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ISSUE BRIEF

STRENGTHENING RURAL MOBILITY IN KARNATAKA

Addressing Capacity Gaps Through Complementary Transport Services
A case study of Melukote Constituency

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EXECUTIVE SUMMARY

Rural mobility in Karnataka remains unreliable despite significant investments into road connectivity and affordability interventions such as the Shakti Scheme. Increased ridership has not been matched by expanded supply, resulting in chronic overcrowding, limited route coverage, and service gaps that restrict access to education, healthcare, and markets. This Issue Brief summarises the findings of a study in the Melukote Constituency, in Mandya District of Karnataka.

In public-transport dependent rural communities, low frequencies and poor coverage force residents to wait longer, to walk up to 2 kms to their nearest bus stop, schools and colleges shorten instructional hours to align with the bus schedules, and residents face inconvenience when travelling for various purposes outside of the bus schedule. Public transport providers struggle to provide adequate service and maintain profitability due to the characteristics of rural demand, while private transport services and intermediate public transport services are unable to cover the gaps due to restrictions in regulations. Such structural gaps in rural mobility provision result in affordability without accessibility.

To better align rural public transport service ecosystem with the rural demand, state requires three sets of policy interventions, each achievable within the existing legal framework: (a) formalising shared IPT through permit reform which can bridge last-mile gaps, (b) introducing services more suitable for rural demand such as mini buses on unserved/low-demand routes and incorporating private operators to reduce burden on state transport services, and (c) piloting community-based models for specific needs like student transport alignined with financial support and existing incentives. Together, they offer Karnataka a practical path from affordability to genuine accessibility.

1. Introduction

Public transport forms the backbone of rural mobility in Karnataka, linking dispersed households with education, healthcare, and markets concentrated in taluk centres. State policy has prioritised road connectivity and affordability through initiatives such as the rural roads schemes, Shakti Scheme, and subsidised student passes. Despite these investments, the Karnataka Economic Survey 2024–25 identifies inadequate transportation facilities as a continuing constraint to rural development.[1]

Melukote Constituency offers a useful lens to examine this gap. Part of Mandya District, the constituency sits within a predominantly agricultural economy, with more than three-fourths of its workforce engaged in the sector. With services and higher education concentrated in Taluka and Hobli centres such as Pandavapura and Dudda, residents depend on reliable outbound travel. Melukote's strong road coverage, high public transport dependency, and concentration of services at the taluk-level make it representative of a broad class

[1]Planning, Programme Monitoring and Statistics Department, Government of Karnataka, *Economic Survey of Karnataka 2024–25* (Bengaluru: Government of Karnataka, March 2025), https://planning.karnataka.gov.in/uploads/media_to_upload1741692168.pdf.

of rural constituencies where physical connectivity exists but service quality does not. The constraints documented here are likely to be found across comparable constituencies in Karnataka.

This brief examines mobility gaps in Melukote and proposes regulatory and financial interventions to address them.

2. Study Area Background

Melukote Constituency is located in Mandya District, Karnataka, comprising the Pandavapura Taluk and parts of Mandya Taluk. The district is predominantly rural, with more than three-fourths of the rural workers engaged in agriculture.[2] Despite the predominance of farm livelihoods, most of the farmers have small landholdings, and the primary sector contributes to only 14.7 percent of the district's gross domestic product.[3] Melukote has limited industrial activity.

Mandya District has the second-highest road network density in Karnataka, with 254 kms of road length per 100 sq km, and a relatively high rural road density with 100 percent connectivity.[4] While this indicates strong physical road coverage, it does not necessarily translate into adequate or frequent public transport services, particularly in interior villages located away from major corridors.

Travel demand in Melukote is directed towards Pandavapura and nearby Hobli centres for schooling, higher education, healthcare, and government services. The constituency also experiences cyclical spikes in travel demand due to religious and leisure travel on weekends and festival days. Agricultural transport demand is relatively limited. Field discussions indicate that intermediaries manage a bulk of the movement of agricultural inputs and produce. To a lesser extent, farmers transport their produce to nearby markets by public bus.

