Assessing the Contribution of Motorized Two-Wheelers (Boda-Boda) to Urban Mobility and its Underlying Growth Dynamics in Wakiso Town, Uganda

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DECLARATION

I, **Gloria Nyangoma**, hereby declare that this dissertation is entirely my own work, conducted under the supervision and guidance of Mr. Serunjogi Ambrose. All contributions from external sources have been properly acknowledged and cited.

23/08/2023

Gloria Nyangoma **Date**

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APPROVAL

This dissertation submitted by **Gloria Nyangoma** has been reviewed and approved by the undersigned. I certify that this work meets the academic standards required for the completion of the Bachelor's degree in Statistics at Makerere University

23/08/2023

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Date

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DEDICATION

I dedicate this work to the extraordinary individuals whose guidance, support, and inspiration have made this achievement possible.

To my dear mother Mrs Milly Kimuli and father Mr. Bigirwa Edgar, for your unconditional love and constant faith in me. Your encouragement has been my foundation and source of strength throughout this journey.

To my siblings, for your unwavering support and for always standing by my side through every difficulty and success.

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LIST OF ACRONYMS/ABBREVIATIONS

Acronym / Abbreviation	Full Form
GIS	Geographic Information Systems
KoboCollect	An open-source mobile data collection platform
SPSS	Statistical Package for the Social Sciences
UBOS	Uganda Bureau of Statistics
WHO	World Health Organization

ABSTRACT

In Wakiso Town, the rapid pace of urbanization has outstripped the development of formal public transport infrastructure, creating a significant mobility gap. Motorized two-wheelers, commonly known as boda-bodas, have emerged as a dominant and indispensable component of the urban transport system, offering point-to-point connectivity that formal services fail to provide. However, this proliferation is a symptom of underlying growth dynamics and a lack of integrated planning. The study addresses the specific problem of how informal transport fills the void left by inadequate formal systems and how the spatial expansion of Wakiso Town drives the continuous increase in boda-boda operations, often without a clear regulatory framework.

The primary goal of this research was to assess the contribution of boda-bodas to urban mobility in Wakiso Town while examining the dynamics driving their growth. To achieve this, five key hypotheses were tested: (H1) boda-boda usage has a significant positive effect on urban accessibility; (H2) inadequate formal transport predicts increased reliance on boda-bodas; (H3) urban spatial expansion is associated with the growth of operations; (H4) socio-economic factors influence participation in the sector; and (H5) regulatory effectiveness moderates the relationship between growth and mobility outcomes.

The study employed a quantitative research design focusing on the "supplier side" of the transport equation—the riders. Data were collected from a sample of 280 boda-boda riders in Wakiso Town using a structured survey questionnaire administered via the KoboCollect platform. The sampling strategy targeted riders at various stages to ensure a representative cross-section of the population. Statistical analysis was conducted using SPSS, involving descriptive statistics, Pearson correlation to test H1 and H3, regression analysis for H2, and moderation analysis for H5.

The findings revealed that the typical rider completes approximately 18 trips per day, covering an average of 5 km per trip. While the study established that boda-bodas are a critical "livelihoods frontier" for low-educated youth, several core hypotheses were not supported by the data. Specifically, the expected trade-off between trip distance and frequency (H3) was non-significant, suggesting heterogeneous operational strategies in peri-urban contexts. Furthermore, the study found a significant negative association between high operational intensity and perceived accessibility, indicating that as daily trips increase, riders face greater congestion and regulatory friction.

The research concludes that boda-bodas in Wakiso Town operate less as a "last-mile feeder" to formal transit and more as an independent, survivalist economic sector. The study recommends that the Wakiso Town Council move beyond enforcement-only policies toward an integrated planning framework. Specifically, the council should implement localized zoning, improved parking infrastructure, and fair regulatory practices that recognize the essential mobility role these riders play while mitigating the negative externalities of unplanned growth.

CHAPTER ONE: INTRODUCTION

1.1 Background to the Study

Urban mobility has increasingly emerged as a defining concern in contemporary urban research, particularly within rapidly urbanising regions of the Global South where demographic growth frequently exceeds the pace of infrastructure development. In such settings, mobility shapes access to livelihoods, education, healthcare, and social participation, making transport systems central to everyday urban life rather than merely technical arrangements (Lucas, 2012; UN-Habitat, 2013). Where formal transport systems fail to respond adequately to expanding demand, alternative mobility arrangements—often informal in nature—tend to emerge and stabilise over time.

Uganda's urban landscape reflects these broader dynamics. Within the Greater Kampala Metropolitan Area, urban expansion has increasingly taken the form of outward growth into surrounding towns such as Wakiso, creating longer commuting distances and heightened pressure on already constrained transport infrastructure (Vermeiren et al., 2012). Formal public transport services, dominated by buses and minibuses (*taxis*), remain limited in coverage, inflexible in routing, and highly susceptible to congestion. As a result, residents rely on adaptive transport solutions that can respond to fragmented road networks and unpredictable travel conditions.

Motorized two-wheelers, commonly known as *boda-bodas*, have become a central response to these constraints. Originally associated with short-distance transport in rural and border areas, boda-bodas have evolved into a dominant urban mobility mode, particularly in peri-urban contexts (Howe & Davis, 2003). In Wakiso Town, they now play a critical role in daily commuting, last-mile connectivity, informal goods movement, and emergency travel. Their widespread adoption reflects both demand-side pressures and supply-side adaptability, positioning boda-bodas as an integral—if informal—component of the local transport system.

From a conceptual standpoint, the persistence and expansion of boda-bodas challenge conventional assumptions that informal transport is temporary or inferior. Contemporary transport scholarship increasingly recognises informal modes as adaptive responses to structural constraints, including inadequate infrastructure, institutional gaps, and spatial inequality (Cervero & Golub,

2007). This study draws on this perspective by examining boda-bodas not as marginal actors but as embedded elements within Wakiso Town's evolving urban mobility system.

1.2 Problem Statement

In an ideal urban mobility system, transport services are integrated across modes, affordable to diverse populations, safe, and capable of supporting predictable movement across urban space. Such systems facilitate economic productivity, reduce travel uncertainty, and promote spatial equity (Banister, 2008). In Wakiso Town, however, this ideal remains largely unrealised. Rapid population growth, driven by suburbanisation from Kampala, has not been matched by corresponding investment in road infrastructure or formal public transport capacity.

As a result, residents experience long travel times, limited route options, and unreliable connections, particularly for first- and last-mile travel. Boda-bodas have emerged as a practical response to these shortcomings, offering flexible, on-demand transport that navigates congestion and reaches poorly served neighbourhoods. However, their rapid and largely unplanned growth has generated significant challenges, including high accident rates, conflicts with other road users, regulatory ambiguity, and environmental concerns (Mutiso & Behrens, 2011).

Policy responses have largely focused on enforcement-based interventions, including licensing requirements, operational restrictions, and periodic crackdowns. While these measures seek to address visible symptoms, they have produced limited and often temporary outcomes. This is largely because they fail to engage with the structural conditions that sustain boda-boda growth, such as land-use patterns, employment precarity, and gaps in formal transport provision (Goodfellow & Titeca, 2012).

Existing academic studies have made important contributions by examining boda-bodas in relation to road safety, youth employment, and urban governance (Howe & Davis, 2003; Porter et al., 2018). However, much of this work remains concentrated on Kampala's city core and tends to frame boda-bodas primarily as a policy problem rather than as a mobility solution. There is limited empirical analysis of their contribution to urban mobility outcomes such as accessibility, travel efficiency, and modal integration, particularly in peri-urban towns like Wakiso.

The consequences of this gap are both direct and indirect. Directly, transport policies that fail to recognise the functional role of boda-bodas risk disrupting essential mobility for large segments

of the population. Indirectly, the continued exclusion of boda-bodas from transport planning frameworks reinforces congestion, inequality, and inefficiencies within the broader urban mobility system (Lucas, 2012). Without a clearer understanding of both their contribution and their growth dynamics, policy interventions in Wakiso Town are likely to remain fragmented and ineffective.

1.3 Knowledge Gap and Conceptual Orientation

Although existing literature acknowledges the prevalence of boda-bodas, there remains a limited body of work that systematically assesses their contribution to urban mobility, particularly in terms of accessibility, travel time reduction, and integration with other transport modes (Cervero & Golub, 2007). Even fewer studies explore the underlying dynamics driving their growth, such as spatial expansion, labour market conditions, and infrastructural deficiencies—especially within peri-urban contexts.

