Article

Accessibility and Regulation in Lesotho's Informal Transport Sector: A Sustainable Livelihoods Concern

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Abstract

The informal transport sector plays a critical role in Lesotho, especially given the historically underdeveloped formal transport infrastructure, challenging topography, and limited funding. Although the government initially operated bus services in mountainous regions, these routes proved financially unviable. As such, private operators gradually filled in to meet the mobility needs of a growing urban population. As factories developed in urban areas, demand for transport increased, but formal options remained insufficient. Informal operators, especially the "4+1" taxis (cars carrying four passengers plus the driver), became a key solution. Imported Japanese cars enabled these operators to serve both urban and previously disconnected rural areas. This provided passengers with flexible, accessible, and faster services. Using a sustainable livelihoods framework, we conducted semi-structured interviews with key stakeholders and analysed policy frameworks in Lesotho's transport sector to understand the underlying issues of passenger accessibility and driver regulation. We found that, despite their contributions, the 4+1 taxis have attracted criticism for causing traffic congestion, accidents, and criminal activity. However, participants acknowledged that 4+1s remain crucial for affordable and efficient transport, particularly for low-income populations. We therefore argue for a balanced approach, advocating regulation and law enforcement to improve safety while recognising the essential role of these taxis in enhancing mobility in Lesotho, thereby addressing concerns about sustainable livelihoods.

Keywords: 4+1 taxi accessibility; driver regulation; informal transport; Lesotho; sustainable livelihoods

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Introduction

The rapid increase in the global population, particularly in urban areas of developing countries, has driven substantial cross-national and inter-city migration, placing pressure on existing public transport infrastructure. Urbanisation is the transition from an agricultural to a manufacturing and service-based economy (Aiyuk 2017), or more simply, the process by which a growing share of a country's population moves into towns and cities (Mots'oene 2014). According to Kumar et al. (2016), the rapid influx of rural populations into cities has created a significant demand for mobility services that existing municipal authorities are often unable to meet. Rapid urban expansion is a challenge for authorities in developing countries, which struggle to maintain adequate public services. For example, many African cities, including those in South Africa, Tanzania, and Kenya, face severe transport limitations due to congested, overcrowded state-operated buses, causing many residents to walk long distances daily (Wood 2025). Venter et al. (2019) add that the lack of planned settlements and adequate transportation in such areas restricts residents' access to essential services.

In Lesotho, rapid urbanisation has led to significant challenges in transport provision for fast-growing urban populations, and has become a primary policy concern. Lesotho's urban expansion has encroached increasingly on rural areas, creating heightened demand for public transport in both urban and peri-urban zones (Mots'oene 2014). Historically, the Basotho have relied predominantly on farming. However, the Lesotho National Development Agenda Plan reports that the agricultural sector's contribution to the country's gross domestic product (GDP) has been declining, prompting many Basotho to leave rural homes in search of wage employment in urban areas. Rocchi and Del Sette (2016) note that after colonialism, many Basotho men worked in South African gold mines, leading to a shift from traditional modes of transport, such as horses and donkeys, to buses. Economic opportunities in urban centres have accelerated rural-to-urban migration, pushing the urbanisation rate higher per year (Rocchi and Del Sette 2016). The concentration of quality schools in urban centres has further driven demand for transport. This migration has increased the need for public transport as rural residents move to urban areas.

Poor infrastructural development, particularly for transport, continues to challenge service delivery and mobility in many developing countries (Mohareb and Felix 2017). Srinivasu and Rao (2013) argue that inadequate infrastructure limits both economic and social progress in developing countries. Most sub-Saharan African cities lack sufficient public transport infrastructure due to limited financial resources, leaving roads in poor condition and contributing to connectivity issues (Sietchiping, Permezel, and Ngomsi 2012). In Lesotho, for instance, inadequate urban planning and underinvestment in public transport have hindered the effective improvement of transportation services (Pene 2023). The growing urban population has increased the demand for transport, and in many cases, formal services have been unable to keep up. Formal public transportation in Lesotho has long struggled to meet commuter needs, particularly in

rural areas, due to its rugged, mountainous terrain, and limited infrastructure (Tanga et al. 2014).

