastructure investments have reduced transport costs efficiently. Similarly, 55% believe their area will have an improved

market access that would be able to grant better opportunities for businesses and farmers while the remaining quarter are unsure because there is a case where some areas may not enjoy it even. Fifty eight percent, likewise say that road investments have increased agricultural productivity — the key to successful rural economic growth; however, 20% are not sure whether impact is region-wide or site specific. Some 55% also believe road improvements have had a positive impact on employment although just under one in three (27%) either disagree or strongly disagree – suggesting that there may be inequalities between the number of jobs created. In conclusion, 55% of respondents believes that road development has improved access to important services such as education and healthcare however; the fact that an estimated 25 percent neither agree nor disagree indicates that challenges in regard to service delivery though diminished are still rife.

### **5.2.3 The challenges and opportunities associated with road development in rural areas**

The findings on the challenges and opportunities associated with road development in rural areas reveal a mix of concerns and optimism among respondents. Financial constraints are a significant issue, with 47% of respondents agreeing or strongly agreeing that limited funding hinders road development, though 33% remain unsure or disagree, indicating some variability in perceptions of financial challenges. Resource allocation is a major concern, with 58% of respondents feeling that prioritizing urban areas negatively impacts rural road development, highlighting disparities in resource distribution. Planning and design standards are also problematic, as 45% believe inadequate planning results in substandard roads, yet 30% are uncertain, suggesting mixed experiences with construction quality. Governance and corruption are seen as impediments to road development, with 45% of respondents agreeing or strongly agreeing that these issues significantly hinder progress, though a notable 38% are unsure or disagree, reflecting differing views on the extent of these problems. On a more positive note, 55% of respondents view public-private partnerships (PPPs) as valuable opportunities for improving road development, although 23% remain unsure. Additionally, 60% of respondents believe that community participation enhances the sustainability of road projects, underscoring the importance of local engagement, although 28% are uncertain, suggesting that the effectiveness of community involvement may vary.

### **5.3 Conclusion**

The findings across the three objectives provide a comprehensive view of the current state, economic impact, and challenges associated with road infrastructure development in Mukono

District. A majority of respondents identify that road coverage is moderately adequate, threatened by concerns about sufficiency and stability in the future; 55% also believe infrastructure investments are shown to have a positive economic benefit (e. g., reduced transportation costs [62%], improved market access [55%]). The lack of proper road maintenance (45% disagreement), inferior construction because of faulty planning (45% agreement) are also some main obstacles. Also, the unequal resource allocation inflating urban areas (58%) along with governance challenges including corruption 45% compound road development inhibition. In current PPP and also involving community to address these issues and therefore it is expected that the road projects would be more sustainable (55% agree concerning public-private partnership, 60 % regarding involvement of community) [World Bank,2019]; [OECD,2019]. However, the diverging views on several principal issues highlights that although some progress has been made there is still much to do before road infrastructure development adequately meets rural community needs in Mukono District (Transparency International 2018)

#### **5.4 Recommendations**

The government must equally allocate resources to ensure that poor rural areas, such as Mukono District and others across the country have a chance of getting adequate funding in resource allocation toward road infrastructure development. This includes raising the budget that is allocated both for building and maintaining rural roads to improve quality, durability etc. Corruption can be encouraged by more responsible governance and that fiscal allocations are fully straightforward ways to spend public money effectively—including transparent procurement, auditing and rule of law; Furthermore, trained capacity and skills sharing sessions with local contractors engineers will enhance the planning process of road works for longer lasting infrastructure which respond to rural communities demand.

The results suggest that local governments must also step up road maintenance programs if we are to meet the challenges of this report and ensure main roads remain fit for purpose now, in five years' time or indeed a decade into the future. This can be accomplished through the development of a formal maintenance calendar and citizen oversight group that alerts Kampala about dangerous stretches. In addition, local governments should promote such a deeper collaboration with the private sector through public-private partnerships (PPPs) to additionally finance and tap into expertise for roads development. Equally imperative is

community involvement in the planning and maintenance of road infrastructure for its sustainability as well as its suitability to local requirements.

Private companies that participate in PPP projects are to utilize their technical capacity as well as investment of funds for the construction and capital repair of roads within rural premises. There will be a key role for partnerships in this, with a focus on new finance mechanisms like infrastructure bonds to secure long-term funding streams for road improvements. It will also require private collaborators to cooperate with local governments and communities in the adoption of state-of-the-art technologies, as well as best practices for construction that could enhance rural transportation networks judging by their durability and efficiency. The trick to push back the walls of resource constraints and governance issues is transparent collaboration between public sector agencies, service providers like funders.

The local perspective: Rural communities need to design, build and maintain road infrastructure developments. Local residents can offer important perspectives on the unique needs and constraints of their regions to help ensure that infrastructures are built sustainably. You can also reduce costs of projects through increased community participation in which local materials and labor could be used. In addition, there should be mechanisms for citizens to demand the quality and timely completion of road projects by local governments or contractors before benefits from infrastructure development can come into place.

The Uganda government and local authorities need support from development agencies, international donors in form of financial grants to help them achieve because rural road construction is an expensive investment but are advantageous once properly constructed. In this context, these agencies can act as unique bridges for filling the funding fix and bringing innovative solutions to maintain quality on the roads. They should also run capacity building programmes to help local engineers and contractors improve their standards when it comes to road construction. Development agencies should also incentivize good governance and integrity practices not only to minimize corrupt activities, but be sure that investments into road infrastructure pay off in the long term as sustainable economic dividends for rural populations.