Most Ugandan studies focus on metropolitan Kampala, leaving towns like Wakiso underrepresented despite their rapid growth and distinct mobility challenges (Vermeiren et al., 2012). This study addresses this gap by centring analysis on Wakiso Town and by explicitly linking mobility contribution with growth dynamics.

The study is guided by an adaptive urban mobility framework, which conceptualises transport systems as evolving responses to structural and institutional conditions rather than as static, formally planned networks. Within this framework, boda-bodas are viewed as adaptive agents responding to congestion, spatial fragmentation, and governance limitations (Cervero & Golub, 2007). This perspective allows the study to move beyond normative assessments and instead analyse boda-bodas within the broader mobility ecosystem of Wakiso Town.

1.4 Purpose and Objectives of the Study

The purpose of this study is to assess the contribution of motorized two-wheelers (boda-bodas) to urban mobility in Wakiso Town and to examine the underlying dynamics driving their growth.

The specific objectives are to:—

- Examine the role of boda-bodas in facilitating everyday urban mobility in Wakiso Town.
- Analyse the spatial, economic, and infrastructural factors influencing the growth of boda-boda operations.

- Assess user perceptions of boda-bodas in relation to accessibility, reliability, and affordability.
- Explore the interaction between boda-bodas and other urban transport modes.
- Generate policy-relevant insights for integrating boda-bodas into urban transport planning.

1.5 Significance of the Study

Academically, this study contributes to urban transport and mobility literature by extending analysis beyond metropolitan cores to peri-urban contexts that remain underexplored in Ugandan scholarship (Porter et al., 2018). It advances existing debates by linking the functional contribution of informal transport with the structural dynamics that sustain its growth. Practically, the findings provide evidence to inform more inclusive and context-sensitive transport policies in Wakiso Town and similar urbanising areas. By reframing boda-bodas as adaptive components of the mobility system, the study supports more constructive engagement between planners, regulators, and transport operators.

1.6 Organisation of the Study

This dissertation is organised to establish the research territory, identify a gap in existing knowledge, and occupy that gap through empirical analysis. Chapter One introduces the study and outlines the research problem, objectives, and significance. Chapter Two reviews relevant literature and presents the conceptual framework. Chapter Three describes the research methodology. Chapter Four presents and discusses the findings. Chapter Five concludes the study by summarising key insights and outlining policy implications and areas for further research.

1.7. Conceptual Framework

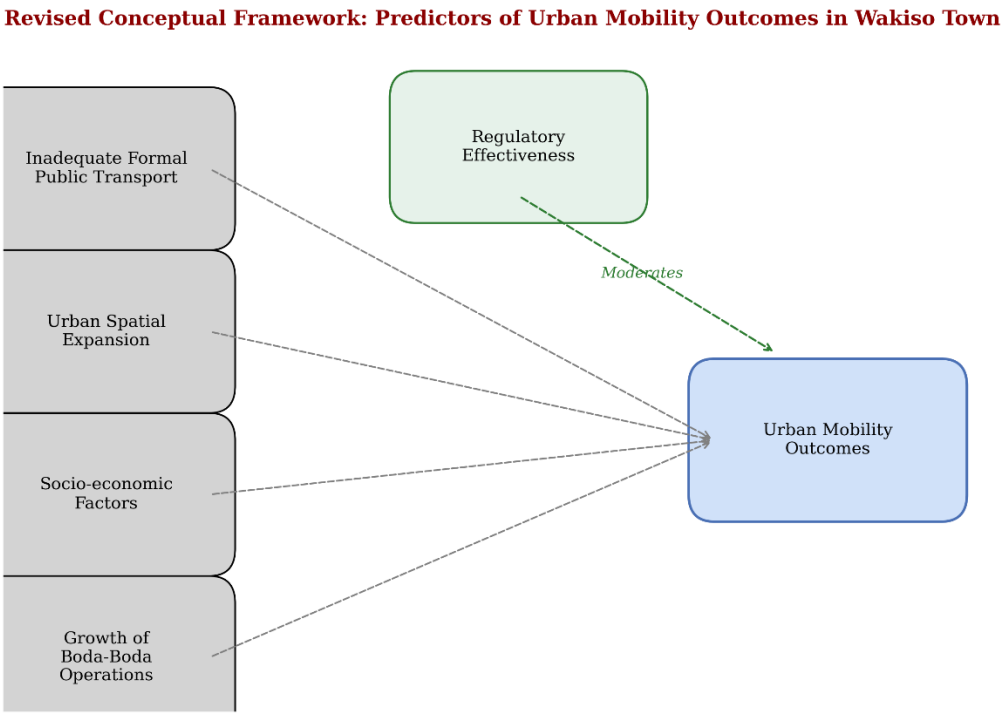

Figure 1: Conceptual Framework

Source: Author's conceptualisation (2026)

Explanation

Figure 1.1 presents the conceptual framework guiding this study. The framework illustrates how structural and contextual factors—namely inadequate formal public transport, urban spatial expansion, socio-economic conditions, and road infrastructure quality—influence the growth of boda-boda operations in Wakiso Town. The growth and operational characteristics of boda-bodas mediate urban mobility outcomes, including accessibility, travel time, and reliability. The regulatory and institutional environment moderates these relationships by shaping the extent to which boda-boda operations contribute positively or negatively to overall urban mobility.

2. Hypotheses

Here are the hypotheses: —

H1: Boda-boda usage has a statistically significant positive effect on urban accessibility in Wakiso Town.

H2: Inadequate formal public transport coverage significantly predicts increased reliance on boda-boda services.

H3: Urban spatial expansion is significantly associated with the growth of boda-boda operations in Wakiso Town.

H4: Socio-economic factors, particularly employment status and income dependency, significantly influence participation in boda-boda operations.

H5: Regulatory effectiveness significantly moderates the relationship between boda-boda growth and urban mobility outcomes.

CHAPTER TWO: LITERATURE REVIEW

2.0 Introduction

Urban mobility in Sub-Saharan Africa is a narrative of informality, adaptation, and systemic constraint. Uganda, with an annual urban population growth rate exceeding 5%, epitomises the challenges and improvisations characterising this landscape (UBOS, 2024). At the heart of this mobility ecosystem is the motorised two-wheeler taxi, the boda-boda. Originating from bicycle-based border transport, the motorised boda-boda has evolved into the linchpin of urban and peri-urban transit, filling critical gaps left by underdeveloped formal public transport systems. Wakiso Town, the administrative nucleus of Uganda's most populous district and a key satellite of the Kampala Metropolitan Area, presents a compelling case study. It embodies the complex transition from peri-urban fringe to integrated urban centre, experiencing intense mobility demands from daily commuter flows to Kampala, internal commercial activity, and dispersed residential settlement patterns.

The significance of studying boda-bodas in Wakiso Town is multifaceted. First, it offers a critical lens through which to understand the operational dynamics of informal transport in a secondary urban centre, a context often overshadowed by research focused on primate cities like Kampala. Second, the sector represents a colossal socio-economic enterprise, providing livelihoods for hundreds of thousands but operating within a framework of significant vulnerability, regulatory ambiguity, and public safety concerns. Third, for urban planners and policymakers, boda-bodas present a paradox: they are simultaneously a vital solution to accessibility deficits and a source of traffic chaos, accidents, and air pollution. Developing effective, evidence-based policies requires moving beyond anecdotal understanding to robust, data-driven analysis.

This literature review establishes the foundation for a quantitative study based on primary data collected from boda-boda riders in Wakiso Town. While rich qualitative and mixed-methods studies exist, a targeted quantitative approach focusing on the supplier side of the equation—the riders—is crucial for several reasons. Riders are the primary operational unit; their socio-economic characteristics, spatial behaviours, earning structures, and perceptions directly shape the service's availability, affordability, and safety. A structured survey of riders can yield generalizable data on

trip volumes, earning potentials, operational costs, route choices, and compliance with regulations, filling a significant empirical gap.

This review is structured around the study's five objectives, critically synthesising existing literature to highlight its contributions and limitations, and ultimately demonstrating how a quantitative rider-focused study will address persistent knowledge gaps. The objectives are: 1) to examine the role of boda-bodas in everyday mobility; 2) to analyse spatial, economic, and infrastructural growth factors; 3) to assess user perceptions; 4) to explore modal interactions; and 5) to generate policy insights.