2.1 Public transport and intermediate transport services in Melukote

The Karnataka State Road Transport Corporation (KSRTC) provides public transport services in the constituency. The Pandavapura Depot operates 72 buses in 67 schedules in Pandavapura and Srirangapattina Taluks. The Mandya KSRTC Depot also serves parts of the constituency. The schedule for bus services connecting the villages aligns with school and college timings, highlighting the significant demand for student travel. Additionally, the constituency is served by intercity buses that connect major towns such as Mandya and K.R. Pete to Mysuru via Pandavapura, carrying both local and through passengers. Most villages are serviced by a roadside bus stop in their proximity

Intermediate Public Transport (IPT) services in the constituency consist of autorickshaws and taxis that supplement the KSRTC network. These autorickshaws operate both on a hire basis and on a shared-fare basis along popular routes. Autorickshaws typically operate from designated stands near high-passenger-flow areas, including bus stands, railway stations, and major temples, and are subject to distance limits for their operations. Their role is particularly important in locations with weak bus connectivity or where buses operate infrequently. Field discussions suggest that while autorickshaws provide essential connectivity, especially for villages and hamlets off main roads, their affordability and availability remain uneven across the constituency.

[2] Directorate of Economics & Statistics, Planning Programme Monitoring & Statistics Department, Government of Karnataka, *Karnataka State At A Glance: Statistical Report FY 2024–25*, Calculates from Table series 2 (Bengaluru: Government of Karnataka, 2025).
[3] Planning, Programme Monitoring and Statistics Department, Government of Karnataka, *Economic Survey of Karnataka 2025–26* (Bengaluru: Government of Karnataka, March 2026), https://planning.karnataka.gov.in/uploads/media_to_upload1772862925.pdf.
[4] Directorate of Economics & Statistics, Planning Programme Monitoring & Statistics Department, Government of Karnataka, *Karnataka State At A Glance: Statistical Report FY 2024–25*, Table 9.3a (Bengaluru: Government of Karnataka, 2025).

A Note on Methodology

The study is primarily informed by a two-day field visit in Melukote in August 2025, supplemented by community engagement during the 'Swaraj Utsava', a constituency-level event at Pandavapura in September 2025. These engagements connected researchers to a wide range of stakeholders connected to rural transport use and provision, including public transport officials and drivers, local auto/share auto operators, commuters, women self-help groups, and residents. Qualitative data were collected through semi-structured interviews and focus group discussions (FGDs). Quantitative insights were gathered through a student survey in Pandavapura and from secondary sources. Educational-related transportation formed a key focus of the study, with discussions with school education department officials, principals, and teachers covering pre-university (PU) colleges and degree colleges in Pandavapura. The data has been thematically analysed to identify recurring mobility challenges, service gaps and user experiences across different population groups. The field visit and the engagement through Swaraj Utsava were facilitated by the Puttanaiah Foundation, an organisation associated with the Member of Legislative Assembly for Melukote Constituency. The Foundation supported stakeholder access and coordination but did not influence data collection or analysis.

3. Key Findings and Implications

Based on field visits, community engagements, interviews, focused group discussions, and student surveys (2025), the data have been thematically analysed to identify recurring mobility challenges, service gaps, and user experiences across different populations. The following thematic categories illustrate the magnitude of these issues.

3.1 Cost-sensitive mobility choices leading to public transport dependency

Public transport is the dominant mode of travel for rural residents in the Melukote constituency. Affordability measures such as the Shakti Scheme and subsidised student bus passes have reinforced this reliance. A survey of 75 students at Government PU College, Pandavapura, found that 90% travel by state-run buses. Approximately half the students reported walking more than 1 km to access the nearest bus stop.