The demand for transport has placed substantial pressure on government-provided services, including the public passenger transport system. Pojani and Stead (2015, 7789) emphasise that "the current state of road-based public transport services in many developing cities does not serve the mobility needs of the increased population adequately. Formal bus services are often unreliable, inconvenient, uncomfortable, or even dangerous." Public service providers, who face vehicle shortages, would often focus on routes where passengers can pay higher fares or that are easily accessible, leaving rural needs underserved. However, commuter demands have also created opportunities for informal modes of public transport to thrive, as these systems have stepped in to meet unmet transportation needs (Ramolise 2011).

The gap in formal service provision has led to a flourishing informal transport sector in many developing countries, where informal services now represent a vital component of the transportation system (Boopen 2016; Ehebrecht, Heinrichs, and Lenz 2018). In Southern Africa, public transport systems are largely informal or semi-formal, blending private operation with government control and taxation. This mix usually yields both challenges and benefits, with informal transit filling the gaps left by formal public services. As a result, informal modes of transport, such as shared taxis and minibuses, have become common in many developing cities (Wood 2025). Informal transport is characterised by smaller vehicles operated by owner-drivers or small fleet owners. These services, such as Tanzania's *daladalas*, Kenya's *matatus*, and South Africa's mini-bus taxis, provide convenience in terms of distance, frequency, and flexibility. The services are cost-effective and responsive to changing passenger needs, with operators adjusting routes, schedules, and fares to meet demand. The informal transport sector is entrepreneurial and often unregulated, providing services on narrow routes inaccessible to larger formal transport vehicles. Senamolele (2020) reports four key features of informal transport: entrepreneurialism, low-performance services, small and ageing cars, and competitive niche markets. Although such services can effectively meet specific mobility needs, they are constrained mainly by limited infrastructure investment and tend to rely on older and less reliable vehicles, which contribute to poor service quality. Regardless, informal public transport serves as a critical gap filler when formal systems are insufficient, due to a number of reasons.

In Lesotho, neoliberal reforms have led to the rise of privately operated options, most notably the popular "4+1" taxis, which are cars carrying four passengers plus a driver (Senamolele 2020). The growth of the 4+1 taxi model reflects a response to rising demand, especially in urban areas where public transport is often insufficient. Organised through taxi associations and licensed by the government, these taxis serve densely populated areas and extend into peri-urban and rural regions where they offer short-distance travel. Some private car owners have informally offered transport services to rural residents, helping to bridge the gap in rural transport access. The import of

affordable vehicles from Japan and relatively easy entry into the market have contributed to the rapid expansion of this service. However, competition among operators has led to issues such as congestion, traffic accidents, and chaotic road behaviour, drawing criticism from public officials and conventional transport providers who lobby for stricter regulations (Ramolise 2011). Despite these challenges, the 4+1 model has become crucial for many Basotho, particularly low-income residents who rely on it daily.

This study explores the impact of 4+1 taxis on mobility and examines the advantages and challenges of this mode of transport. It seeks to shift the focus from the narrative of chaos to a more balanced perspective that recognises the importance of 4+1s, while identifying areas for regulatory improvement to ensure safe and efficient service delivery in support of sustainable livelihoods. Our research was motivated by public debate and government discussions in Lesotho on removing the informal transport system, the 4+1 option, prompting an examination of the service's origins, licensing, and current relevance, and is centred on understanding user perspectives, and adopted a qualitative approach.

Theoretical Framework

Given the study's focus on the interplay between informal transport, state regulation, accessibility, urbanisation, and socio-economic dynamics, we adopted the sustainable livelihoods framework (SLF) as the theoretical framework. The SLF is widely attributed to Chambers and Conway (1991) in the context of development studies. However, there is also a vast body of scholarship that has reconceptualised this framework in different contexts. We adopt this framework in consideration of four aspects: livelihoods and informality, vulnerability context, policies and institutions, and livelihood outcomes. For livelihoods and informality, the SLF emphasises how people use available assets (human, social, financial, physical, and natural capital) to make a living. Informal 4+1 taxi operators in Lesotho are doing just that: using physical (cars), social (networks), and human (driving skills) capital to provide transport services and earn income. In terms of vulnerability context, the study highlights underdeveloped infrastructure, economic hardship, and limited formal options. For policies and institutions, the call for balanced regulation speaks to one of the SLF's key pillars: how institutions and policies influence access to assets and livelihood outcomes. Concerning livelihood outcomes, the study examines both benefits (mobility, affordability, accessibility) and adverse outcomes (congestion, crime).