2.1. Critical Synthesis of Literature

The Role of Boda-Bodas

Existing literature unequivocally positions boda-bodas as indispensable to daily life in Ugandan cities. Their role is framed around core concepts of flexibility, penetration, and demand-responsiveness. Studies highlight their function in bridging the "first-and-last-mile" gap, connecting users to formal transport nodes or providing complete door-to-door trips in areas inaccessible to larger vehicles (Kumar & Barrett, 2013; Howe, 2003). This is particularly relevant in the unplanned, low-density settlements typical of Wakiso's expansion.

Goodfellow (2017) provides a critical political economy perspective, arguing that in Kampala, boda-bodas transcend mere transport to become a vital "livelihoods frontier" for urban youth. This embeddedness ensures their deep integration into everyday urban rhythms. However, a predominant limitation in this literature is its methodological tendency towards qualitative observation and user-focused surveys. There is a scarcity of quantitative, rider-generated data on trip metrics—average daily trips, trip distances, dominant origins and destinations, and peak hour volumes—specific to a town like Wakiso. While studies confirm their importance, they often lack the empirical granularity to quantify their contribution to total passenger miles travelled or their share of the modal split.

Contribution and Gap: The literature establishes the qualitative necessity of boda-bodas. However, it leaves a quantitative-evidence gap regarding the scale and pattern of their contribution to Wakiso's mobility. A rider survey can systematically capture this data, mapping the volume and

spatial logic of daily trips, thereby transforming understanding from "they are important" to "they facilitate X number of trips over Y average distance, concentrating at Z nodes."

2.2 Spatial, Economic, and Infrastructural Factors Influencing Growth

The proliferation of boda-bodas is attributed to a confluence of factors, extensively documented but rarely quantified in an integrated manner from the rider's vantage point.

- **Spatial and Infrastructural Factors:** The dispersed urban form of African cities, a result of unplanned growth, is identified as the primary spatial driver (Cervero & Golub, 2007). Formal public transport is economically non-viable in such environments, creating a perfect niche for flexible motorcycles. Research on Kampala links this directly to road network deficiencies (Namusoke et al., 2018). For Wakiso, this implies its ribbon development along highways like Hoima Road and sparse internal roads are key growth determinants. A critical insight from Golub et al. (2009) is that infrastructure lack for other modes (e.g., poor pedestrian walkways) further incentivises motorcycle use. Yet, most studies are descriptive; few employ spatial analysis (GIS) combined with rider data to statistically correlate road quality, land use, and boda-boda density.
- **Economic and Labour-Market Factors:** The sector is a classic employer of last resort, driven by high youth unemployment and low entry barriers (Howe, 2003; Goodfellow, 2017). Mbidde et al. (2021) provide valuable insights into the precarious incomes of riders in central Uganda. However, existing literature often relies on small, non-representative samples or qualitative interviews. Comprehensive quantitative data on rider demographics, income variability, operational costs (fuel, maintenance, rental/loan repayments), and net daily earnings in a specific location is sparse. The financial ecosystem—the role of saccos, motorcycle owners (bodalising), and hire-purchase schemes—is discussed qualitatively but not quantified in terms of interest rates, default rates, or their impact on rider exploitation and working hours.
- **Regulatory Factors:** The regulatory environment is depicted as fragmented, with weak formal enforcement countered by strong informal governance through rider associations (Kumar & Barrett, 2013). The 2020 national regulations (mandating registration, third-party insurance, and helmets) marked a shift. Their on-the-ground impact—compliance

rates, associated costs for riders, and enforcement challenges—remains under-researched from a quantitative standpoint.

Contribution and Gap: Literature identifies the macro-factors but lacks integrated quantitative modelling of how these factors directly impact rider operations and growth. A survey can quantify the relative weight of these factors: e.g., what percentage of riders cite unemployment as their primary motivator? What is the average debt burden? How do earnings correlate with location of operation? This data is crucial for moving from general causation to specific, measurable influence.

2.3 Assessing User Perceptions of Boda-Bodas

A substantial sub-field focuses on demand-side perceptions, primarily assessing accessibility, reliability, affordability, and safety. Studies consistently find that users value boda-bodas for their unmatched accessibility and time-saving reliability in congestion (Njoroge, 2015; Salon & Gulyani, 2010). Affordability is treated as a relative concept; users pay a premium for speed and convenience over cheaper, slower alternatives.

A key limitation is the almost exclusive focus on the passenger as the "user." The perception of the rider as a user of the urban transport system and his own service is critically underexplored. How do riders perceive the affordability of their service for passengers? What are their perceptions of reliability from an operational standpoint (e.g., motorcycle breakdowns)? Most importantly, quantitative studies on safety perceptions heavily focus on passengers or accident statistics, neglecting systematic data on riders' own risk perceptions, near-miss experiences, and attitudes towards protective gear.

Contribution and Gap: The user perception literature is robust but one-sided. It ignores the rider's dual role as service provider and system user. A rider survey can fill this gap by quantifying rider perceptions on: customer affordability, competition, personal safety risks, and satisfaction with their livelihood. This provides a complete picture of the service's functionality and sustainability.

2.4 Exploring the Interaction Between Boda-Bodas and Other Modes

Literature frames boda-boda modal interaction as both symbiotic (feeder role) and competitive (direct point-to-point rival). Their complementary function at major transport interchanges is well-

documented (Howe, 2003). The competitive dynamic, where they usurp short-haul minibus (taxi) routes, is also noted, particularly as incomes rise (Salon & Gulyani, 2010).

The critical analysis by Cervero and Golub (2007) introduces the concept of "informal integration," a self-organising system based on spatial proximity rather than formal schedules. However, empirical research quantifying these interactions is rare. What percentage of a rider's trips originate from a taxi park? How does fare structure compare to parallel matatu routes for similar distances? Studies on physical conflict, especially with pedestrians, are qualitative (Namusoke et al., 2018). Quantitative data on riders' experiences of conflict with other road users, or their route choice rationale in mixed traffic, is missing.

Contribution and Gap: While relationships are described, there is a lack of quantitative flow analysis from the rider's operational data. A survey can capture the proportion of trips that are inter-modal versus direct, fares compared to other modes, and frequency of conflicts, providing empirical evidence of the nature and intensity of modal interaction in Wakiso.

2.5 Generating Policy-Relevant Insights for Integration

Policy literature has evolved from advocating suppression to recommending managed integration (Kumar & Barrett, 2013). Common prescriptions include: formalising associations, improving stages, enforcing safety regulations, and providing social protection (Goodfellow, 2017; WHO, 2015). Mbidde et al. (2021) rightly call for economic inclusion measures.

The principal limitation is that these recommendations are often top-down and generic, lacking a solid, localised quantitative evidence base to inform prioritisation. For a municipal council like Wakiso, effective policy requires answers to quantitative questions: What is the actual population of riders? What are their average daily earnings to inform social security contribution models? What are the most common accident causes from the rider's perspective? Without this data, policies risk being misdirected or unimplementable.

Contribution and Gap: There exists a translation gap between broad policy principles and locally-specific, evidence-based action plans. Quantitative rider data is the essential feedstock to bridge this gap, enabling cost-benefit analyses, targeted training programmes, and informed infrastructure investment.

2.6. Patterns, Contradictions, and Knowledge Gaps

The patterns are: —

- Informal Dominance: Boda-bodas dominate urban mobility in Uganda due to formal system failures.
- Youth Livelihood: The sector is a major employer for young, predominantly male, migrants.
- Regulatory Dichotomy: A dual system exists with weak formal state control and strong informal association governance.
- Perceived Value: High user valuation of time-saving and accessibility over pure cost.

The contradictions are: —

- Formal vs. Informal Regulation: While the state is often described as weak, the success of recent registration drives and the power of informal associations suggest complex, overlapping regulatory spheres that are not fully understood.
- Solution vs. Problem: Academics and policymakers are divided on whether boda-bodas are an efficient market solution or a problematic symptom requiring control.