Stakeholders report a substantial rise in ridership under the Sakthi Scheme, with two crore tickets issued at Pandavapura Depot. Interviews indicate that women travel more frequently and for a wider variety of purposes, and they often wait longer for bus services even when paid autorickshaws are immediately available, reflecting strong cost sensitivity. Autorickshaw operators report a decline in female ridership following the introduction of the Shakti Scheme.

Voices from the ground

"Auto trips may cost up to ₹150. Some days, if we are not well, we pay that amount. On other days, we walk and take the bus."

- *A traveller waiting at the Jakkanahalli Cross Bus Stand*

However, the increase in demand for travel has not resulted in any adequate increase in capacity to serve the ridership. The result is a service ecosystem where accessibility is compromised. Stakeholders, including students and women, were critical of the overcrowding that stemmed from the scheme.

Implication

Increased affordability without corresponding expansion in service capacity has intensified pressure on the public transport system. Pricing interventions alone are insufficient; without parallel supply augmentation or complementary services, they risk degrading service quality and reliability.

3.2 A supply-constrained and corridor-focused public transport system limits access

The distribution and frequency of KSRTC bus services are uneven across the constituency. Villages located along major corridors connecting Pandavapura, Mandya, and Mysore receive relatively high-frequency connectivity, with 10-15-minute peak-hour headways. In contrast, villages located off the main roads have limited service frequency or lack direct connectivity. Residents, including students, report walking up to 2 km to the nearest bus stop from several villages. The scale of this gap is officially acknowledged. In response to an unstarred question at the Legislative Council, the Transport Minister stated that of 21,748 villages in Karnataka, KSRTC operates in 20,090, leaving 1,658 villages where the nearest bus stop is at a distance of 2 kms. Melukote's interior hamlets are among them[5].

Discussions with various stakeholders, including officials, reveal capacity limitations and internal constraints to offering additional KSRTC services. With 70 buses and 67 routes, the Pandavapura KSRTC Depot operates at capacity. There are demands for new routes and services from the public, including elected representatives. KSRTC tries to cater to these demands either at the depot level by extending certain routes or re-routing services or at the district level by adding new services on a trial basis. However, these new additions are routinely discontinued when they fail to meet profitability standards. Residents were clear in their disappointment that even sustained local efforts, with support from legislators, cannot deliver a permanent solution to their transportation needs.

Voices from the ground

"Even if we initiate a discussion, we will not be able to provide for their demands. The Gram Panchayat will have more demands that we will not be able to fulfil."

- A representative from the KSRTC depot also observed

Melukote has several low-demand routes where operating regular service puts the KSRTC's revenue targets at risk, making them difficult to sustain. To maintain profitability, buses from these social routes are rerouted to higher-revenue trips on weekends, so the social routes can be kept on paper. This service diversion along low-demand routes on weekends and holidays creates unpredictability for residents.

The bus schedules in the constituency primarily align with school timings, failing to adequately support other essential travel purposes. For healthcare visits, market access, and agricultural work, limited frequency disrupts the entire day's activities.

Voices from the ground

"For farming-related trips, healthcare trips, or household shopping, buses are not reliable. People have to arrive early and wait a long time in Pandavapura. They might arrive at 8, wait till 11 for an appointment and can only return on the 4 pm bus." *- A local stakeholder*

[5]Ashwini M. Sripad, "Despite Shakti Scheme, No Bus Connectivity for 1,800 Villages in Karnataka," *The New Indian Express*, December 18, 2025. https://www.newindianexpress.com/states/karnataka/2025/Dec/18/despite-shakti-scheme-no-bus-connectivity-for-1800-villages-in-karnataka

These limitations in frequency, capacity, and coverage contribute to routine peak-time overcrowding, longer-wait times, and unreliability in services.

Implication

The current service model is structurally unable to provide both coverage and frequency. Expanding access to interior villages via conventional fixed-route bus services is operationally and financially inefficient, underscoring the need for alternative service models for low-demand, dispersed settlements.

