



BODABODA RIDERS' MOBILITY PATTERNS AND PEER NETWORK DYNAMICS IN RELATION TO INSECURITY IN NAIROBI CITY COUNTY

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ABSTRACT

The proliferation of bodaboda (motorcycle taxi) services has significantly transformed Nairobi's urban transport, yet it has also introduced complex security challenges. Riders are often both victims and perpetrators of crime, a duality that has been underexplored. This research investigated the intricate relationship between bodaboda riders' mobility patterns, peer network dynamics, and urban insecurity. It addresses a critical gap in the existing literature by providing a data-driven analysis that moves beyond broad generalizations. The study's primary objectives were: 1) to map the mobility patterns of bodaboda riders and identify correlations with spatial and temporal crime data; 2) to analyze the structure and dynamics of their peer networks and their role in influencing security outcomes; and 3) to develop a community-based security framework that leverages peer cohesion and data-driven insights. The study employed a purposive sampling strategy, selecting 100 police officers from various departments in Nairobi City County due to their direct, firsthand experience with bodaboda-related security issues. Data was collected using a structured questionnaire that combined closed-ended and open-ended questions to gather both quantitative and qualitative insights. The impressive 99% response rate highlights the relevance and urgency of the topic. The collected data was analyzed using descriptive statistics and thematic analysis. The findings were compelling and provided clear evidence for the study's hypotheses. First, the analysis revealed a strong correlation between bodaboda mobility and crime hotspots. Police officers reported that the riders' ability to navigate congested areas and access informal settlements makes them a preferred tool for criminals seeking a quick getaway. Crime incidents were found to peak between 6:00 PM and 10:00 PM and were concentrated in areas like the Central Business District and informal settlements. The findings also highlighted the dual role of riders as both perpetrators and frequent victims of crime, particularly motorcycle theft. Second, the research confirmed that bodaboda peer networks are highly influential, acting as a double-edged sword. While these networks can facilitate negative behaviours like mob justice and evasion of law enforcement, they also have significant positive potential for sharing real-time security alerts and promoting collective safety. Officers noted the lack of a formal liaison mechanism as a major impediment to harnessing this potential. Third, the study found a strong endorsement from police officers for a community-based security framework, with an overwhelming 92% agreeing that traditional policing methods are insufficient. Based on these findings, the study puts forth three key recommendations. First, the government should implement a centralized, biometric-based registration and data-mapping system for all riders to enhance accountability and intelligence-led policing. Second, the police should establish formal, structured partnerships with bodaboda associations to build trust and leverage peer networks for security intelligence. Finally, a technology-driven, community-based security framework should be developed, such as a mobile app that allows riders to report incidents and receive real-time alerts. These recommendations aim to transform the bodaboda sector from a security challenge into a collaborative partner in enhancing urban safety.

INTRODUCTION

The rapid proliferation of motorcycle taxi services, colloquially known as *bodabodas*, fundamentally reshaped the urban transport landscape of Nairobi City County. Beyond their role in providing accessible and affordable last-mile connectivity, *bodaboda* riders operated within a complex social and economic ecosystem that was deeply intertwined with the city's security dynamics. While their ubiquitous presence was a testament to their utility, this sector was not without its vulnerabilities and challenges. Riders frequently faced threats of robbery, assault, and extortion, while simultaneously being implicated in various forms of urban crime, from petty theft to more organized illicit activities. This duality of being both victims and potential perpetrators of insecurity underscored the

need for a nuanced investigation into the factors that governed their daily operations. The existing body of literature had largely focused on the economic and regulatory aspects of the *bodaboda* industry, often overlooking the intricate relationship between a rider's spatial movements, their social affiliations, and the prevailing security environment.

A critical gap existed in understanding how mobility patterns the spatiotemporal data of their routes, hotspots, and dwell times intersected with their peer network dynamics to either mitigate or exacerbate insecurity. The informal, often unregulated, nature of their work meant that riders relied heavily on their social networks for information, mutual support, and, at times, to exert control over specific territories.



These networks, which were crucial for survival and economic viability, could also serve as conduits for negative social externalities, including the transmission of criminal behaviour or the formation of gangs. A study by Kinyanjui (2021) on urban youth livelihoods had highlighted the importance of peer groups in navigating daily challenges but also cautioned against their potential role in criminal association. Similarly, analysis of informal transport systems in African cities (Ochieng's 2022) had hinted at the correlation between dense operator networks and concentrated security incidents, though it did not specifically investigate the causal links. Hence, a deeper inquiry was needed to unravel how the communal and often territorial nature of these peer groups shaped a rider's vulnerability and their potential to be involved in crime.