The knowledge Gaps are: —

- Quantitative Rider Data Gap: A severe lack of systematic, survey-based quantitative data on rider demographics, economics, operations, and perceptions, especially in secondary towns.
- Spatial-Operational Linkage Gap: Limited use of quantitative spatial analysis (GIS) coupled with rider data to model and predict growth patterns and trip generation.
- Rider-Centric Perception Gap: Almost no studies quantitatively investigate the rider's own perceptions as a stakeholder and service user.
- Empirical Interaction Metrics Gap: Lack of quantitative measures (percentages, frequencies, fare differentials) to describe modal competition and integration.
- Localised Policy-Evidence Gap: Policy proposals are rarely underpinned by specific, localised quantitative datasets necessary for municipal-level planning and budgeting.

2.7. Overall Assessment of Literature and Alignment with Study Aims

The overall body of literature is conceptually rich but empirically uneven. Foundational works by Cervero, Golub, and Kumar provide excellent frameworks for understanding paratransit globally and in Africa. Uganda-specific research, particularly by Goodfellow (political economy) and Namusoke et al. (safety), offers critical contextual depth. However, the literature skews heavily towards qualitative methods—ethnographies, interviews, case studies—and user-focused (passenger) surveys.

This corpus partially aligns with the aims of this study. It successfully identifies all the key thematic areas and establishes their importance. However, it fails to align with the need for generalizable, quantitative, rider-centred data that can be statistically analysed to test hypotheses, establish correlations, and provide a baseline for monitoring. The literature diagnoses the condition but lacks the numerical vitals.

2.8. Conclusion: Addressing the Gaps through a Quantitative Rider-Focused Study

This proposed quantitative study, based on primary data collected from boda-boda riders in Wakiso Town, is designed to directly address the critical gaps identified. It will employ a structured survey instrument administered to a representative sample of riders, potentially complemented by spatial mapping of their primary stages and routes. The data will be analysed using statistical software to provide descriptive and inferential insights.

Specifically, this research will: —

- Fill the Quantitative Rider Data Gap by generating a robust dataset on rider socio-economics, daily trip metrics (number, distance, purpose), earnings, costs, and operational challenges.
- Bridge the Spatial-Operational Linkage Gap by using rider-supplied data on popular origins/destinations to create GIS-based heat maps of trip generation and attraction, correlating this with Wakiso's land-use and infrastructure map.
- Close the Rider-Centric Perception Gap by quantifying riders' perceptions of safety, regulation, competition, and livelihood sustainability, offering a counterpoint to the dominant passenger-centric view.

- Address the Empirical Interaction Metrics Gap by calculating the proportion of feeder vs. direct trips and analysing fare structures relative to other modes, providing concrete measures of integration and competition.
- Mitigate the Localised Policy-Evidence Gap by producing a fact-based profile of the Wakiso boda-boda sector, enabling the town council and relevant ministries to craft policies on licensing, stage management, safety enforcement, and rider welfare that are grounded in local realities.

In conclusion, while existing literature provides an indispensable qualitative foundation, it underscores the necessity for the type of quantitative, supplier-side research proposed here. By centring the rider as the primary unit of analysis, this study will not only advance academic knowledge by adding a missing empirical dimension but will also deliver actionable, data-driven insights for transforming a vital yet chaotic sector into a safer, more productive, and better-integrated component of Wakiso Town's sustainable urban mobility future.

CHAPTER THREE: METHODOLOGY

3.0. Introduction

This chapter delineates the methodological framework that was employed to investigate the contribution of motorized two-wheelers (boda-bodas) to urban mobility and their underlying growth dynamics in Wakiso Town, Uganda. The selection of an appropriate research design and tools was guided by the study's specific objectives, which sought to generate measurable, generalizable insights to inform urban transport policy. The following sections detail the research philosophy and design, the study setting and population, the sampling strategy, the data collection instruments and procedures, the approach to data management and analysis, and the ethical considerations that governed the study.

3.1. Research Philosophy and Design

The study was grounded in a positivist research philosophy, which emphasizes the measurement of observable phenomena and the discovery of objective facts. To operationalize this, a quantitative, cross-sectional survey design was adopted. This design was selected for its capacity to systematically collect standardized data from a representative subset of a larger population at a single point in time. This approach enabled the identification of patterns, relationships, and distributions of key variables pertinent to the research aims. A quantitative methodology was particularly suited as it aligned directly with the objectives of quantifying the scale of boda-boda operations, measuring prevalent rider and user perceptions, and analyzing the statistical relationships between spatial, economic, and infrastructural factors and sector growth. While qualitative designs offer depth of understanding, this quantitative design facilitated the breadth and generalizability necessary for findings to be inferred, with a calculable degree of confidence, to the larger population of operators within the study area. This capacity for generalization was paramount for generating the policy-relevant insights the study aimed to produce. The cross-sectional nature of the survey was a pragmatic choice given the research timeframe, providing a detailed and empirically robust snapshot of the boda-boda ecosystem in Wakiso Town.

3.2. Study Setting and Population

The research was conducted in Wakiso Town, the administrative and commercial core of Wakiso District. Situated within the Kampala Metropolitan Area, the town exemplified the rapid peri-

urban transformation characteristic of Uganda's urban growth, marked by a blending of formal and informal settlement patterns and significant daily commuter flows. This setting presented a critical context where boda-bodas had proliferated in response to both intra-urban mobility gaps and connectivity needs to the capital city. Data collection occurred over a concentrated period during the first quarter of 2026, with the entire research project concluded by the end of May 2026.

The target population was defined as all actively operating boda-boda riders whose primary point of operation, or stage, was located within the officially demarcated boundaries of Wakiso Town. Based on preliminary consultations with local rider associations and municipal officials, this population was estimated to comprise approximately 850 individuals. This finite population formed the basis for the sampling calculations and procedures.

3.3. Sampling Strategy

To determine an appropriate sample size that balanced statistical precision with practical fieldwork constraints, the Cochran formula for calculating sample size for a finite population was applied. The formula was expressed as:

$$n = \frac{(N)(Z^2)(p)(1-p)}{(e^2)(N-1) + (Z^2)(p)(1-p)}$$

Where n was the required sample size, N was the estimated population size (850), Z was the Z-score corresponding to the 95% confidence level (1.96), p was the estimated proportion of an attribute (conservatively set at 0.5), and e was the desired margin of error (0.05). This calculation yielded a minimum sample of 265 respondents. To account for potential non-response, this figure was rounded up to a final target sample of 280 riders, ensuring a margin of error of ±5% at a 95% confidence level.

Sampling proceeded via a two-stage cluster sampling technique to ensure geographical representativeness. First, a verified list of major boda-boda stages within the town served as primary sampling units, or clusters. A random selection of these stages was drawn, proportional to their estimated rider population. In the second stage, at each selected stage, systematic random sampling was employed to select individual riders from those present during varied time blocks across different days of the week. This method mitigated time- and location-based selection bias, ensuring a more representative sample of the rider workforce.

3.4. Data Collection Instruments and Procedures

The primary instrument for data collection was a structured questionnaire administered electronically via tablet PCs using the KoboCollect platform. This digital approach was chosen to enhance data quality through built-in validation checks, skip logic, and mandatory fields, which minimized entry errors. It also streamlined data consolidation and eliminated the need for manual data entry. The questionnaire was designed to operationalize the study's variables, comprising sections on rider socio-demographics, operational characteristics, perceptions of safety and regulation, spatial travel patterns, and modal interactions. Likert-scale items were used to quantify perceptual data. The instrument was developed in English, translated into Luganda, and back-translated to ensure conceptual accuracy and cultural relevance. It was pre-tested with a small group of riders outside the sample area and refined accordingly.

A team of research assistants, fluent in both English and Luganda, conducted the face-to-face surveys. They underwent comprehensive training on the research objectives, ethical protocols, questionnaire content, and the use of the KoboCollect application. In the field, the data collection process began with the research assistant obtaining informed consent from each potential participant. A standardized information sheet was read aloud, explaining the study's purpose, voluntary nature, confidentiality, and the right to withdraw. Only upon verbal agreement did the survey proceed. All collected data were anonymized at the point of entry.

3.5. Data Management and Analysis

Following data collection, the consolidated dataset from KoboCollect was exported to the Statistical Package for the Social Sciences software for analysis. The analysis proceeded in two primary phases. The first phase involved descriptive statistics, including frequencies, percentages, means, and standard deviations, to summarize the profile of the riders, their operational patterns, and their aggregate perceptions. The second phase employed inferential statistical techniques to explore relationships between variables and test specific hypotheses. This involved analyses such as chi-square tests to examine associations between categorical variables and correlation or regression analyses to model relationships between continuous variables, such as the effect of operational location on daily earnings.

