

Innovation-Driven Transportation Management Strategies for Mid-Sized Cities: Evidence from General Santos City, Philippines

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Abstract

Urban transportation systems in many developing countries continue to experience significant pressures arising from rapid urbanization, fragmented governance arrangements, and limited institutional capacity. In the Philippine context, transportation modernization initiatives have largely concentrated on major metropolitan areas, while mid-sized cities remain relatively underexplored in empirical studies on transport governance. This research investigates the extent to which innovation-oriented transportation management strategies affect mobility outcomes in General Santos City, Philippines. Drawing on Systems Theory, Innovation Diffusion Theory, Institutional Theory, and Sustainable Mobility Theory, the study explores the relationships among contextual drivers, transportation transformation mechanisms, and mobility outcomes. A quantitative descriptive-correlational design was utilized, with survey data collected from 360 stakeholders, including public utility vehicle drivers, representatives of transport cooperatives, and commuters. The data were analyzed using descriptive statistics, correlation analysis, and multiple regression techniques. The findings reveal that contextual factors, particularly commuter mobility demands, institutional capacity, and the prevailing policy environment, significantly shape the adoption of transportation transformation mechanisms. These mechanisms include the implementation of digital mobility systems, participatory stakeholder engagement processes, route rationalization initiatives, and data-driven planning approaches. Furthermore, the results demonstrate that these transformation mechanisms contribute positively to key mobility outcomes, particularly commuter satisfaction, service reliability, and operational efficiency. Nevertheless, progress in areas related to institutional viability and environmental sustainability appears to be slower, largely due to existing structural and financial limitations. Based on these findings, the study advances an integrated transportation management framework that integrates technological innovation, governance reforms, and collaborative stakeholder engagement to promote sustainable urban mobility in mid-sized cities.

Keywords: transportation innovation, sustainable mobility, transportation governance, public transport modernization, mid-sized cities