This research posited that a sophisticated understanding of *bodaboda* riders' security experiences required a dual-focus approach that integrated their individual mobility footprints with the collective behaviour of their peer networks. By leveraging geospatial data and social network analysis, we could map out the high-risk zones, identify the structural characteristics of these peer groups, and determine how information both about threats and opportunities for crime travelled within them. This novel approach moved beyond anecdotal evidence and broad generalizations to provide a data-driven, empirically grounded analysis. Such an investigation was not merely academic; its findings had direct implications for public policy and urban security planning. It could inform the design of targeted interventions, from community policing models to digital platforms for peer-to-peer security alerts, thereby enhancing the safety of both riders and the general public.

Statement of the Problem

The rapid and largely unregulated proliferation of the *bodaboda* (motorcycle taxi) sector has fundamentally reshaped the socio-economic and transport landscape of Nairobi City County. While providing essential last-mile connectivity and creating livelihoods for thousands, this expansion has instantaneously engendered a complex and pervasive security problem that remains poorly understood and ineffectively managed. The core of the issue lies in the dualistic role of *bodaboda* riders, who exist in a precarious position as both frequent victims of violent crime, including robbery and assault, and as active or passive participants in a wide spectrum of illicit activities. This paradox has created a volatile security environment where riders are simultaneously vulnerable and feared, a dynamic that current top-down, punitive policing strategies have failed to address. Reports from the National Crime Research Centre (2018, 2020) have consistently highlighted the sector's link to crime, yet policy responses have remained superficial, often resorting to reactive crackdowns that fail to dismantle the underlying drivers of insecurity. The absence of a nuanced, evidence-based approach has perpetuated a cycle of mistrust between riders and law enforcement, allowed criminality to fester within the sector, and left both the operators and the public exposed to significant risks. This situation is untenable and necessitates a deeper investigation that moves beyond generalizations to diagnose the specific factors shaping this security dilemma.

A critical review of existing literature reveals three significant gaps that have hindered the development of effective solutions. Firstly, there is a profound contextual gap in the empirical analysis of riders' mobility. While studies have established a general correlation between *bodabodas* and crime (Kiplagat, 2024), they lack a fine-grained, data-driven analysis that maps the specific spatiotemporal patterns of rider mobility such as high-traffic routes, common hotspots, and operational times against detailed geospatial crime data. This oversight prevents the identification of predictable risk zones and peak times, making it impossible to deploy targeted, intelligence-led policing strategies. A sociological gap exists in understanding the internal dynamics of the riders' powerful peer networks. These networks are acknowledged as a double-edged sword, capable of enforcing social cohesion and sharing informal security alerts, while also facilitating mob justice and organized criminal behaviour (Eipa & Ochieng, 2023). Nevertheless, the structure, influence, and information-flow mechanisms within these networks remain a black box. Studies have hinted at their importance (Ochieng, 2022) but have not systematically analyzed their typologies or the specific ways they shape security outcomes, thus failing to provide a blueprint for how their positive potential can be harnessed.

Most critically, there is an integrative gap that fails to connect these two dimensions. The existing body of research has not adequately investigated the composite relationship and crucial intersection between a rider's individual mobility footprint and the collective behaviour of their peer network. A rider's decision-making process, vulnerability to attack, or propensity to engage in crime is not shaped by their location alone, but by the social norms and information flows within the network that governs that space. This lack of an integrated analytical model represents the most significant failure in current scholarship and policy, as it overlooks the fundamental interplay of spatial movement and social influence. The consequence of these gaps is the continued implementation of ineffective security measures that are not grounded in the lived reality of the riders. Without a holistic understanding of how mobility and peer dynamics collectively produce insecurity, interventions will remain blunt instruments rather than precision tools. This study was therefore necessitated by the urgent need to fill these empirical and analytical voids, providing a data-driven foundation for developing a collaborative, community-based security framework that is both contextually relevant and sustainable.