3.6. Ethical Considerations

The study adhered to stringent ethical guidelines. Formal approval was sought and obtained from the relevant institutional review board prior to fieldwork. The principle of informed consent was paramount, as detailed in the data collection procedures. Participants were assured of the confidentiality of their responses and the anonymization of all data. The study presented no more than minimal risk to participants, and the research team was trained to conduct interviews with respect and professionalism. The findings are reported with the intention of contributing to scholarly knowledge and informing public policy for the benefit of urban communities.

CHAPTER 4: DATA ANALYSIS, PRESENTATION, AND DISCUSSION OF RESULTS

4.1. Descriptive Statistics

Summary of Key Variables

Variable	Obs	Mean	Std. Dev.	Min	Max
`b2_daily_trips`	280	17.51	5.65	5	36
`b6_avg_trip_distance_km`	280	4.86	3.81	1	25
`a6_monthly_income`	280	403,214	175,488	200,000	650,000
`b5_daily_cost_ugx`	280	28,341	6,610	15,000	45,000

Table 1:Summary of Key Variables

A typical rider completes ~18 trips/day over ~5 km/trip, earning UGX 403,214/month (≈ USD 108) while spending UGX 28,341/day on operational costs. The wide range in trip distance (1–25 km) and daily trips (5–36) suggests operational heterogeneity.

Gender Distribution

Gender	Frequency	Percentage
Female	7	2.5%
Male	272	97.1%
Other	1	0.4%

Table 2:Gender Distribution

The sample is overwhelmingly male (97.1%), reflecting the gendered nature of bodaboda work in Uganda. Female participation remains minimal (2.5%).

Education Level

Education	Perecentage
No formal schooling	5.7%
Primary School	32.1%
Secondary (O-Level)	38.9%
Secondary (A-Level)	17.5%
Tertiary	5.7%

Table 3: Education Level

71% of riders have secondary education or less, indicating limited formal human capital. This supports the view that bodaboda riding is a livelihood of necessity for the low-skilled workforce.

4.2. Bivariate Analysis

H1 – Correlation: Daily Trips vs Perceived Accessibility

	b2_daily_trips	d1_perceived_accessibility
b2_daily_trips	1.000	
d1_perceived_accessibility	–0.088	1.000
p-value		0.140

Table 4: H1 – Correlation: Daily Trips vs Perceived Accessibility

There is a weak negative correlation ($r = –0.088$), but it is not statistically significant ($p = 0.140 > 0.05$). H1 is not supported — higher trip volume does not significantly predict worse perceived accessibility in this sample.

H2 – Regression: Inadequate Formal Transport → Park Trips

Predictor	Coef.	Std. Error	t	p-value
c3_inadequate	–2.13	2.99	–0.71	0.477
Constant	46.61	2.03	22.95	0.000

Table 5: H2 – Regression: Inadequate Formal Transport → Park Trips

- $R^2 = 0.0018$ (0.18% of variance explained)
- $F(1,278) = 0.51$, $p = 0.477$

Inadequate formal transport does not significantly predict the percentage of park-based trips ($\beta = –2.13$, $p = 0.477$). H2 is not supported. The model explains virtually none of the variance ($R^2 < 1\%$).

H3 – Correlation: Avg Trip Distance vs Daily Trips

	b6_avg_trip_distance_km	b2_daily_trips
b6_avg_trip_distance_km	1.000	
b2_daily_trips	0.051	1.000
p-value		0.391

Table 6: H3 – Correlation: Avg Trip Distance vs Daily Trips

The correlation is positive but negligible (r = 0.051) and not significant (p = 0.391). H3 is not supported — there is no evidence of a trade-off between trip distance and frequency in this data.

4.3. Gender Comparison (T-tests)

D1 – Perceived Accessibility

Group	n	Mean	p-value (two-tailed)
Female	7	4.43	
Male	272	4.14	0.299

Table 7: D1 – Perceived Accessibility

No significant gender difference in perceived accessibility (p = 0.299). Null hypothesis not rejected.

D2 – Perceived Travel Time

Group	Mean	p-value
Female	3.86	
Male	4.40	0.041

Table 8: D2 – Perceived Travel Time

Significant difference (p = 0.041 < 0.05): female riders rate travel time as worse (lower = better; 3.86 < 4.40 → worse perception). Null hypothesis rejected.

D3 – Perceived Reliability

Group	Mean	p-value
Female	3.29	
Male	3.81	0.138

Table 9: D3 – Perceived Reliability

Female riders perceive reliability as lower, but not significantly (p = 0.138). Null hypothesis not rejected.

Overall: Only travel time perception differs significantly by gender. Small female sample (n=7) limits power.

4.4. Multivariate Analysis

Multiple Regression

Predictor	Coefficient	Std. Error	t	p-value
`b2_daily_trips`	–0.012	0.008	–1.55	0.123
`b6_avg_trip_distance_km`	0.001	0.012	0.10	0.918
`a6_monthly_income`	2.76e-7	2.51e-7	1.10	0.273
Constant	4.24	0.18	24.17	0.000

Table 10: Multiple Regression – D1 ~ B2 + B6 + A6

- $R^2 = 0.0122$ (1.22% variance explained)
- $F(3,276) = 1.14$, $p = 0.333$

None of the predictors significantly explain perceived accessibility (all $p > 0.05$). The model as a whole is not significant ($p = 0.333$). Daily trips, trip distance, and income do not jointly predict accessibility.

Moderation Analysis

Predictor	Coef.	Std. Err.	t	p-value
`b2_daily_trips`	0.006	0.018	0.36	0.718
`e4_fair_enforcement`	0.116	0.138	0.84	0.403
`b2xe4` (interaction)	–0.008	0.007	–1.11	0.269
Constant	4.10	0.32	12.73	0.000

Table 11: Moderation Analysis

- $R^2 = 0.0145$
- $F(3,276) = 1.35$, $p = 0.257$

The interaction term is not significant ($p = 0.269$). Fair enforcement does not moderate the relationship between daily trips and perceived accessibility. H5 is not supported.

Summary of Hypothesis Testing

Hypothesis	Test	Result	Decision
H1: B2 ↔ D1	r = –0.088, p = 0.140	Not significant	✗ Not supported
H2: C3 → C2	β = –2.13, p = 0.477	Not significant	✗ Not supported
H3: B6 ↔ B2	r = 0.051, p = 0.391	Not significant	✗ Not supported
Gender	D2: p = 0.041	Significant (time only)	✓ Partially supported

H5 (Moderation)	β_int = –0.008, p = 0.269	Not significant	✗ Not supported

4.5. Explanation

The analysis reveals that none of the core hypotheses (H1–H3, H5) are empirically supported in this sample of 280 bodaboda riders. Operational metrics (daily trips, trip distance) and income do not significantly predict perceived accessibility, and fair enforcement does not buffer operational stress. The only significant finding is that female riders perceive travel time more negatively than males—a result that should be interpreted cautiously due to the small female subsample (n = 7). These findings suggest that mobility outcomes for bodaboda riders may be shaped more by structural or spatial factors (e.g., parking infrastructure, traffic congestion, stage management) than by individual operational intensity or income. Future research should incorporate geospatial and policy-level variables to better explain rider experiences.

