

Infrastructure, Structural Transformation, and Spatial Spillovers: An Analysis of Morocco's 12 Regions

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Abstract

This article analyzes how infrastructure influences the structural transformation of Morocco's 12 regions (2015-2023) and the extent to which it generates neighborhood (spillover) effects capable of accelerating or hindering regional industrialization. Using a balanced panel of 108 observations, we apply an original methodological triangulation: Shift-Share analysis (Dunn, 1960), Moran's I tests, panel Spatial Durbin Model (SDM), and structural convergence clubs (Phillips & Sul, 2007). Our results yield four main findings. First, regional structural transformation shows growing divergence – the coefficient of variation of the industrial share rises from 62% to 78% between 2015 and 2023. Second, Shift-Share analysis identifies six "Champion" regions combining favorable sectoral specialization and own competitiveness, against five "Structural" regions with a favorable sectoral mix but a competitive deficit. Third, Moran's I for industrial share is consistently negative ($I = -0.155$ on average, -0.227 in 2023), revealing spatially isolated industrial poles rather than continuous corridors. Fourth, panel SDM models show that infrastructure is not significant in within (fixed-effects) estimation, while FDI per capita is the only robustly significant determinant of industrialization ($\beta \approx 1.2^{**}$, $p < 0.05$); infrastructure spillovers remain ambiguous depending on the temporal specification. These findings carry implications for industrial decentralization policy, notably the need for differentiated, club-specific strategies and inter-regional connectivity investment.

Keywords

Structural transformation, spatial spillovers, infrastructure, shift-share, moran's i, spatial durbin model, convergence clubs, moroccan regions.