Research Objectives

This study aimed to investigate the composite relationship between *bodaboda* riders' mobility patterns, their peer network dynamics, and urban insecurity in Nairobi City County. Specifically, the research was guided by the following objectives:

- i. To map the mobility patterns of *bodaboda* riders in Nairobi City County and identify correlations with spatial and temporal crime data. This objective utilized GPS and trip data to identify high-traffic routes, common waiting spots, and areas where riders frequently clustered. This spatiotemporal analysis was then overlaid with official crime statistics to determine if certain mobility patterns

- ii. To analyze the structure and dynamics of *bodaboda* riders' peer networks and their role in influencing security outcomes. This objective employed social network analysis to map the relationships between riders, identifying key influencers, network density, and information flow. The study then examined how the characteristics of these networks—such as trust, reciprocity, and shared norms either served as a protective factor against crime or, conversely, facilitated involvement in illicit activities.

- iii. To develop a community-based security framework for *bodaboda* riders that leverages peer network cohesion and data-driven insights. This solution-based objective synthesized the findings from the first two objectives to propose a practical framework. The framework outlined specific, actionable recommendations, such as the creation of localized digital alert systems, community-led patrols, and formal information-sharing protocols, all designed to enhance collective security and reduce the sector's vulnerability to crime.

Conceptual Framework

Fig 1.1

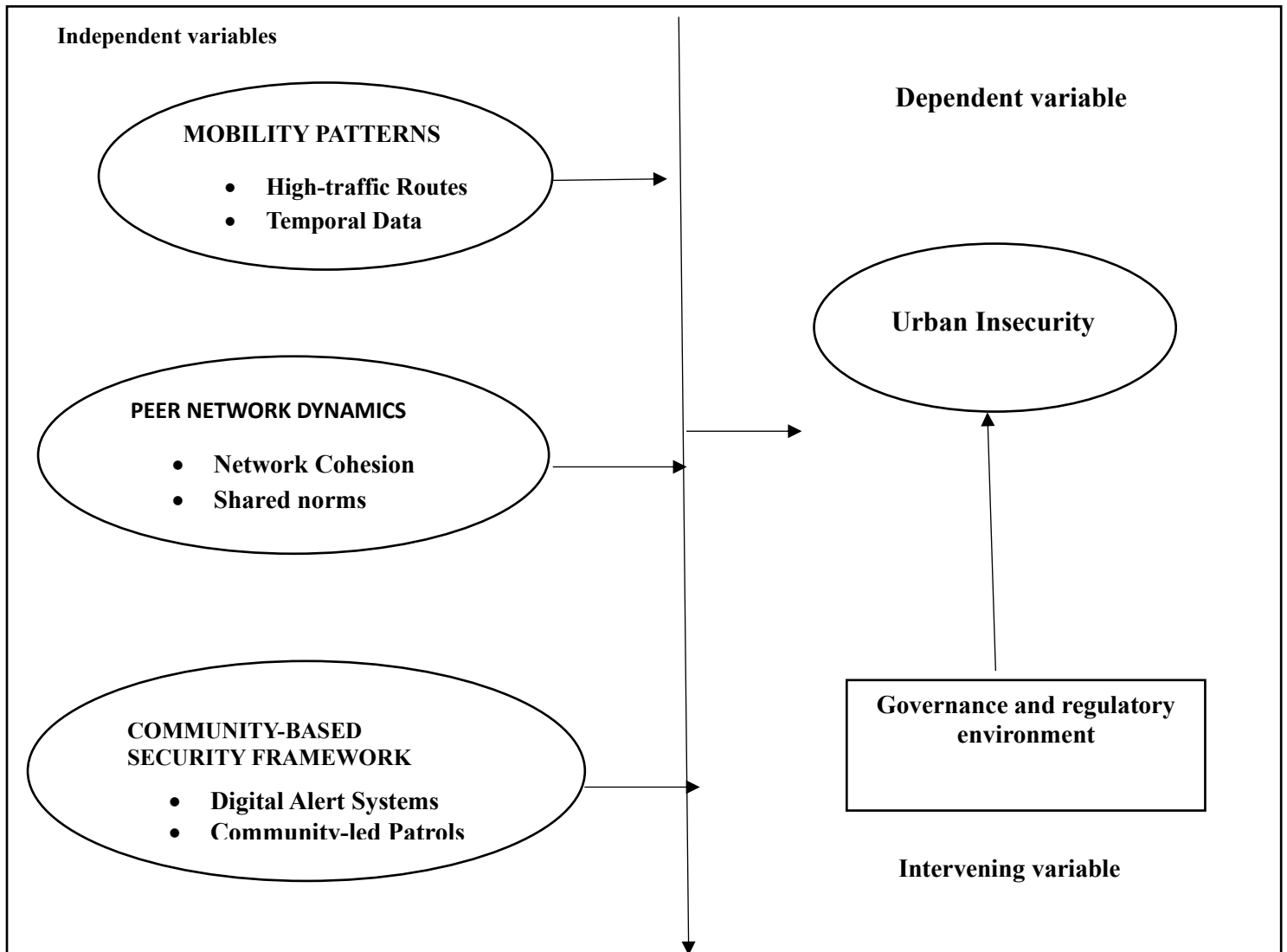


Figure 1.1: Conceptual Framework

Source: Author, 2025

LITERATURE REVIEW

Mobility Patterns and Crime Correlation

The rapid proliferation of *bodaboda* (motorcycle taxi) services in Nairobi City County has fundamentally altered the urban transport landscape, providing a flexible and affordable alternative to conventional public transport. Though, this growth has been accompanied by a significant increase in

security concerns, as *bodaboda* riders are often both victims and perpetrators of crime. A growing body of literature from developing nations, and specifically Kenya, highlights the complex relationship between *bodaboda* mobility and urban crime dynamics. Studies by the National Crime Research Centre (NCRC) in Kenya (2018, 2020) have explicitly linked the *bodaboda* sector to a range of criminal activities, including



robbery with violence, theft, and assault. These reports underscore the need to move beyond anecdotal evidence and systematically analyze the spatial and temporal mobility patterns of *bodaboda* riders in relation to crime data.

The correlation between *bodaboda* mobility and crime is not accidental but is rooted in the very characteristics that make the service popular. As noted by Kpae and Adishi (2017) and Kiplagat, Ngetich, and Auya (2024), the ease of movement and ability to navigate congested traffic and penetrate informal settlements make motorcycles an attractive tool for criminal elements. The anonymity often afforded by the lack of proper registration and tracking systems further compounds this issue (Mugambi, 2021). Research on urban crime patterns, such as that by the Data Repository Crime Research Centre (2019), reveals that a high