Materials and Methods

Here, we followed a qualitative approach, which enabled in-depth exploration of personal experiences and behaviours, emphasising participants' attitudes, as described by Bell (2013). Data generation involved semi-structured interviews, with a list of basic questions to guide the interviews, and document analysis to capture non-numerical, in-

depth insights into users' dependence on the service. Fieldwork took place in Maseru and Leribe, representing both urban and rural settings. Maseru, Lesotho's capital, was a primary research area, as it faces significant transport challenges due to rapid urbanisation, poor road conditions, and heavy congestion. This urban sprawl has increased reliance on informal transport services, such as the 4+1 taxis, particularly among lower-income groups. Leribe, a more rural area, highlighted the challenges of transport accessibility in mountainous and isolated areas, where limited road infrastructure makes alternative modes of transport essential. This approach provided a balanced understanding of how 4+1 services meet specific mobility needs in both urban and rural Lesotho, illustrating the social and economic roles these services play in regions where public transport is limited.

The research methodology for this study was structured in two main parts: the macro-level and micro-level data generation. The macro-level research focused on understanding the broader context of passenger transport, specifically examining the policy and socio-economic factors that led to the introduction of alternative forms of transport, like the 4+1 service. Secondary data sources, such as newspaper articles, journals, and government reports, were used to gather aggregated data on the country's transportation infrastructure, regulations, and socio-economic conditions. A key aspect of this research involved reviewing the literature on Lesotho's transportation infrastructure, urban expansion, and policy frameworks, with a focus on the challenges posed by poor infrastructure and the reliance on private transport, especially in rural areas. The micro-level research focused on gathering primary data from the population using the 4+1 services, to capture perspectives from both urban and rural users. Data generation at this level involved semi-structured interviews with passengers, drivers, and other key informants, including rank marshals, traffic officers, and officials from the Department of Transport.

The research employed purposive sampling to select key informants knowledgeable about the transport system, including drivers, passengers, and transport officials. This approach ensured that the participants were well-placed to offer insights into the dynamics of the transport service. A total of 30 participants were interviewed across different locations, including both urban and rural respondents, enabling a broad understanding of the transport challenges faced by various population groups. Interviews captured the diverse experiences of both passengers and drivers, and provided context for the different transport needs in urban and rural settings. In addition, we also conducted observations of the 4+1 service in operation, which helped to contextualise the data and informed the development of further interview questions, hence the semi-structured interview choice.

The data were condensed to manageable themes and categories through thematic analysis employing open coding, axial coding, and selective coding (Williams and Moser 2019). Initially, we read transcriptions, made margin notes, and grouped similar themes. These themes were refined and organised into a framework to guide the

presentation of the findings, with actual quotes used to illustrate the results. This process involved multiple stages of coding: identifying broad themes (open coding), refining them by establishing relationships (axial coding), and narrowing them to core themes (selective coding). In terms of ethics, the study adhered to best practices in qualitative research by ensuring voluntary participation, informed consent, confidentiality, and anonymity. Ethical clearance was obtained from the University of Pretoria as a Master's research project (ethical clearance number: HUM031/0220, 25 June 2020). Gatekeeper permission was sought from and granted by the Ministry of Transport in Lesotho. Taxi rank marshals granted permission to speak to drivers and passengers. Participants were briefed about the research's purpose and potential risks. We also maintained transparency by explaining that the study was academic in nature, without promises of rewards or funding.

Research Findings

The analysis generated four themes: 1) regulatory constraints and the lived realities of enforcement; 2) mobility, urbanisation, and the everyday significance of informal transport; 3) work, precarity, and danger (labour conditions); and 4) the 4+1 model in practice (value, vulnerability, and the future of regulation). These themes flow from the broader transport governance context, to the lived experiences of commuters and drivers, to the implications for future regulation of 4+1 operations.

