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Business Model Innovation For Rural Public Transport Sustainability: Evidence From Public Stage Bus Demand In Serdang – Kedah, Malaysia

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Abstract

Rural public transport services face substantial operational and financial challenges due to low population density, dispersed settlements, and uneven road infrastructure, resulting in low ridership and high operating costs. Consequently, many bus operators struggle to sustain profitable operations in rural areas. This study aims to explore the demand for public stage bus services in rural areas of Serdang – Kedah, Malaysia, and examine potential business model innovations to enhance service sustainability. A qualitative exploratory approach was employed using two methods: (i) in-depth interviews with rural communities to understand their transportation needs and experiences, and (ii) focus group discussions involving bus company personnel, government authorities, and local communities to gather multi-stakeholder perspectives. The findings reveal that demand for public stage bus services continues to exist, particularly among rural populations with limited mobility alternatives. However, conventional fixed-route services alone may no longer be sufficient to ensure long-term operational sustainability. Stakeholders suggested the integration of Demand Responsive Transport (DRT) as a complementary mobility solution to improve service accessibility, operational efficiency, and cost-effectiveness. This study contributes to the discussion on rural transport sustainability by highlighting the importance of business model innovation in public transport services, particularly through the adoption of flexible and demand-driven transport approaches in rural settings.

Keywords: Rural Public Transport; Public Stage Bus; Business Model Innovation; Transport Sustainability; Demand Responsive Transport (DRT)