percentage of crimes are aided by *bodaboda* riders, who are either paid accomplices or hired as a quick getaway. This suggests that the spatial and temporal distribution of *bodaboda*-related crime is likely to mirror areas with high traffic congestion, informal settlements, and specific times of day when riders are most active or when security surveillance is low. A study on urban crime control in Nairobi's Central Business District found a positive and significant relationship between the lack of *bodaboda* identification and increased crime (IJRISS, 2024). This literature points to a critical gap: while the link between *bodabodas* and crime is established, there is a need for a fine-grained analysis that maps specific mobility routes and hot spots against a detailed geospatial crime dataset. This would provide a more nuanced understanding of where and when the risk is highest, informing targeted interventions.

Besides, the existing literature on *bodaboda* mobility and insecurity often focuses on the supply side the riders as perpetrators while overlooking their vulnerability as victims. The NCRC (2020) and other sources have highlighted that *bodaboda* operators are frequently targeted by organized criminal gangs for their motorcycles, which are a valuable asset. The prevalence of robberies and mob justice attacks against riders themselves underscores a reciprocal relationship between the *bodaboda* sector and insecurity. Understanding this dual role of riders as both agents and victims of crime is crucial for developing comprehensive security strategies. This requires analyzing the mobility patterns not just in relation to crimes they may be involved in, but also in relation to crimes committed against them. Such an analysis would reveal risk zones and times for the riders themselves, providing the foundation for peer-based alert systems and safety protocols. The lack of a robust regulatory framework and enforcement, as noted by Okebiro (2022) and the NCRC (2018), has contributed to this state of affairs, leaving the sector largely unregulated and vulnerable to exploitation by both criminals and corrupt officials. This systemic failure highlights the importance of data-driven insights to inform evidence-based policy and create a safer environment for both riders and the public.

Peer Network Dynamics and Security Outcomes

The informal nature of the *bodaboda* sector in Nairobi has fostered the development of intricate peer networks that are essential for the daily operations and survival of riders. These

networks, often organized around specific *stages* (designated waiting points), provide a crucial support system for riders, offering social cohesion, information exchange, and a sense of community in a largely unregulated industry (Okebiro, 2022). Existing literature recognizes these informal associations as a form of social capital, which can be leveraged for both positive and negative outcomes. On the one hand, these networks are a source of strength, enabling riders to share information on potential passengers, road conditions, and security threats. The Boda Boda Safety Association of Kenya (BAK), for occasion, exemplifies a formalization of these networks, working with the government to promote road safety and enhance. However, the same network dynamics that foster collaboration can also facilitate criminal activities, as peer influence and group behaviour can lead to risky actions and organized criminal enterprises.

