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CLIMATE RISK, DIGITAL TRANSFORMATION AND SUPPLY CHAIN RISK: EVIDENCE FROM CHINA

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Abstract

Climate risks have increasingly disrupted firms' supply chains worldwide, making it imperative to understand how such risks undermine supply chain stability and how firms can mitigate these adverse effects. Using panel data from 3,653 Chinese A-share listed firms over the period 2007–2022, this study examines the impact of climate risk on supply chain risk and the moderating role of digital transformation. The results show that climate risk significantly increases firms' supply chain risk, and this effect remains robust after addressing endogeneity concerns. Further analyses reveal that the adverse impact is more pronounced for firms with weaker ESG performance, greater exposure to transition risk, higher supplier concentration, and those located in regions with lower digital infrastructure. Importantly, digital transformation mitigates the negative effect of climate risk on supply chain. These findings provide micro-level evidence on how firms can enhance supply chain resilience in the face of climate-related risks.

Key words: balance between supply and demand, climate risk, digital transformation, supply chain risk

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