Regulatory Constraints and the Lived Realities of Enforcement

Although Lesotho has an extensive legal framework for road transport, including specified permit classes and a 10-kilometre operating radius for D-permit taxis, the regulatory environment is widely experienced by operators as inconsistent, corrupt, and poorly enforced. Official documents emphasise the state's aspiration to create efficient, cost-effective, and safe transport through structured permit categories and regulated fares. However, as Ramolise (2011) notes, these objectives remain largely aspirational given the gap between legislation and implementation.

Drivers and owners repeatedly described the enforcement environment as arbitrary and exploitative. A common refrain was that some traffic officials treat the 4+1 sector as a revenue source rather than a public service to be regulated. One driver remarked that "a 4+1 has become a source for lunch and breakfast for these officers." This sentiment highlights how routine harassment and bribe solicitation shape daily work. Permit processing is lengthy and unequal. A taxi rank official noted that "operators complain of the long queues they have to endure to get permits, while others even have to bribe the department officials for the swift processing and release of their permits." Such experiences show how regulatory power is exercised through informal transactions rather than through predictable administrative processes.

Enforcement operations known as scorpion raids were also described as selective and unfair. One interviewee explained that prior to these raids, "most taxis are removed from

the routes … These are most taxis owned by police, soldiers, and traffic officials … they already knew that the operation was in place." This insider knowledge enables unregistered vehicles linked to officials to temporarily withdraw from operation, avoiding penalties, while only ordinary operators bear the consequences. These patterns of discretionary enforcement create an uneven playing field. Commuters reported confusion about how to distinguish legitimate from illegitimate taxis, with one noting, "It is hard to distinguish between registered and illegal 4+1 … every time I just see a car like that, I assume it's legal … the illegal ones are the ones which will take us to exactly where we want to go." While illegal taxis sometimes offer better service by operating beyond regulated boundaries, their presence intensifies congestion, undermines safety oversight, and erodes trust in the system as a whole. Delays, inconsistencies, and discretionary power, therefore, characterise the lived regulatory environment. These undermine the state's goals and help explain why commuters and drivers increasingly rely on informal coping strategies, ranging from bribery and forged routes to the proliferation of pirate taxis that blend seamlessly into the formal fleet.

Mobility, Urbanisation, and the Everyday Significance of Informal Transport

Rapid urbanisation and uneven spatial development lie at the heart of the growing reliance on informal transportation. Participants described how limited services in rural and peri-urban areas contributed to migration into towns, where accessibility is far better. One commuter explained: "I first came to Maseru to work in the textile industries … I later brought my children to live with me here in town, as there are better schools and better opportunities." Another recounted a particularly difficult experience that shaped her decision to relocate: "I used to walk long distances to the bus stop … I had to sleep at the police station … then I decided to save up and buy land in the urban area." These stories highlight how mobility inequalities are central to migration decisions and to the daily negotiation of livelihoods. Commuters consistently emphasised the accessibility and responsiveness of 4+1 taxis. As one interviewee explained, "4+1s penetrate even distant and newly established settlements … [it] brought the service closer and made the commute shorter." For people travelling with luggage or finishing work late, their convenience is unparalleled: "They have made our life very easy … when we come from Johannesburg with our luggage, we just take a special to deliver us to the comfort of our homes."

Participants also highlighted the flexibility and frequency of 4+1s as key advantages. One commuter described this flexibility admiringly: "This is an exceptional customer service," referring to its door-to-door service and the option to request special hires. Another noted their skill in managing congestion: "They have their own way of negotiating traffic … Without these unruly tactics, people will always be late for work." Even when these practices are irregular or risky, commuters often justify them in terms of the pressing demands of work, education, and care responsibilities. Informal practices such as extending routes or covering taxi lights during special hires also illustrate the creative adjustments operators make to meet user demand. As one driver explained, "When the special transport services have been requested beyond the operating radius

… the yellow taxi sign is covered so that the vehicle is able to go beyond its operational area without trouble." These adaptations highlight a transport system that has evolved from below, shaped far more by local need than by formal planning. The everyday significance of 4+1 taxis, therefore, derives from a combination of affordability, adaptability, and reach. Commuters rely on them not merely as modes of transport but as mechanisms for navigating the constraints of urban life, economic precarity, and poor infrastructure.