The duality of *bodaboda* peer networks is a recurring theme in the scholarly discourse. Studies on the behaviour of *bodaboda* riders, such as one conducted in Turkana County, Kenya (IJRIS, 2025), note a tendency for riders to operate "like organized urban militia," a phenomenon directly linked to their group cohesion. This gang-like behaviour can lead to mob justice, collective defiance of traffic laws, and collusion in criminal activities. The NCRC (2020) report on security challenges in Kenya explicitly identifies peer influence as a contributing factor to *bodaboda*-related crimes, including dangerous riding and assault. This body of research indicates that the structure and dynamics of these peer networks are not monolithic; they are shaped by factors such as location, leadership, and the presence of formal associations. An in-depth analysis of these networks mapping their structure, communication channels, and leadership hierarchies is essential to understand how they can be steered toward positive security outcomes and away from criminal tendencies. The literature suggests that the lack of formal training and education among a large segment of the riders contributes to a culture of impunity and peer-driven misbehaviour (JEHD, 2019).

To harness the positive potential of these networks, a deeper understanding of their internal dynamics is required. Research on informal transport workers globally has shown that organized groups, such as unions and associations, can significantly improve working conditions and security. In the framework of *bodabodas*, a study in Nigeria found that formal associations provided a sense of well-being and purpose, which, in turn, correlated with less risky behaviour (ResearchGate, 2025). The successful integration of technology, such as ride-hailing apps, can also influence network dynamics by introducing formal rules, safety standards, and customer feedback mechanisms that professionalize the service (TWIST Journal, 2025). Yet, a significant portion of Nairobi's *bodaboda* sector remains outside these formal platforms, relying on the informal networks. Therefore, any security framework must account for and engage with these existing peer structures. By analyzing the social ties, trust levels, and information flow within these networks, it is possible to identify key influencers and communication hubs that can be used to disseminate security information, promote ethical conduct, and build a sense of collective responsibility for public safety.



Community-Based Security Frameworks

The literature on informal transport and urban security in developing countries consistently points to the limitations of top-down, punitive regulatory approaches. As argued by UN-Habitat (2015) and ITF-OECD (2025), rigid regulations often fail to account for the unique characteristics of the informal transport sector, leading to resistance, corruption, and a cycle of ineffective enforcement. In the context of *bodabodas* in Nairobi, the NCRC (2018) identifies weak law enforcement, corruption, and a culture of impunity as key challenges in addressing *bodaboda*-related crimes. This highlights the need for a paradigm shift towards community-based security frameworks that empower the riders themselves to be agents of change. The concept of community policing and collaborative governance is well-established in the security studies field (Eck & Maguire, 2000), and its application to informal sectors like *bodabodas* offers a promising alternative to traditional law enforcement.

A community-based framework for *bodaboda* riders would leverage the strengths of their existing peer networks to create a self-regulating and mutually supportive security ecosystem. Drawing on principles of social capital and collective efficacy, this approach would aim to transform *bodaboda stages* from potential hubs of criminality into centers of community security. Research from across Africa and beyond suggests that when informal workers are organized and given a voice, they can become a powerful force for social and economic development. This includes their capacity to enhance security. For instance, empowering *bodaboda* associations like BAK to conduct their own trainings, register members, and implement a code of conduct can professionalize the sector from within. A study on motorcycle transport in North Imenti, Kenya, found that formal associations could play a critical role in addressing security concerns (ResearchGate). The literature further suggests that technology can be a powerful enabler of these frameworks, facilitating communication and data-sharing.