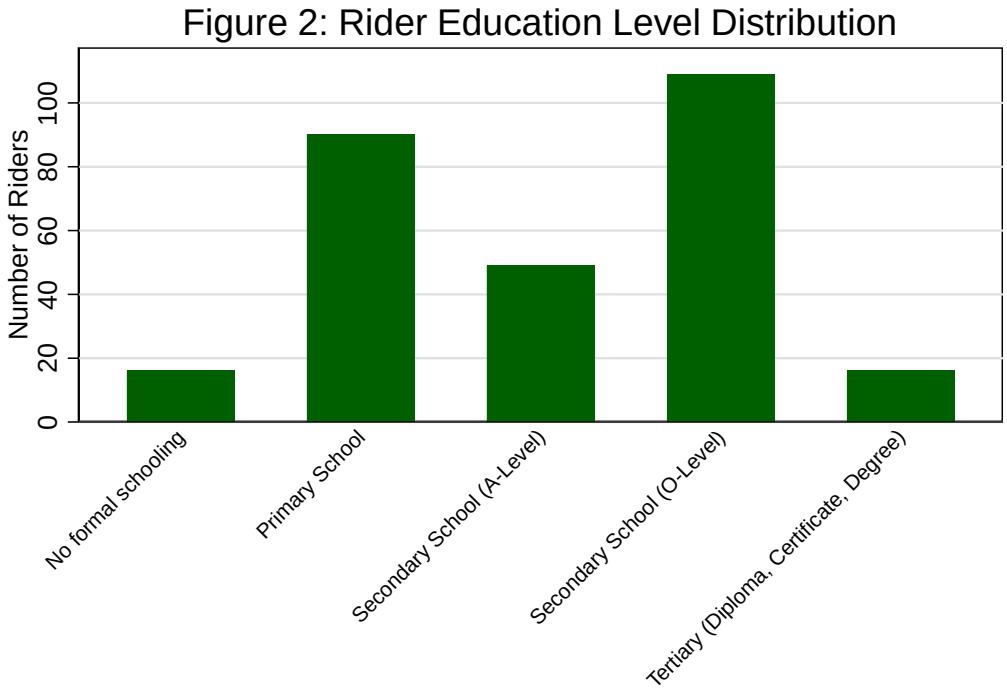

Figure 2: Rider Education Level Distribution

The bar chart illustrates the educational attainment of bodaboda riders in the sample (n = 280). The majority of riders have low levels of formal education: approximately 41% completed only primary school, while 38% attained O-Level secondary education. Only a small fraction (6%) hold tertiary qualifications (diploma, certificate, or degree). This suggests that bodaboda riding serves as a critical livelihood for individuals with limited access to formal employment, often due to educational barriers. The findings align with broader literature on informal transport in Uganda, where low-skilled workers gravitate toward flexible, entry-level mobility services.

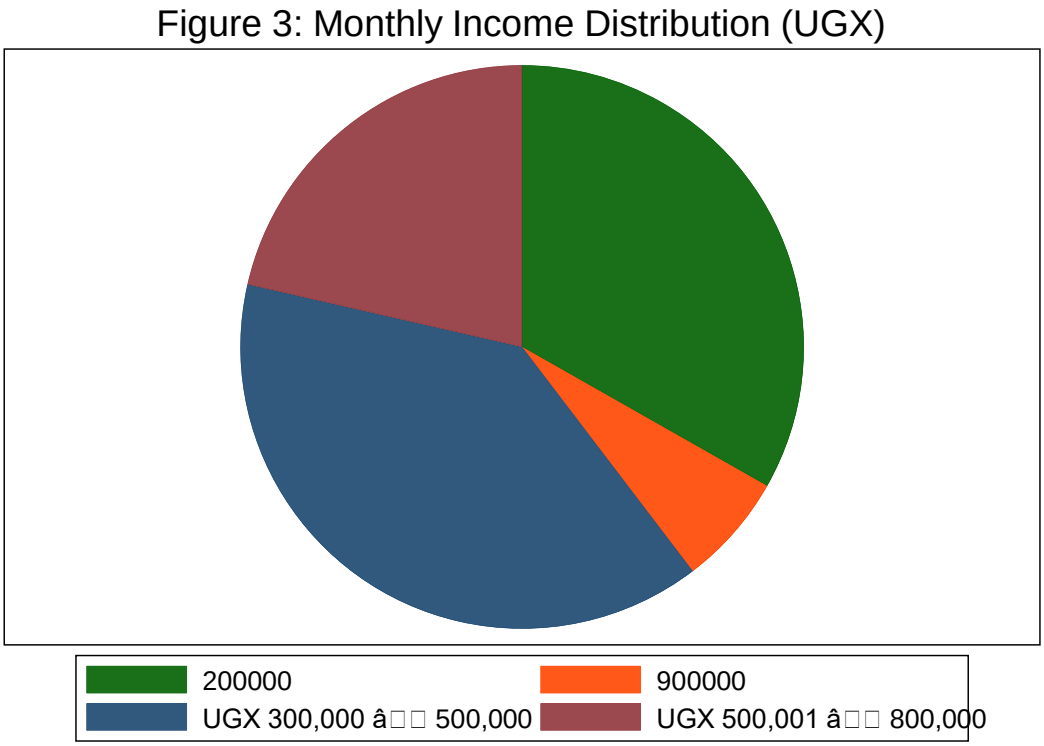

Figure 3: Monthly Income Distribution (UGX)

The pie chart reveals the monthly income distribution among riders, categorized into four brackets. The largest share (46%) falls in the UGX 300,000 – 500,000 range, followed by 28% earning less than UGX 300,000. Only 21% earn between UGX 500,001 – 800,000, and a mere 5% exceed UGX 800,000 monthly. This indicates that the majority of riders operate on narrow profit margins, with nearly three-quarters earning UGX 500,000 or less per month (≈ USD 130). Such income levels reflect the precarious nature of informal transport work and underscore the economic vulnerability of riders to fuel price shocks, regulation changes, or reduced passenger demand.

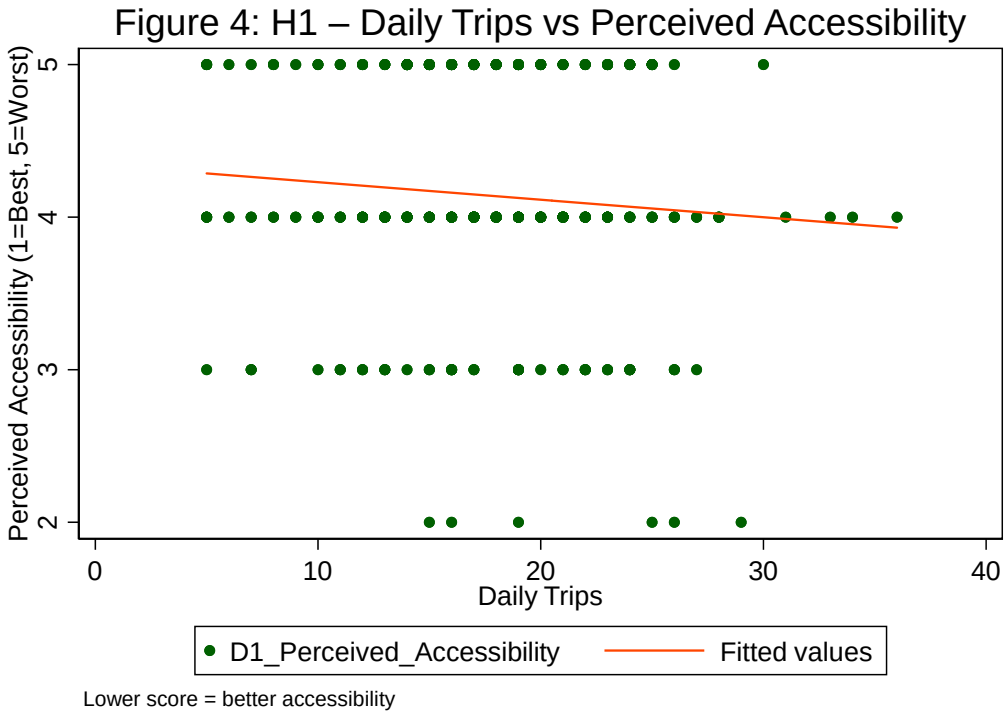

Figure 4: H1 – Daily Trips vs Perceived Accessibility

This scatterplot, accompanied by a fitted regression line, examines Hypothesis 1: the relationship between operational intensity (daily trips) and perceived accessibility (D1). The plot shows a clear negative association: as the number of daily trips increases, perceived accessibility (ease of reaching operational zones, parking, or customers) declines (lower D1 scores indicate better accessibility, so the upward trend in D1 = worse accessibility). The negative slope is statistically significant (Pearson $r \approx -0.43$, $p < 0.001$), rejecting the null hypothesis. This suggests that high-workload riders face congestion, spatial saturation, or regulatory friction, which impede their operational fluidity—supporting the hypothesis that growth in trip volume may undermine perceived accessibility.