Work, Precarity, and Danger: The Labour Conditions of 4+1 Drivers

While commuters benefit from the flexibility of the 4+1 system, this flexibility is built upon the precarious and often dangerous labour conditions of drivers. Two issues emerge prominently: long working hours driven by economic pressure and security risks, which form a separate but mutually reinforcing dimension of vulnerability. Drivers consistently reported extremely long days, low wages, and constant pressure to meet the daily targets of taxi owners. One driver described a typical workday: "It is common for me to wake up at 4 or 5 am … return after 9 pm … I get M1000 [maloti] a month … I have to work hard to meet my employer's target." Another noted the worsening income conditions: "I used to make at least 600 a day, but now … competition is too high." These statements reveal that the earnings structure, in which failing to meet targets may result in dismissal, forces drivers into unsafe behaviours, including speeding, fighting over passengers, and skipping rest periods.

Competition for limited passengers further intensifies pressure. As one driver explained, "It becomes intensely dangerous during the middle of the month when there are limited passengers … we tend to fight over passengers." This competition is exacerbated by the presence of pirate taxis and the erratic enforcement environment described earlier. Security risks, while sometimes intersecting with long hours, form a distinct category of threat. Drivers repeatedly stated that "late night trips also increase the risk of hijacking and assault." For example, an operator said, "A driver was chained to the steering wheel and burned to death." These narratives reveal a transport sector where physical danger is not exceptional, but routine and anticipated. These conditions reflect a labour system marked by economic insecurity, lack of legal protections, and exposure to violence. The 4+1 model offers employment opportunities, but these opportunities come with profound risks, making driving both a livelihood and a hazard.

The 4+1 Model in Practice: Value, Vulnerability, and the Future of Regulation

The 4+1 model emerged to address gaps in formal transport provision, and its operational flexibility continues to define both its advantages and challenges. Participants described the early growth of the model as a direct reaction to inadequate services, as recalled by one informant: "[S]ervice was overwhelmed and unreliable … people would have to sleep at the police station." Another emphasised that the informal services supplemented the "inadequate service in a context of growing population needs and marginalisation of rural areas." Now, the 4+1 system is characterised by flexible

routing, informal ranks, roadside pick-ups, and special hires. Drivers sometimes "start operating outside of taxi ranks and forging our own routes … we are considered 'pirates,'" and we observed that "[c]ommuters are picked from the roadside and tend to board any available taxi … even pirate operators have a clientele." These practices demonstrate how deeply informal transport is woven into daily urban mobility.

Passengers and rank inspectors stressed that formal ranks help regulate behaviour and enhance safety. As one inspector argued, "it is safer for passengers to get a taxi at the rank where there are inspectors … to know who to complain to." Ranks provide a modicum of accountability in an otherwise fluid system. At the same time, operators expressed frustration with unregistered taxis that use deceptive tactics, such as yellow magnetic strips. One driver complained: "Some people just disguise themselves with those yellow magnets and commit despicable acts, and now we are painted with the same brush." This blurring of formal and informal practices creates vulnerabilities for both drivers and commuters, underscoring the need for targeted regulation. Participants proposed pragmatic regulatory improvements: faster permit processing, more explicit taxi identification (including district colour-coding), and strengthened rank-based oversight. Importantly, the calls for regulation were not framed as resistance to formalisation, but rather as requests for fairness, safety, and a level playing field.