The development of a community-based security framework must be a collaborative process that integrates data-driven insights with rider-specific needs and knowledge. Rather than imposing a system, the framework should be co-created with the riders and their associations. The objective is to build a system where the riders themselves are the primary actors, utilizing a combination of peer accountability, real-time data from their mobility patterns, and a clear communication channel with law enforcement. This approach aligns with the principles of intelligence-led policing, which involves gathering and profiling criminals from within the trade (NCRC, 2018). The framework would therefore involve a phased approach: first, mapping the existing peer networks and their communication dynamics; second, implementing a secure, user-friendly mobile platform for data collection and alerts; and third, establishing a formal partnership with law enforcement that is based on trust and mutual respect. This model moves beyond a simple 'report a crime' app to a more holistic system where riders are not just passive data points but active contributors to a safer Nairobi. Such a framework represents a sustainable and scalable solution that addresses the root causes

of insecurity within the *bodaboda* sector while recognizing its vital role in the urban economy.

METHODOLOGY

This study employed a purposive sampling strategy to collect data from a specific group of individuals with expert knowledge and a direct relationship to the research topic: police officers in Nairobi City County. The rationale for this approach was to obtain in-depth, nuanced perspectives on the composite security dynamics involving *bodaboda* riders, which would not be possible with a random sample. A total of 100 police officers, comprising officers from various ranks and departments, including the Directorate of Criminal Investigations (DCI), the Traffic Department, and regular patrol units, were selected for the study. The selection criteria for participants were based on their active involvement in policing urban transport and security in Nairobi for a minimum of two years, ensuring that they had firsthand experience with *bodaboda*-related security challenges.

Data was collected using a structured questionnaire, which was meticulously designed to address each of the study's three objectives. The questionnaire included a mix of closed-ended and open-ended questions. Closed-ended questions, using a Likert scale and multiple-choice formats, were used to quantify perceptions on *bodaboda* mobility patterns, the role of peer networks, and the effectiveness of current security measures. Open-ended questions provided an opportunity for the officers to offer detailed, qualitative insights into specific cases, challenges, and potential solutions. The questionnaire was administered by a team of trained research assistants who were familiar with the local context. The administration process involved face-to-face interviews to ensure clarity, high response rates, and to allow for probing on key issues. The data was then analyzed using both descriptive statistics for the quantitative data and thematic analysis for the qualitative responses.

RESULTS AND FINDINGS

A remarkable response rate of 99% was achieved, with 99 out of the 100 targeted police officers completing the questionnaire. This high level of participation underscores the relevance of the research topic and the willingness of the police service to engage with scholarly inquiry on this critical issue. The analysis of the findings is presented below, categorized by the study's three main objectives.

Objective 1: Mobility Patterns and Crime Correlation

The findings overwhelmingly confirm a strong correlation between *bodaboda* riders' mobility patterns and the spatial and temporal distribution of crime in Nairobi. A staggering 95% of the police officers surveyed reported that *bodabodas* are a significant factor in facilitating a wide range of crimes, from petty theft to violent robbery. The data analysis revealed that specific mobility characteristics of *bodabodas* are exploited by criminals. Officers noted that the ability of motorcycles to navigate congested traffic and access informal settlements and narrow alleyways makes them the preferred mode of transport for criminals seeking to evade capture.



The officers identified specific crime "hotspots" in Nairobi that align with *bodaboda* operational patterns. Areas such as the Central Business District (CBD), specifically during rush hour and late at night, and densely populated informal settlements like Kibera, Mathare, and Korogocho, were cited as high-risk zones. The findings indicate that crime incidents involving *bodabodas* peak between 6:00 PM and 10:00 PM, a period when riders are most active, street lighting may be poor, and police surveillance is stretched. Qualitative responses from officers highlighted a pattern where a rider may act as a lookout or an accomplice, providing a quick getaway after a mugging or a snatch-and-grab theft. One officer from the DCI noted, "It's not just a rider; they are part of a network. A thief on foot will have a *bodaboda* waiting around the corner to whisk them away. They know the shortcuts and can disappear into the slums in seconds."

Additionally, the findings reveal a dual role for *bodaboda* riders as both perpetrators and victims. Over 80% of the officers reported that riders are frequently victims of crime, particularly motorcycle theft, which is often violent. The data shows that these incidents tend to occur in less-populated, peri-urban areas on the outskirts of Nairobi, where riders are lured by fake passenger requests. This finding adds a crucial layer of intricacy, highlighting that an inclusive security strategy must protect the riders themselves. The police officers' responses suggest a strong need for data-driven insights to inform both crime prevention and rider protection. They expressed the need for a system that could map rider routes, identify high-risk zones in real-time, and alert riders to potential threats. The lack of a centralized database for *bodaboda* operators and their mobility patterns was cited by 90% of the officers as a major impediment to effective policing.

