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Policy Brief

AT THE CROSSROADS OF REFORM AND SURVIVAL: THE UNSTRUCTURED BUS SYSTEM OF KARACHI

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INTRODUCTION

Karachi has long struggled to develop an adequate public transport system for its rapidly growing population, which now exceeds 20 million people. The city grapples with issues like congestion, accidents, and pollution due to a limited and deteriorating road network, unreliability of local private buses, and increasing reliance on private transportation. While a major government-led public transport restructuring project is underway, privately owned minibuses, coaches, and paratransit services (such as Qingqi rickshaws) have remained in operation since their introduction in 1971 and 2009, respectively. However, these services face numerous issues, including the absence of formal bus stops, overspeeding, poor roadworthiness, and frequent delays. Despite these challenges, these modes of transport are the primary option for Karachi's lower and lower-middle classes, given the lack of affordable alternatives. Although the SMTA is pursuing several transport initiatives in Karachi, no comprehensive transportation policy, plan, or strategy has been devised yet.

Meanwhile, around 4500 minibuses, coaches and buses and around 60,000 Qingui rickshaws continue to provide daily mobility in the city. This research maps operational routes of unstructured buses, identifying major transit corridors, and analyzing the integration of Qingqis within the broader transportation network to assesses how these unstructured modes support access to essential services like healthcare, education, and employment.

It further examines the decision-making processes behind route development, profitability, and the spatial expansion of these services. Through geospatial analysis and engagement with key stakeholders, the research has generated an evidence-based understanding of Karachi's unstructured transport sector. The goal is to inform the development of urban mobility policies that are equitable, sustainable, and better integrated with formal initiatives, such as the Karachi BRT system and People's Bus Service, thereby contributing to a more efficient, inclusive, and climate-resilient transportation framework for the city.

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METHODOLOGY

This study adopted a mixed-methods design that integrated quantitative spatial analysis with qualitative inquiry to document and evaluate Karachi's unstructured transit network. The data collection strategy was designed to capture on- ground operational realities while incorporating institutional and user perspectives, thereby directly informing the development of policy recommendations. It consisted of three main components:

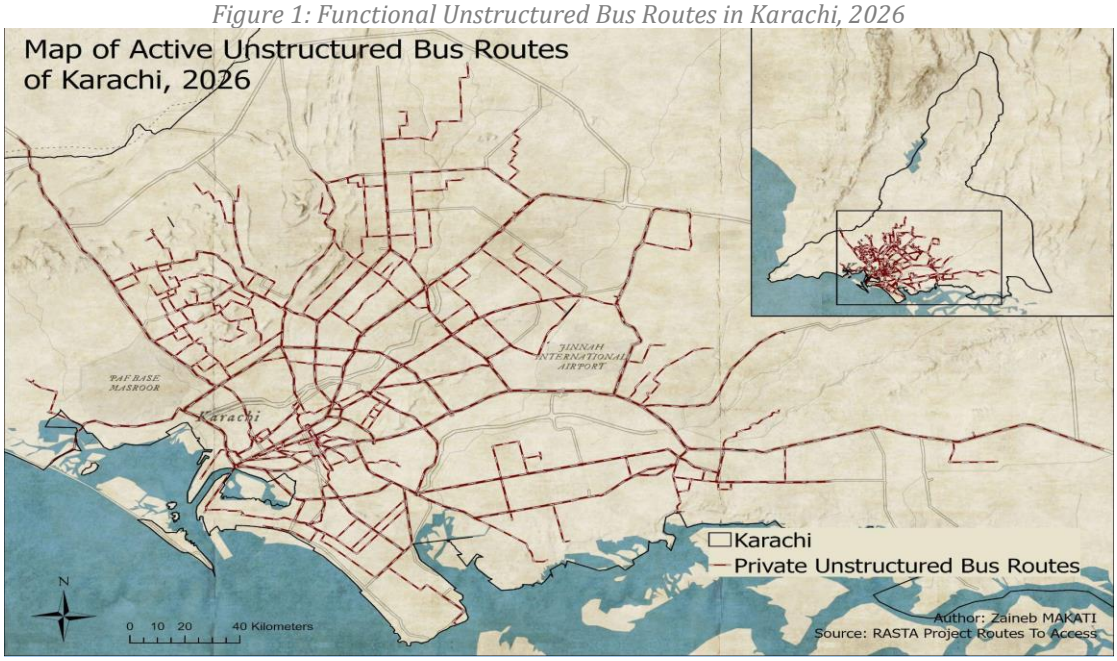
1. Route Mapping
2. Semi-structured Interviews,
3. Participatory Post-Mapping Workshop

Primary spatial data was collected through extensive field mapping of bus routes from adda to adda, covering the full length of each route from first to last stop. Additionally, four mappers were hired to manually map tertiary education institutions and healthcare facilities across Karachi, producing a primary spatial dataset central to analyzing access and spatial distribution.

To complement the spatial analysis, ten open-ended semi-structured interviews were conducted with key stakeholders across public and private sectors using a snowball sampling approach. Interviewees included representatives from transport authorities, consulting firms, transport associations, academia, and frontline operators.

Lastly, a post-mapping participatory workshop with field mappers employed story circles, story mapping, and role-playing to capture lived experiences and commuter insights, enabling triangulation of findings and grounding the policy recommendations in everyday mobility realities.

Figure 1: Functional Unstructured Bus Routes in Karachi, 2026



Source: Authors' compilations.

