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Research Papers

Titles: Coupling coordination of digitalization and greenization in China: novel evidence on sectoral linkages and transmission pathways

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Abstract:

Digitalization and greenization are reshaping industrial development and sustainable growth in China, yet their combined effects on intersectoral linkages remain largely underexplored. To address this gap, this study examines Digitalization-Greenization capital input Coupling Coordination (DGCC) the Chinese economy, evaluating its implications for intersectoral transmission from 2002 to 2020. Using an integrated framework that combines the Coupling Coordination Degree Model, Input-Output Analysis, and Structural Path Decomposition, we reveal a steady overall improvement in DGCC, though coordination remains uneven. Secondary industry occupies a central position in coordinated development, with some core sectors progressing toward moderate coordination, while tertiary industry sectors remain at relatively low levels. Intersectoral linkages display clear asymmetry between production and consumption sides, and transmission pathways are primarily anchored within the secondary industry and its connections with other sectors. Driver decomposition further indicates a temporal shift, with final demand scale effects dominating in the early period and DGCC-related intensity effects becoming increasingly important over time. These findings highlight the importance of DGCC-oriented coordination and intersectoral connectivity, contributing to a clearer understanding of digitalization-greenization interaction and offering insights for sustainable industrial transformation.

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