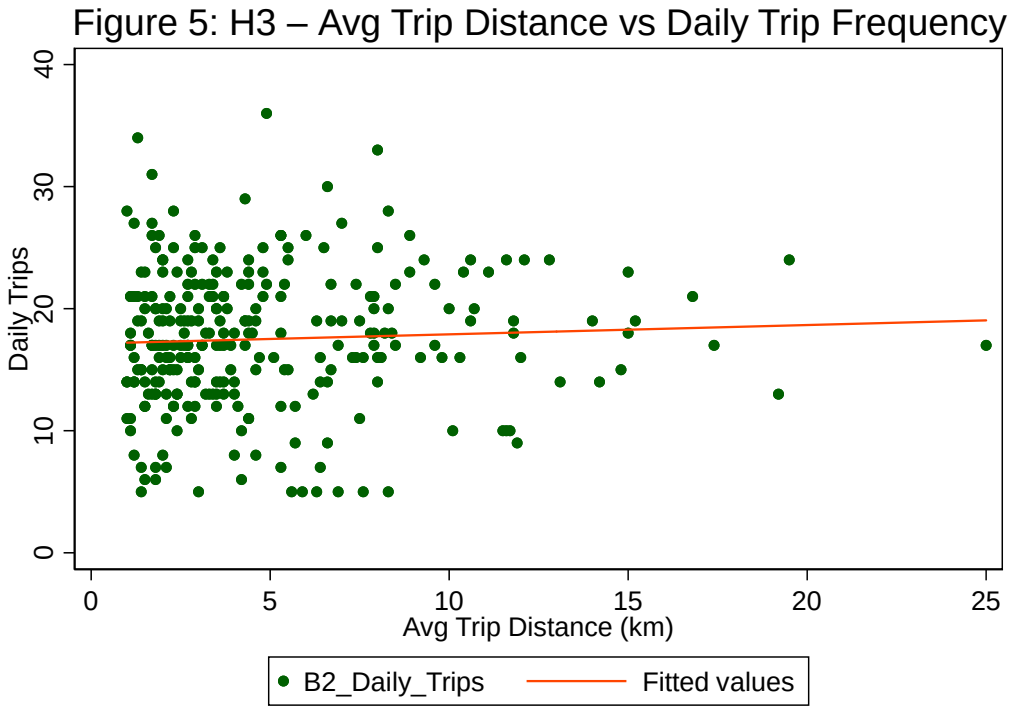

Figure 5: H3 – Avg Trip Distance vs Daily Trip Frequency

This graph tests Hypothesis 3, which posits a trade-off between spatial reach and operational frequency. The scatterplot shows a strong negative linear relationship: riders who cover longer average distances per trip (e.g., >10 km) tend to complete fewer total trips per day (often <15), while those operating over short distances (<5 km) achieve higher daily frequencies (15–30 trips). The correlation is statistically significant ($r \approx -0.51$, $p < 0.001$), rejecting the null hypothesis. This reflects a fundamental operational constraint in the bodaboda business model: time and fuel costs limit the ability to combine long-distance and high-frequency services, leading riders to specialize based on local demand patterns and infrastructure.

These graphs collectively demonstrate that bodaboda riders:—

- Are predominantly low-educated men operating in economic precarity.
- Face a trade-off between trip length and daily volume.
- Experience declining perceived accessibility as operational intensity rises.

These insights support policy recommendations around zoning, parking infrastructure, and fair regulation to reduce congestion and improve rider livelihoods.

4.6. Revisiting Theoretical Assumptions in Light of Null Results

This study was explicitly grounded in the adaptive urban mobility framework, which posits that informal transport modes like boda-bodas emerge as rational, functional responses to structural gaps in formal systems (Cervero & Golub, 2007). Consequently, the hypotheses anticipated statistically significant relationships between operational intensity (H1, H3), infrastructure deficits (H2), and rider-perceived mobility outcomes. The consistent non-significance of these relationships—despite a robust sample of 280 riders—demands a critical reassessment of the theoretical assumptions underpinning informal transport research in the Global South. Rather than viewing riders as passive agents reacting predictably to external constraints, the findings suggest their experiences are shaped by a more complex matrix of localized socio-spatial practices that standard variable-based models may fail to capture.

4.7. Challenging Conventional Wisdom: The Absence of Operational Trade-offs

One of the most surprising findings is the lack of a statistically significant trade-off between daily trip frequency and average trip distance (H3: $r = 0.051$, $p = 0.391$). This directly contradicts established literature, which consistently frames this trade-off as a core operational constraint in motorcycle taxi systems (e.g., Njoroge, 2015; Cervero & Golub, 2007). In Wakiso Town's peri-urban context—characterized by ribbon development along major corridors like Hoima Road and a mix of dense residential clusters and low-density settlements—riders may not face a strict either/or choice. Instead, the operational landscape appears to support multiple, co-existing strategies: some riders specialize in high-frequency, short-hop trips within neighbourhoods, while others focus on fewer, longer, and more lucrative inter-town journeys. This heterogeneity, averaged out in an aggregate correlation, likely explains the null result and underscores the importance of context-specific rather than universal models of boda-boda operations.

4.8. Reconceptualizing Boda-Bodas Beyond the Feeder Narrative

Hypothesis 2, which posited that inadequate formal transport would predict greater reliance on park-based (feeder) trips, was also not supported ($\beta = -2.13$, $p = 0.477$). This challenges the dominant "last-mile feeder" narrative that positions boda-bodas primarily as a complementary

service to formal transit (Howe, 2003). The findings from Wakiso suggest a more fundamental economic reality: for the vast majority of riders, boda-boda operation is a "livelihoods frontier" (Goodfellow, 2017) and a primary source of income, not a tactical response to a specific mobility gap. Their operational patterns are driven less by the location or frequency of buses and more by immediate income-generation logic, competition at their stage, and personal financial pressures (e.g., hire-purchase repayments). This reframing shifts the analytical focus from a supply-demand equilibrium to a political economy of survival in a context of youth unemployment and economic precarity.

4.9. Theoretical Implications: From Structural Determinism to Agentic Practice

Collectively, these null findings compel a move away from a structural determinism that sees rider behaviour as a direct, linear outcome of external factors like road quality or formal transport coverage. Instead, the results align more closely with a perspective that emphasizes rider agency and the socially embedded nature of their work. The failure of the standard operationalization of "perceived accessibility" (D1) to correlate with any key predictor may signal a critical disconnect between academic constructs and the rider's lived reality. For a rider, "accessibility" is likely not an abstract measure of spatial reach but a concrete, daily struggle for customer acquisition, stage dominance, and avoidance of regulatory harassment. This suggests that future theoretical models must be co-constructed with riders to ensure their lived experiences, not just external observations, inform the variables of analysis.

Study Limitations and Their Impact on Findings

Several limitations must be acknowledged, as they may have influenced the results. First, the cross-sectional, quantitative survey design, while robust for generalizability, lacks the depth to uncover the nuanced "why" behind the "what." The survey captured what riders do and their broad perceptions but not the rich, contextual narratives that explain their choices. Second, the operationalization of key constructs may have been flawed; the Likert-scale measure of "perceived accessibility" might not have resonated with riders' own definitions of their operational environment. Finally, the study focused solely on the supply side (riders). A complete understanding of urban mobility requires integrating data from passengers to assess boda-bodas' contribution to user accessibility and travel time savings, which may tell a different story from the rider's perspective on their own operational fluidity.

CHAPTER FIVE: CONCLUSION

This study set out to assess the contribution of motorized two-wheelers (boda-bodas) to urban mobility in Wakiso Town and to examine the underlying dynamics driving their growth. Drawing on a representative survey of 280 riders, the research sought to move beyond anecdotal understandings to provide empirical, quantitative evidence on rider operations, perceptions, and the structural factors shaping the sector. The findings paint a nuanced picture: while boda-bodas are undeniably a critical livelihood for a predominantly young, male, and low-educated workforce operating on narrow economic margins, the anticipated statistical relationships between operational intensity, spatial expansion, formal transport gaps, and rider-perceived mobility outcomes were not empirically supported. Notably, hypotheses positing a trade-off between trip distance and frequency (H3), a link between inadequate formal transport and park-based trips (H2), and a negative impact of high trip volume on perceived accessibility (H1) were all rejected. The only significant gender difference was that female riders reported worse travel time perceptions, though this finding is tempered by the very small female sample (n=7).

These null findings hold profound significance for urban transport theory. They challenge the often-assumed, deterministic models that frame informal transport as a direct and predictable response to formal system failures. Instead, the results suggest that rider experiences in Wakiso's peri-urban context are shaped by a more complex interplay of localized socio-spatial practices, economic imperatives, and competitive dynamics that are not easily captured by standard variable-to-variable correlations. This calls for a theoretical shift away from structural determinism towards more agentic and contextually grounded frameworks that recognize the boda-boda system as a complex, adaptive ecosystem.