## **5.6 Areas of Further Research**

This points to the need for future research in form of a longitudinal study which would enable tracking down long-term impacts road infrastructure improvements on economic growth among other agriculture parameters across rural areas especially Mukono district. For

instance, a possible extension to this study could be done perhaps over years that explores how continuous development of roads affect central economic metrics such as income levels, decline in the poverty rate and business expansions.

This is important because analysing the performance of PPPs in financing and implementing road infrastructure projects related to rural roads would help policy planners with lessons on how these partnerships can be better utilised. We could research the cost-effectiveness, quality and sustainability of PPP-led projects against those led by other government sources.

Future studies should be conducted on community ownership during the planning, implementation and maintenance of rural roads. This could be replicated in this study where we compare the longevity and relevance of road infrastructure following different levels of community engagement, thus providing a model for effective community participation with respect to infrastructure development.

The research could focus on the use of contemporary construction and maintenance practices within rural road infrastructure projects. This could be explored through an investigation on the effects or outcomes of innovations such as soil stabilization, durable materials and GIS (Geographic Information Systems) to enhance rural road quality performances in comparison with project life span.

An in-depth study could explore how enhanced road infrastructure improves rural access to essential services (e.g. healthcare, education and markets). This research would be able to examine the relationship between road quality and accessing these services, illustrating how roads can bring greater social benefits.

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# UGANDA CHRISTIAN UNIVERSITY

A Centre of Excellence in the Heart of Africa

## SCHOOL OF BUSINESS

10<sup>th</sup> Sep, 2024

### TO WHOM IT MAY CONCERN

Name: **MORIBA CHRISTINE SEBIT**

Reg. **J22B34/031**

a bachelor's student who is seeking permission from your office to collect data for her dissertation titled

**The Importance of Road Infrastructural Investment on Rural Economic Growth in Uganda. A case study of Mukono District**

We shall be grateful if you could render assistance to her in collecting the necessary data for her dissertation

The Uganda Christian University School of Business thanks you in advance

Mukisa Simon Peter  
Research coordinator



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## Appendix

### Questionnaire

Dear respondent, my name is ..... I am carrying out a study to ..... in partial fulfillment of the requirements for the award of a degree of the Bachelor of Science of ..... Of Uganda Christian University. Your knowledge regarding the issue is the basis for your selection to participate in this study as a respondent. Kindly provide the most appropriate information as indicated in the questionnaire based on your experiences. The information provided shall be used for academic purpose only and will be treated with utmost confidentiality.

If you agree please tick the box  and proceed to section I

If you decline, do nothing and return the questionnaire to the researcher.

Thank you in advance. Yours truly,

Signed .....

**CHRISTINE MORIBA**

### SECTION I: BACKGROUND INFORMATION

01	My Sex	Male	1
		Female	2
02	My age in years	Between18-25	1
		Between26-30	2
		Between31-40	3
		Between40-45	4
		45and above	5
03	My Education Level	Primary	1

	Secondary	2
	Certificate	3
	Diploma	4
	Bachelor's degree	5
	Master's Degree	6

**Objective I: The current state of road infrastructure in Mukono District. (circle as Appropriate)**

Indicate the extent to which you agree with the following observations on Demand for University Accommodation on a scale of (1) = strongly disagree, (2) = disagree, (3) = not sure (4) = agree (5) = strongly agree

Scale	1	2	3	4	5
<b>The current state of road infrastructure in Mukono District.</b>					
i. The current road coverage in Mukono District is adequate for meeting the transportation needs of local communities.					
ii. The quality of roads in Mukono District is sufficient to ensure safe and reliable transportation throughout the year.					
iii. The maintenance of road infrastructure in Mukono District is regularly conducted and effectively addresses road wear and tear.					
iv. The road network in Mukono District provides sufficient accessibility to key services, including markets, schools, and healthcare facilities.					
v. Public-private partnerships have been effective in mobilizing resources and enhancing the road infrastructure in Mukono District.					

**Objective II: The economic impact of road infrastructure investment on rural communities. (circle as Appropriate)**

Indicate the extent to which you agree with the following observations on financial capacity on a scale of (1) = strongly disagree, (2) = disagree, (3) = not sure (4) = agree (5) = strongly agree

Scale	1	2	3	4	5
<b>The economic impact of road infrastructure investment on rural communities</b>					
i. Investments in road infrastructure have significantly reduced transportation costs for goods and services in rural communities.					
ii. Improved road infrastructure has enhanced access to markets, allowing rural farmers and businesses to sell their products more efficiently.					
iii. Road infrastructure investment has directly contributed to increased agricultural productivity in rural areas.					
iv. Enhanced road infrastructure has led to increased employment opportunities in rural communities by connecting workers to larger labour markets.					
v. Road infrastructure development has improved access to essential services such as education and healthcare in rural communities.					

**Objective III: The challenges and opportunities associated with road development in rural areas. (circle as Appropriate)**

Indicate the extent to which you agree with the following observations on socio-demographic factors on a scale of (1) = strongly disagree, (2) = disagree, (3) = not sure (4) = agree (5) = strongly agree

Scale	1	2	3	4	5
<b>The challenges and opportunities associated with road development in rural areas.</b>					
i. Limited funding significantly hinders the development and maintenance of road infrastructure in rural areas.					
ii. The prioritization of urban areas over rural areas in resource allocation negatively impacts road development in rural communities.					
iii. Inadequate planning and poor design standards result in substandard rural roads that deteriorate quickly.					
iv. Corruption and weak governance significantly impede the efficiency and effectiveness of rural road development projects.					
v. Public-private partnerships present valuable opportunities to improve the funding and execution of rural road development projects.					
vi. Engaging local communities in the planning and maintenance of roads increases the sustainability and relevance of rural road infrastructure.					