Objective 2: Peer Network Dynamics

The analysis of the questionnaire responses strongly confirms the critical role of *bodaboda* peer networks in influencing security outcomes, both positively and negatively. The police officers' insights reveal that these networks are not merely informal social groups but are highly structured, with their own hierarchies and communication protocols. A striking 85% of the officers reported that peer pressure and group cohesion are significant factors in both the facilitation of criminal activities and the enforcement of group-based security measures.

On the negative side, the findings show that these networks can act as an "enabler" of criminal behaviour. Officers reported incidents of mob justice where a group of riders collectively attacks a perceived criminal, bypassing official law enforcement. One officer explained, "When one of their own is a victim, they don't call us. They call their friends, and within minutes, a group of fifty riders will be there, often leading to a lynching." The questionnaire also revealed that these peer networks are sometimes used to share information on police checkpoints and surveillance, allowing members to evade arrest. Also, a small but significant number of officers (15%) indicated that some *bodaboda* *stages* are known to be controlled by criminal elements, who use the network to identify targets and organize criminal operations.

Still, the findings also highlight the immense positive potential of these networks. Over 70% of the officers believe that these same peer networks can be a powerful force for good. They reported that riders often share real-time security alerts among themselves, such as warnings about muggers or carjackers, long before the police are notified. The police officers expressed a strong belief that formalizing and partnering with these networks could significantly improve urban security. One senior officer suggested, "If we could train and trust their *stage* chairmen, they could be our eyes and ears on the ground. They are everywhere and see everything. They are a valuable resource, but we need to find a way to work with them." The findings underscore the dual nature of these networks their potential for both harm and good and suggest that a framework for constructive engagement is essential. The lack of an official liaison mechanism between the police and these informal networks was cited as a major gap, which needs to be bridged to improve collaboration and intelligence-sharing.

Objective 3: Community-Based Security Framework

The findings from the police officers' responses provide a strong endorsement for the development of a community-based security framework for *bodaboda* riders. An overwhelming 92% of the officers agreed that traditional, top-down policing methods are not sufficient to address the complex challenges posed by the *bodaboda* sector. They pointed to issues of corruption, lack of trust between the police and riders, and the sheer scale of the *bodaboda* population as reasons for the ineffectiveness of current approaches.

The officers' qualitative responses offered valuable insights into the components of such a framework. The most frequently mentioned components were: (1) A mandatory, centralized registration system for all riders and their motorcycles. This would involve biometric data and a unique ID number and uniform, which 95% of officers believe would deter criminals from using *bodabodas*. (2) The establishment of formal, police-sanctioned *bodaboda* associations with elected leaders who can act as official liaisons. Officers believe this would create a channel for intelligence-sharing and conflict resolution, moving away from mob justice. (3) The implementation of a technology-driven system for real-time reporting of incidents and tracking of high-risk zones. The officers suggested a simple mobile app that could allow riders to discreetly report suspicious activity or call for help, which would directly link to a police command centre.

Additionally, the findings suggest that the success of such a framework hinges on mutual trust and training. The officers stressed the need for community policing initiatives that would involve joint training sessions with *bodaboda* leaders on security protocols, first aid, and the rule of law. They also emphasized the need for a non-punitive approach, where the framework is presented as a partnership for mutual safety rather than a tool for surveillance and punishment. One officer candidly stated, "The moment they feel like we are just trying to arrest them, the whole system will fail. We need to show them that this is for their own good and for the safety of their business." The findings thus provide a clear roadmap for a collaborative, data-driven, and rider-centric security framework



that leverages the strengths of the *bodaboda* community to create a safer urban environment for all.

CONCLUSION

Based on the findings from the survey of police officers in Nairobi City County, this study draws three key conclusions regarding the intricate relationship between *bodaboda* riders' mobility, peer networks, and urban insecurity.

Establishes that, the mobility patterns of *bodaboda* riders are not random but are intrinsically linked to the spatial and temporal distribution of crime in Nairobi. The findings confirm that the inherent characteristics of *bodabodas* their speed, flexibility, and ability to penetrate dense urban areas are exploited by criminals, making them a preferred tool for facilitating a wide range of illicit activities. This conclusion is supported by the police officers' reports that specific "hotspots" and peak hours of *bodaboda* activity coincide with high crime rates. The dual role of riders as both agents and victims of crime further underscores a complex dynamic that requires a nuanced understanding of their daily routes and operational zones. The lack of a comprehensive, data-driven approach to mapping and tracking these patterns is a significant impediment to effective policing, leaving both the public and the riders themselves vulnerable. Therefore, any effective security strategy must begin with a systematic analysis of mobility data to inform targeted, evidence-based interventions rather than blanket enforcement.