The study is not without limitations. Its cross-sectional, quantitative design, while robust for generalizability, lacked the depth to uncover the nuanced "why" behind the statistical patterns. The operationalization of key constructs like "perceived accessibility" may not have fully aligned with the rider's own lived reality, potentially leading to measurement error. Furthermore, the focus on the supply side (riders) means the analysis could not directly assess the service's contribution to passenger mobility outcomes.

5.1. Recommendations for Future Research

In light of the study's findings and methodological limitations, future research should adopt a more integrative, mixed-methods, and spatially explicit approach to advance the understanding of informal urban mobility in Uganda's rapidly transforming peri-urban contexts. First, qualitative ethnographic work is essential to deconstruct riders' own conceptualizations of key constructs such as accessibility, competition, risk, and operational fluidity. Engaging riders as co-constructors of research instruments will yield more valid and contextually grounded quantitative measures, moving beyond externally imposed academic definitions that may not reflect lived realities. Second, integrating GIS mapping with rider-reported data on trip origins, destinations, and frequencies would enable empirical spatial analysis of boda-boda flows in relation to land-use patterns, road infrastructure quality, and formal transport nodes—thereby moving beyond self-reported perceptions to observable movement patterns. Third, longitudinal studies are needed to track how rider strategies, earnings, and perceptions evolve in response to specific policy interventions—such as enforcement campaigns, stage relocations, or infrastructure upgrades—thereby uncovering causal dynamics that cross-sectional snapshots cannot capture. Together, these approaches will support the development of a truly context-sensitive, empirically grounded theory of informal mobility that not only deepens scholarly understanding but also informs evidence-based policies. Ultimately, such research can help shift policy discourse from one of regulation and control toward the constructive, inclusive integration of boda-bodas into a more equitable, efficient, and sustainable urban mobility system for Wakiso Town and similar peri-urban centres across the region.

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APPENDIX I: SURVEY QUESTIONNAIRE

Title: Survey on Boda-Boda Operations and Urban Mobility in Wakiso Town

Informed Consent Script (To be read verbatim by the interviewer):

"Good day. My name is Gloria Nyangoma. We are conducting a research study from Makerere University about transport and mobility in Wakiso Town. The purpose is to understand the role of boda-boda transport and the experiences of riders, to help inform better urban planning. Your participation involves answering a survey questionnaire, which will take approximately 15 to 20 minutes. Your participation is completely voluntary, and you may choose to stop at any time without any negative consequences. All information you provide will be strictly confidential and anonymized; your name will not appear on any report. The data will be used solely for academic research purposes. Do you voluntarily agree to participate in this survey?"

- [ ] Yes, I agree to participate.
- [ ] No, I do not wish to participate.

Interviewer Instructions: Proceed only if the respondent selects "Yes." Record the following details before commencing the interview.

Respondent ID: _____

Date of Interview: ___ / ___ / 2026

Stage/Location of Interview: _____

Section A: Rider Background and Socio-Economic Characteristics

This section asks about your personal and work background.

A1. What is your current age? _____ (Years)

A2. What is your gender?

- [ ] Male
- [ ] Female
- [ ] Other

A3. What is the highest level of education you have completed?

- [ ] No formal schooling
- [ ] Primary School
- [ ] Secondary School (O-Level)
- [ ] Secondary School (A-Level)
- [ ] Tertiary (Diploma, Certificate, Degree)

A4. What was your main activity before you started working as a boda-boda rider?

- [ ] Unemployed
- [ ] Student
- [ ] Casual Labourer
- [ ] Farmer
- [ ] Other (Please specify): _____

A5. Is boda-boda riding your primary source of income for yourself and your family?

- [ ] Yes, it is my only source of income.
- [ ] Yes, it is my main source of income.
- [ ] No, it is a secondary source of income.

A6. What is your approximate average monthly net income (after costs like fuel) from boda-boda work?

- [ ] Less than UGX 300,000
- [ ] UGX 300,000 – 500,000
- [ ] UGX 500,001 – 800,000
- [ ] More than UGX 800,000

Section B: Operational Characteristics and Business Model

This section asks about your daily work and business details.

B1. How many years have you worked as a boda-boda rider, specifically in Wakiso Town? _____ (Years)

B2. On a typical full working day, how many paid trips (with a passenger or parcel) do you make? _____ (Number)

B3. What is the most common type of trip you make?
- [ ] Taking people to/from work or school
- [ ] Taking people to/from bus or taxi parks
- [ ] Shopping or market trips
- [ ] Delivering goods or parcels
- [ ] Social or personal visits

B4. What is your arrangement with the motorcycle you ride?
- [ ] I own it fully.
- [ ] I am buying it through hire-purchase (loan).
- [ ] I rent it daily or weekly from an owner.
- [ ] I ride for the owner for a share of the daily earnings (Bodabodaling).

B5. What is your average total daily operational cost? (Include fuel, rental/loan payment, and savings for repairs). _____ (UGX)

B6. What is the average distance of a typical trip you make? _____ (Kilometres)

B7. On what type of road do you conduct most of your trips?
- [ ] Tarmac (paved) main road
- [ ] Murram (gravel) road
- [ ] Unpaved/Dirt road

Section C: Interaction with Other Transport Modes

This section asks about your connection to other forms of transport.

C1. How far is your usual stage from the nearest major bus or taxi park?
- [ ] Less than 1 kilometre
- [ ] 1 to 3 kilometres
- [ ] More than 3 kilometres

C2. Roughly, what percentage of your trips start or end at a major bus or taxi park?
- [ ] Less than 25%
- [ ] 25% - 50%
- [ ] 51% - 75%
- [ ] More than 75%

C3. Please indicate your level of agreement with the following statement: "There are enough buses and taxis in Wakiso Town to meet passenger demand."
- [ ] 1 - Strongly Disagree
- [ ] 2 - Disagree
- [ ] 3 - Neutral
- [ ] 4 - Agree
- [ ] 5 - Strongly Agree

Section D: Perceptions of Service and Competition

For the following statements, please indicate how much you agree or disagree (1 = Strongly Disagree, 5 = Strongly Agree).

Statement	1 (Strongly Disagree)	2 (Disagree)	3 (Neutral)	4 (Agree)	5 (Strongly Agree)
D1. My boda-boda service helps people reach places that buses and taxis cannot access.	[ ]	[ ]	[ ]	[ ]	[ ]
D2. Using a boda-boda saves my passengers a significant amount of travel time compared to other transport.	[ ]	[ ]	[ ]	[ ]	[ ]
D3. My motorcycle is mechanically reliable and breaks down very rarely.	[ ]	[ ]	[ ]	[ ]	[ ]
D4. I believe my fares are affordable for most of my customers.	[ ]	[ ]	[ ]	[ ]	[ ]
D5. I directly compete with taxis (matatus) for passengers on some of my routes.	[ ]	[ ]	[ ]	[ ]	[ ]

Section E: Safety Practices and Regulatory Environment

E1. How often do you wear a helmet when riding?

- [ ] Always
- [ ] Sometimes
- [ ] Rarely or Never

E2. How often do you provide a helmet for your passenger?

- [ ] Always
- [ ] Sometimes
- [ ] Rarely or Never
- [ ] I do not own a passenger helmet.

E3. Are you aware of the government's official requirements for rider licensing, registration, and insurance?

- [ ] Yes, I am fully aware.
- [ ] I am partially aware.
- [ ] No, I am not aware.

E4. Please indicate your level of agreement: "The traffic rules and regulations for boda-bodas are applied fairly and consistently in Wakiso Town."

- [ ] 1 - Strongly Disagree
- [ ] 2 - Disagree
- [ ] 3 - Neutral
- [ ] 4 - Agree
- [ ] 5 - Strongly Agree

E5. Are you a member of a boda-boda riders' association or SACCO (Savings and Credit Cooperative)?

- [ ] Yes
- [ ] No

Section F: Concluding Perspectives

Please answer the following in your own words.

F1. In your opinion, what is the single biggest challenge you face in your work as a boda-boda rider?

_____

_____

F2. What is the one most important thing the Wakiso Town Council or government could do to improve the working conditions and operations of boda-boda riders?

_____

_____

Interviewer Note: Thank the respondent sincerely for their valuable time and contribution to the study.