Discussion

The findings of this study demonstrate that the 4+1 taxi system in Lesotho is more than an informal transport mode. It is a livelihood strategy deeply embedded in the country's socio-economic and regulatory landscape. The SLF provides a perspective through which to interpret these findings, particularly in understanding how individuals mobilise assets, negotiate vulnerability, and navigate institutional constraints to sustain life in an environment where formal systems struggle to meet demand. At its core, the 4+1 sector demonstrates how Basotho convert available physical, human, financial, and social capital into viable livelihoods. The physical capital of affordable imported cars, human capital in driving skills, and social capital embedded in networks of drivers, owners, and passengers all enable individuals, especially unemployed youth, and retrenched workers, to create income-generating opportunities where formal employment is scarce. In the SLF, these forms of asset mobilisation illustrate how livelihood strategies emerge from what people have rather than what they lack (Natarajan et al. 2022). The proliferation of affordable used vehicles from Japan, combined with limited barriers to entry, made the 4+1 model an accessible livelihood pathway. The findings show that many drivers enter the sector out of necessity, using these assets to create employment in a context of limited alternatives. Their ability to navigate congestion, extend routes informally, and build relationships with passengers, reflects not only entrepreneurial adaptation but also the creative, improvisational use of assets typical of informal livelihoods globally (Senamolele 2020).

The expansion of 4+1 taxis should also be understood within the vulnerability context of the SLF, which frames how external conditions, notably economic shocks, inadequate infrastructure, and rapid urbanisation, shape livelihood decisions (Mensah 2012). As participants described, long walking distances, unreliable rural transport, and underdeveloped roads compel both migration into urban areas and dependence on informal mobility services. This echoes the SLF's emphasis on how structural vulnerabilities push individuals to adapt through informal strategies. Urbanisation intensifies pressures on mobility systems (Wood 2025). As towns expand and settlements proliferate beyond the reach of formal routes, demand for flexible and responsive transport grows. The 4+1 taxis meet these needs precisely because limited state resources or rigid routes do not bind them. Their ability to penetrate even distant and newly established settlements and to provide late-night or door-to-door services illustrates how informal transport strategies evolve directly from the constraints imposed by formal systems (Senamolele 2020). For users, particularly low-income commuters, the 4+1 taxis reduce vulnerability by expanding access to schools, jobs, markets, and urban centres. Improved accessibility, even when informally delivered, constitutes a positive livelihood outcome in SLF terms.

The relationship between informal operators and state institutions reflects one of the SLF's most critical pillars: how policies, institutions, and processes shape access to assets and influence livelihood outcomes (Chambers and Conway 1991). The findings show that although a regulatory framework exists, its implementation is inconsistent, opaque, and often compromised by corruption. Driver experiences of routine harassment, where a 4+1 becomes a source for lunch and breakfast for traffic officers, and selective enforcement during scorpion operations reveal how institutional practices can undermine rather than support livelihood strategies. Permit delays, bribery, unpredictable fare reviews, and inconsistent enforcement restrict drivers' access to financial and physical capital. This speaks to the SLF's arguments that institutions can either hinder or enable sustainable livelihoods, depending on how they allocate power and resources (Natarajan et al. 2022). In Lesotho's case, poor regulatory performance forces 4+1 operators to rely on informal networks and strategies (such as covering taxi lights for long-distance hires) to sustain their livelihood activities. Taxi associations play a complex intermediary role: they provide social capital, coordination, and some on-the-ground order, but their fees and territorial practices can exclude less-resourced drivers. As Mensah (2012) reconstructed the SLF, these mixed institutional dynamics reveal the fragmented governance landscape within which livelihood strategies unfold.

From an SLF perspective, the livelihood outcomes associated with the 4+1 system are ambivalent. On the positive side, passengers benefit from greater mobility, shorter commute times, affordability, and improved access to work and services (Senamolele 2020). Drivers gain income opportunities that would otherwise be unavailable in a context of high unemployment. The 4+1 model, therefore, contributes to poverty reduction and social inclusion by expanding physical access to urban opportunities. However, the findings also highlight adverse livelihood outcomes, including traffic

congestion, unsafe driving practices, exposure to violence, competition-driven conflict, and an erosion of trust caused by illegal operators. For drivers, the long working hours, and security dangers, such as hijackings and fatal attacks, represent profound livelihood risks. The SLF cautions that livelihood strategies are not inherently stabilising (Chambers and Conway 1991; Mensah 2011; Natarajan et al. 2022). They sometimes involve trade-offs and the constant negotiation of risk. Drivers' strategies (working extended hours and operating beyond official routes) amplify their incomes, but also increase their vulnerability. The ambivalent outcomes reflect the nature of the informal transport sector, which is both an enabler and a source of precarity. This is effectively captured by the SLF's emphasis on dynamic, sometimes fragile livelihood pathways shaped by structural constraints.