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FINDINGS

A total of 59 active bus routes were mapped. All services are required to hold a route permit valid for three years. Spatial analysis shows that unstructured bus services provide extensive geographic coverage across Karachi, particularly along major arterial corridors. However, this coverage is uneven, with high route density concentrated in central and older districts and sparse availability in peripheral towns. District East is the most well connected, with 48 buses passing through, while Malir Cantonment is connected by only 8 routes.

Unlike the BRT system, route selection for unstructured minibuses and coaches is not informed by transport modeling, household surveys, or demand forecasting. Instead, routes emerge through an iterative process grounded in operators' long-term observation of commuter flows and neighborhood linkages. Routes typically connect low-income residential areas to employment and commercial centers, indicating that operators prioritize network survival and economic flows over equitable accessibility. Importantly, route proposals originate solely from operators; neither the Regional Transport Authority nor the Traffic Bureau proactively plans or proposes routes.

Route overlapping patterns further illustrate an emergent, functionally adaptive network logic.

Some routes show high proportional overlap with a few, while others intersect moderately with many, reflecting both structural redundancy and broad network interweaving. Informal and formal services coexist and compete along high-demand corridors, while peripheral and lower-demand areas remain served primarily by niche alignments. These dynamics indicate both multiple travel alternatives and inefficient duplication in the absence of coordinated planning. Such mismatches are consistent with unplanned urban expansion and weak regulatory oversight, where transport supply evolves in response to profitability rather than accessibility, prioritizing other factors over local access.

Qingqi services are also providing essential connectivity in areas where other modes do not operate. However, operational instability, regulatory concerns, driver qualifications issues highlight the need for reform to ensure safer and more reliable service.

Accessibility analysis of health and education institutions shows that the unstructured bus system simultaneously enhances access in high-demand urban cores while reproducing spatial inequalities at the metropolitan periphery. Similar patterns are observed in access to employment zones, where, apart from central and south-western industrial areas, many zones remain underserved by the current bus network. Further research incorporating travel day-time analysis and origin–destination data is required to strengthen these findings.

Operators are hence addressing demand without adequate mechanisms to protect workers or passengers. Commuter concerns and poor working conditions for drivers and conductors are direct outcomes of this regulatory vacuum. Micro-level practices such as frequent stopping, fare flexibility,

route persistence, and labor arrangements, are shaped by macro fuel prices, licensing costs, informal payments, and accident risks.

This coupled with no support, minimum regulations by the relevant authorities and crippling infrastructure of the city, make these unstructured buses an operational anomaly whose operators defy all odds to provide mobility to the lower socio- economic laborers and workers of the city who cannot afford any other mode of transport.

he future trajectory of unstructured buses points toward socio-spatial marginalization rather than disappearance, with services increasingly serving working-class populations in peripheral areas. Their continued operation reflects both state failure and community resilience. Beyond mobility, minibuses also function as spaces of everyday interaction and community formation, representing a cultural marker of Karachi's transport history. Replacing these systems with uniform models without addressing underlying governance failures risks reproducing exclusion rather than resolving it.

POLICY RECOMMENDATIONS & IMPLICATIONS

Alignment of Routes with Population and Essential Services: The study found that current route design practices are not aligned with population distribution and access needs. Route development focused on central, high-demand corridors risks reinforcing spatial inequities, particularly in peripheral and suburban areas. This suggests a need for transport planning frameworks that incorporate population density and ensure connectivity to essential services such as healthcare, education, and employment across all parts of the city.

Livelihood Implications of System Transition: The transition towards formal mass transit systems carries significant implications for employment within the existing transport sector employing tens of thousands of people. This underscores the importance of transparent and effective execution of existing livelihood restoration frameworks by relevant authorities to avoid economic displacement and social vulnerability.

Role of Unstructured Buses within Future Systems: The continued service and survival of unstructured buses suggest that they remain functionally embedded within Karachi's mobility landscape. Their potential integration as feeder services points to the need for policy frameworks that recognize their operational value rather than treating them as redundant. At the same time, their cultural and social significance indicates that transport modernization efforts must also consider public acceptance and identity.

Position of Qingqis in the Transport Ecosystem: The economic viability and connectivity provided by Qingqis highlights a gap within the formal transport system, despite regulatory and safety concerns. This suggests that, with appropriate safety regulation and formal recognition, Qingqis could play a structured role within an integrated transport network.

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Need for Interim Regulation of Existing Services: Given delays in the expansion of formal mass transit infrastructure, unstructured buses will continue to play a central role in urban mobility in the short to medium term. This creates an immediate need for stronger regulatory oversight as well as support to address equitable service provision, safety risks, vehicle conditions, and unsustainable operational practices.

Institutional Coordination and Stakeholder Engagement: The findings reveal a fragmented governance structure with limited coordination between transport authorities, operators, and other stakeholders. This lack of alignment contributes to inconsistent policies and ad hoc interventions. Strengthening institutional coordination and establishing regular platforms for stakeholder engagement emerges as a critical requirement for coherent and effective transport planning.

Importance of Supporting Urban Infrastructure: Transport service quality is closely tied to the condition of supporting urban infrastructure. Poor road conditions, lack of designated stops, and inadequate pedestrian facilities directly affect operational efficiency and user experience. This implies that transport policy must extend beyond vehicles and routes to include coordinated investment in urban infrastructure systems.

Public Trust and Communication Gaps: Low public trust, reliance on cheap private transport alternatives and limited access to information about transport services highlight a critical communication gap between institutions and users. This suggests that transport reforms must be accompanied by clear, accessible, and transparent communication strategies to improve public understanding, encourage usage, and build confidence in the system.