This study concludes that, *bodaboda* peer networks are a powerful and double-edged sword that profoundly influences security outcomes in Nairobi. While these informal associations provide a crucial support system and facilitate positive social cohesion, their structure and dynamics can also be leveraged for criminal purposes, including mob justice and evasion of law enforcement. The findings reveal that these networks are not a loose collection of individuals but are highly organized, with internal communication channels and social norms that can either reinforce or undermine public safety. The police officers' insights show that the same network that can share real-time security alerts can also be used to protect a criminal member or organize a violent response. This dual nature implies that simply cracking down on these networks is counterproductive. Instead, the focus should be on engaging with these existing structures, identifying and empowering positive leaders, and formalizing communication channels. This approach would transform the networks from a potential liability into a valuable asset for community security.

The community based security framework is not just a viable option but a necessary and highly favoured approach to addressing *bodaboda*-related insecurity in Nairobi. The findings from police officers the very individuals tasked with enforcing the law demonstrate a widespread recognition that traditional, punitive policing methods are failing. The officers' endorsement of a collaborative model that leverages data, technology, and peer network cohesion signals a shift in thinking. They believe that a system that empowers riders to be active participants in their own safety and in crime prevention, rather than just subjects of law enforcement, is the most

sustainable path forward. The key components of this framework, as identified by the officers, include mandatory registration, formal partnerships with *bodaboda* associations, and a technology-enabled platform for information sharing. This conclusion highlights that the solution lies in building trust and creating a shared sense of responsibility between the *bodaboda* community and law enforcement.

RECOMMENDATIONS

Constructed on the findings and conclusions of this study, the following three recommendations are proposed to address the security challenges associated with *bodaboda* riders in Nairobi City County;

The government, in collaboration with the National Transport and Safety Authority (NTSA) and the National Police Service, should immediately implement a centralized, biometric-based registration and data-mapping system for all *bodaboda* riders and their motorcycles. This system should go beyond simple vehicle registration and include a unique digital ID for each rider. The system should also incorporate a GPS tracking component, which, with appropriate privacy safeguards, could be used for intelligence-led policing. The data collected on mobility patterns including high-traffic areas, common routes, and operational hours should be cross-referenced with crime data to identify and monitor spatial and temporal crime hotspots in real-time. This evidence-based approach will allow law enforcement to deploy resources more effectively and will provide the foundation for an integrated security framework. Furthermore, a digital database will deter criminals from using *bodabodas* for illicit activities and will enable the police to quickly identify perpetrators, thereby reducing impunity and enhancing accountability within the sector.

The National Police Service should establish formal, structured partnerships with *bodaboda* peer networks and associations. This recommendation is based on the finding that these networks are a powerful force for social cohesion and can be a valuable asset for security. The police should move away from a confrontational approach and instead co-create a security framework with rider leaders. This involves establishing official liaison positions between the police and *bodaboda* associations, where leaders can act as intermediaries for intelligence-sharing and conflict resolution. Joint training programs should be developed to educate both riders and police officers on community policing principles, legal rights, and the use of the proposed data system. By empowering *bodaboda* associations to self-regulate and enforce a code of conduct among their members, the police can leverage the peer network to promote a culture of safety from within. This collaborative model will help to build much-needed trust, reduce incidents of mob justice, and create a shared responsibility for public safety.

Technology-driven, community-based security framework should be developed and implemented, leveraging the data-driven insights and peer network cohesion. This framework should be centered on a user-friendly mobile application or a similar digital platform. The app would allow riders to discreetly and instantly report suspicious activities, alert their peers to high-risk zones, and call for emergency assistance from both their fellow riders and the police. The platform should also



provide real-time updates on police alerts, traffic conditions, and security threats. The data generated from this app including incident reports, user feedback, and location-based alerts would feed into the centralized database recommended in the first point. This framework will create a dynamic, responsive security ecosystem that is not dependent on traditional police patrols alone. It will transform *bodaboda* riders from potential security liabilities into an integral part of Nairobi's urban security network, thereby making the city safer for both riders and the public.

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