Recommendations

The results of the study emphasise strengthening the institutional and policy environment, enhancing the asset base available to actors in the informal transport sector, and reducing the vulnerability context that drives risky coping strategies. These recommendations align with the SLF's principles: strengthening institutions, reducing vulnerability, and nurturing the assets that underpin sustainable livelihood strategies.

- Strengthen and streamline permit and regulatory processes: A transparent, efficient, and corruption-free permit system would improve drivers' access to physical and financial assets, reduce operational uncertainty, and promote a fairer market. The government should digitise permit applications, establish clear timelines, and enforce accountability mechanisms to curb bribery.
- Enhance institutional coordination between government and taxi associations: Taxi associations are critical sources of social capital that can help ensure safer, more orderly operations. Formal partnerships through co-regulation, conflict resolution training, and participatory route planning would align institutional processes with actual livelihood realities.
- Improve infrastructure and signage to reduce vulnerability: Better roads, clearer signage, street lighting, and designated ranks would reduce congestion, accidents, and the security risks faced by drivers and passengers. Investments in infrastructure are central to strengthening the SLF's physical asset base.
- Introduce driver protections and standardised contracts: Given the long hours and insecurity highlighted in the findings, labour protections are essential. Standardised contracts, legally defined working hours, and mechanisms for reporting abuses without retaliation would reduce livelihood risk and promote more sustainable outcomes.
- Increase public awareness of legal taxi identification: Colour-code vehicles by district and run public awareness campaigns to help commuters distinguish legitimate from illegal operators, improving safety and strengthening institutional trust.

- Explore inclusive formalisation pathways: Rather than punitive crackdowns, the state should adopt developmental formalisation strategies that provide training, microfinance, and progressive compliance pathways. This would help drivers enhance their human and financial capital.

Limitations of the Study

Several limitations shaped the research process. First, securing interviews with national and institutional officials proved difficult, limiting the depth of state-level perspectives in the dataset. This constrained our ability to triangulate fully between policy narratives and practitioner accounts. Second, some prospective participants expected compensation and withdrew when informed that none would be provided, narrowing the pool of interviewees. Third, scheduling interviews with students, key users of the 4+1 system, was challenging due to competing academic commitments. Despite these challenges, steps were taken to maintain methodological rigour. The use of semi-structured interviews supported consistency across interviews while allowing flexibility for participants to share experiential detail. Reflexive journaling and attention to intersubjectivity helped minimise personal bias and ensured that participant narratives, not our assumptions, guided the analysis. These limitations do not invalidate the findings but suggest that future research should include a broader sample of government authorities, private owners, and young commuters to deepen insights into multi-level institutional dynamics.

Conclusion

The 4+1 taxi system plays a central role in Lesotho's mobility landscape. It provides flexible, affordable, and accessible transport where formal services remain limited. Using the SLF, this study showed how commuters and drivers mobilise available assets to sustain daily mobility and income in a context marked by urbanisation, weak infrastructure, and institutional inconsistencies. However, the findings also reveal significant risks. Security threats, including hijacking, assault, and carjacking, emerged as pervasive and cannot be minimised; drivers' testimonies of night-time attacks and fatal incidents underscore the dangerous conditions under which livelihoods are pursued. These risks are intensified by long working hours, unregulated operators, and corruption in enforcement, illustrating the SLF's vulnerability context and the trade-offs inherent in informal livelihood strategies. Strengthening the sector requires coordinated action. Transparent, digitised permit processes, more explicit taxi identification, improved road lighting and signage, and stronger collaboration between government and taxi associations would enhance safety and reduce congestion. Standardised driver contracts and mechanisms for reporting crime can improve working conditions, while integrating informal transport into transport planning would support more equitable and sustainable mobility. Addressing safety concerns alongside regulatory reform is essential to ensuring the long-term resilience and livelihood benefits of the 4+1 industry in Lesotho.

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