Observations from the field

A visit to the Pandavapura bus stop around 4 pm on weekdays shows buses carrying passengers well beyond capacity as students attempt to return to their villages. Passengers are observed standing on the footboards and hanging outside the bus, with many unable to find seats and experiencing severe overcrowding and suffocation inside the buses.

3.3 Impact on Education: Schedule misalignment, overcrowding, and last-mile gaps

The primary impact of the current transportation crisis is on the education sector. Students travel to high schools and colleges in Hobli centres and Taluk centres by bus. Due to limited frequency in both morning and evening hours, students report either reaching too early/late to school, or leaving too late/early to catch the bus home. Despite attempts to align bus timings to school schedules, low frequency leads to long wait times.

Colleges in the area report ending classes at 3:00 PM solely to ensure students catch the last reliable 3:30 PM bus. Parents and students prefer to skip or shorten the time rather than take the later bus and walk home in the dark. Teachers in government institutions report reducing their teaching hours, which is impacting their ability to cover the curriculum, offer special classes, and provide any support for undergraduate entrance exams. This situation further contributes to a lower preference for government institutions among students. Students also report overcrowding, long waiting times, and unsafe travel conditions, including standing on footboards and buses skipping stops.

Voices from the ground

"If they ask them to come earlier for the special classes, some celebration or other reasons, students are not able to come as there are no buses. Students leave earlier, by 3:30, as there is no bus available at a later time/ or those buses will be too late and will be unsafe."
"We tried to keep additional classes for science students after 4. However, parents requested to end class early, by 3 pm, so students could catch the 3:30 pm bus back to their homes. The next bus is at 5:30, and it is too late for students to get back to their homes."
"Parents prefer to send students to private institutions that offer transportation services"

- *From Focussed Group Discussions*

All stakeholders were clear on the need for an alternative arrangement that drops off and picks up students from their village centres in line with the school's timings. While government schools are in no position to provide transportation services on their own, KSRTC faces constraints in sustaining student-only demand routes even when experimenting with them.

Implication

Transport constraints are directly reducing instructional time and educational outcomes, effectively linking mobility gaps to human capital development. Addressing student mobility requires dedicated or restructured services aligned with education schedules, rather than reliance on general public routes.

3.4 Para/intermediate public transport services and regulations

Pandavapura has several forms of intermediate public transport and paratransit services, including autorickshaws that run for hire and on a shared basis. These serve as connectors in Melukote, meeting travel needs where the public transport system falls short. However, the current permit models are unsuitable for rural operations in three ways.

3.4.1 No regulatory support for ride sharing

Rural passengers' preference for lower costs necessitates ride-sharing, which is not permitted under the current regulatory system. Autorickshaws are formally permitted as hired vehicles. A single hired trip typically costs ₹150, which is unaffordable to the daily commuters. This results in operators running shared services along high-demand routes, where they charge an average of ₹20 per seat for a 3 km ride. However, the current permit systems do not explicitly allow such operations. Ridesharing arrangements often exist in a grey area, beyond the typical boundaries of what authorities deem permissible. Similarly, all operations reported facing an 8 km operational radius limit. Operating beyond the 8 km limit is a permit violation, attracting a fine of Rs. 5000.

3.4.2 Decline in passenger demands

Due to passenger preference for affordability, autorickshaws face competition from buses. Autorickshaw operators report a drop in the number of women passengers following the Shakti scheme, as women prefer to wait for a bus and travel at no cost, regardless of travel time. KSRTC special services for religious festivals, which also saw a travel spike, hurt IPT operators.

3.4.3 Limited ability to serve last-mile gaps.

At present, despite being paratransit services, autorickshaws do not provide last-mile connectivity well in rural contexts. They operate from major passenger hubs such as railway stations, bus stations, and town centres, and are rarely available at smaller village stops. Residents living in interior hamlets, especially the elderly or those feeling unwell, hire autorickshaws by calling the operators.

