Integrating Transit Oriented Development (TOD) Principles with Industrial Mobility: A Case of Industrial Areas in Chhatrapati Sambhajinagar

Gayatri D. Supekar
Department of Planning, College of Engineering Pune Technological University (COEP TU), Pune, India

Abstract

Industrial corridors developed under India's National Industrial Corridor Development Programme (NICDP) are reshaping urban growth and regional connectivity. Industrial growth driven by Shendra- Bidkin MIDC under the Delhi - Mumbai Industrial Corridor (DMIC), along with the expansion of Waluj MIDC, has significantly accelerated economic growth and employment generation. However, mobility systems have not evolved proportionately, resulting in changing travel pattern behaviour of workers, inadequate public transport integration, unsafe commuting environments, rising travel expenditure and increasing dependence on private and informal transport modes among industrial workers. Conventional Transit-Oriented Development (TOD) principles primarily focus on high-density mixed-use development along BRT corridors, metro lines, or mass transit systems and do not adequately address industrial mobility characteristics, where worker commute, freight movement, and travel patterns play a significant role. This gap is particularly evident in rapidly urbanizing Tier-2 cities, where industrial expansion precedes integrated transport planning. This study examines the integration of TOD principles with industrial mobility in the Waluj- Shendra- Bidkin MIDCs using a mixed-method approach involving GIS spatial analysis, worker travel surveys and NMT audits, along with the evaluation of multimodal integration, last-mile connectivity, housing accessibility, transport affordability and freight connectivity. The study proposes an integrated industrial mobility planning approach that contextualizes TOD principles for MIDCs, aiming to support compact urban growth, improved worker and freight mobility and enhanced multimodal integration in emerging Tier-2 cities such as Chhatrapati Sambhajinagar.

Keywords

DMIC, freight connectivity, GIS spatial analysis, last mile connectivity, MIDC, NMT, TOD, workers mobility.