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CAN DIGITAL INDUSTRY AGGLOMERATION IMPROVE URBAN GREEN TOTAL FACTOR PRODUCTIVITY? INSIGHTS FROM THE THRESHOLD EFFECTS OF GOVERNMENT ATTENTION

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Abstract

Under the Digital China strategy, the integration of digital development with green transformation has become a key challenge for ensuring the sustainable growth of Chinese cities. This study examines how digital industry agglomeration (DIA) influences urban green total factor productivity (GTFP), using panel data from Chinese cities. It also explores the threshold effects of government environmental attention (GEA) and government digital attention (GDA) on this relationship. The results reveal that DIA exerts a significant positive influence on GTFP, contingent upon the level of GEA. Specifically, when GEA is below the threshold value of 4.431, DIA does not have a statistically significant effect on GTFP. A positive impact is observed only when GEA surpasses this critical threshold. Similarly, GDA demonstrates a double threshold effect. When GDA is below 2.197, DIA shows no significant influence on GTFP. The positive impact emerges at GDA levels above 2.197 and strengthens further beyond 3.296. Further heterogeneity analysis reveals that the positive effect of DIA on GTFP is more pronounced in central regions and resource-based cities. This finding suggests that digitization can play a crucial role in mitigating the long-term challenges associated with the "resource curse," offering new momentum for these cities to overcome path dependence and achieve green transformation. This study contributes to the integration of the digital economy and green development, providing a theoretical foundation and policy guidance for local governments to design context-specific strategies that promote both digitalization and environmental sustainability.

Key words: digital industry agglomeration, government attention, green total factor productivity, threshold effect

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