Implication

Intermediate Public Transport operates as an essential but informal mobility layer, filling critical gaps left by the formal system. However, the current regulatory frameworks neither recognise nor enable these services, preventing them from scaling safely or integrating with public transport. Reforming IPT regulation is therefore central to improving rural mobility without overburdening the state bus system.

4. Analysis and Recommendations

Structural Gaps in Rural Mobility Provision result in Affordability without Accessibility

The findings point to a structural mismatch between rising travel demand and the capacity and design of existing public transport systems. Recent affordability measures, particularly the Shakti Scheme, have significantly increased ridership without a corresponding expansion in fleet size or service levels, resulting in systemic overcrowding and declining service reliability. At the same time, the current fixed-route, fixed-schedule bus network is not well-suited to serving dispersed, low-demand rural settlements. While it performs relatively well along high-demand corridors, it struggles to provide adequate coverage and frequency in interior areas without incurring financial losses.

Intermediate public transport services partially fill these gaps in practice. However, regulatory constraints prevent these services from operating at scale or in alignment with user demand, limiting their ability to complement the formal system. Together, these findings point to a service ecosystem that is structurally misaligned with rural demand. Addressing this issue requires three complementary interventions: regulatory reform to enable shared IPT, service restructuring for low-demand routes, and targeted financing for operators who cannot survive on fare revenue alone.

4.1 Formalise and enable shared IPT service

Karnataka should formalise shared IPT services by creating supportive permits or licenses that allow vehicles to operate on a shared basis.

- **Modify Current Contract Carriage Permits Through Special Conditions:** Regional Transport Authorities to issue contract carriage permits to autorickshaws or contract carriage vehicles to operate in a shared manner along a fixed or flexible route/area. RTAs have the authority to specify the area or route of operation for contract carriages under Section 74(2), thereby facilitating shared operations. (See Puducherry example in the box below)
- **Notify a Special Shared Mobility Scheme under Section 67 of the Motor Vehicles (Amendment) Act, 2019:** State Government to create a new scheme for rural shared mobility that can create a license to operate as shared vehicles in order to improve transportation services in alignment with the goals listed in Section 67(3) (Motor Vehicle Act Amendment 2019). This section supports the creation of schemes to improve accessibility and mobility in rural transport and last-mile connectivity.

Puducherry

Puducherry's Vikrams and Maxi Cabs operate as a shared IPT along pre-determined routes, serving both low-density rural corridors and high-usage inner-city roads.

Puducherry's Transport Authority incorporated route/corridor details directly into contract carriage permits issued to small vehicles (7+1 seaters), allowing them to operate on fixed routes as shared service, without requiring a separate scheme or legislative amendment. This was achieved through the Regional Transport Authority's discretion to attach permit conditionalities when granting contract carriage permits within the existing framework under Section 74(2) of the Motor Vehicles Act 1988. The 2017 Transport Policy for the Union Territory demonstrates continued importance for shared vehicles along approved routes as part of its multimodal strategy to reduce congestion and promote sustainability[6]. This allows for a RTA level decision making without waiting for a state level policy.

4.2 Incorporate mini buses to connect unserved, low-demand routes

Smaller vehicles such as vans or minibuses are better suited for unserved, low-demand rural routes where larger stage carriages struggle to make a profit. Tamil Nadu's mini bus scheme offers a directly replicable model for Karnataka to improve accessibility and frequency on low-demand rural routes by channelling private operators into corridors that STUs cannot viably serve. In Melukote, routes that KSRTC has trialled and withdrawn due to low profitability are precisely the corridors where smaller privately operated vehicles could provide viable, lower-cost services.

The State Government can create this scheme under either Section 99 of the Motor Vehicle Act 1988, which allows state governments to operate STUs, or as a scheme or license to achieve goals listed in Section 67(3) (Motor Vehicle Act Amendment 2019).

[6] Government of Puducherry, Transport Secretariat. G.O. Ms. No. 7/Tr. Sectt./2017. August 2, 2017. https://transport.py.gov.in/sites/default/files/Transport%20policy-2018.pdf

Tamil Nadu

Tamil Nadu's mini bus schemes address connectivity gaps in areas not served adequately by stage carriages. This scheme permits mini buses operated by private operators to connect villages/ hamlets/ habitations that have a population of 100 or more to bus stops from where better connectivity is available. The scheme is notified under Section 99 of the Motor Vehicle Act 1988, which allows State Governments to make schemes to provide transportation services through or alongside State Transport Undertakings (STUs).

The New Comprehensive Mini Bus Scheme 2024[7] revised the earlier criteria, permitting mini bus services, offering between 7 and 25 seats, on routes up to 25 kms, with at least 65% of the route covering unserved areas. It also permits new services where existing routes run fewer than four single trips per day, prioritising frequency as a measure of accessibility. Permits are issued at the Regional Transport Authorities (RTA), with the district administration in charge of identifying and notifying routes based on local studies.

4.3 Provide targeted financial and institutional support for rural transport services

Given the limited viability of low-demand routes, the state can adopt targeted support mechanisms, such as viability gap funding for specific routes, subsidies or credit support for small vehicle operators, or community-based transport models. The Aajeevika Grameen Express Yojana (AGEY) is one such central scheme that offers funding for community-based transport solutions for unconnected rural communities.

Educational services are an avenue for such targeted support. Contracted private or IPT operators running dedicated village-to-school/college services, coordinated between the education and transport departments, would directly address the schedule misalignment documented in this study. Existing student pass subsidies should be extended to cover such contracted services, maintaining affordability while relieving pressure on KSRTC.

Aajeevika Grameen Express Yojana (AGEY)

Launched in 2017 as a subscheme under the Deendayal Antyodaya Yojana—National Rural Livelihoods Mission (DAY-NRLM), AGEY provides financial assistance to women-led self-help groups and community-based organisations to purchase small passenger vehicles for rural last-mile connectivity. State Rural Livelihoods Missions (SRLMs) coordinate with State Transport Departments to identify corridors and issue appropriate permits based on feasibility assessments. In several areas, RTOs have provided administrative relaxations allowing vehicles to operate in a shared manner to make AGEY services viable in remote and rural areas[8].

AGEY demonstrates a viable model for channelling central and state support to community-based rural transport operators and provides a ready institutional entry point for states like Karnataka to extend targeted financial support to small vehicle operators serving low-demand rural routes.

[7]Government of Tamil Nadu, Home Department (Transport-I). *New Comprehensive Scheme, 2024 And Fare Revision Of Mini Bus Under The Motor Vehicles Act, 1988*. G.O. Ms. No. 33, Home (Transport-I). 23rd January 2025 https://www.stationeryprinting.tn.gov.in/extraordinary/2025/37_Ex_II_1_2025.pdf

[8] Ali, Nikhil. 2026. "Rural Mobility in India: Roads Built, Services Missing" Centre for Public Policy Research (CPPR), January, 2026.

4. Conclusion

The findings from Melukote point to a structural problem in how rural mobility is provided in rural Karnataka. The current model of STU provides public transport that operates at capacity, and is not able to meet the variations in demand along rural routes without incurring losses. Despite an opportunity, IPT services are unable to complement transport provision due to restrictions in regulations. Affordability interventions have increased demand without a corresponding increase in supply, resulting in poor accessibility.

The proposed interventions are drawn from flexibilities in the current legal framework, which allows States to take innovative measures to meet rural transport demands. All three of them, permit reform for shared IPT, private mini buses on unserved routes, and targeted financial support for community operators, have a precedent elsewhere in India. What they require is administrative will: at the RTA level to attach corridor conditionalities to permits, at the state level to notify a mini bus scheme, and at the district level to coordinate route identification and operator support. The Karnataka Department of Transport and the Mandya District Administration should initiate a coordinated pilot in Melukote that puts these recommendations into practice. Together, they offer Karnataka a practical path from affordability to genuine accessibility.

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