Research on the Realization Mechanism of Digital Economy's Synergistic Effect on Pollution Reduction and Carbon Reduction (Summary)

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At present, China is confronted with the dual challenges of addressing climate change and building a beautiful China. The synergy between pollution reduction and carbon reduction has become an important starting point for promoting the realization of ecological civilization. The digital economy provides an important opportunity to achieve this goal. Based on panel data from 30 provinces from 2013 to 2022, this paper uses a joint coordination model to calculate the synergy between pollution and carbon reduction, builds a two-way fixed model, and analyzes the benchmark regression, the verification of the intermediary mechanism, and the imbalance mechanism. According to regression, firstly, the digital economy significantly promotes the synergy between pollution reduction and carbon reduction. Secondly, the digital economy can achieve the coordinated management of pollution reduction and carbon reduction through three channels: promoting technological progress, optimizing the industrial structure, and optimizing the energy consumption structure.

Keywords: Digital economy, Synergy between pollution reduction and carbon reduction, Mediating mechanism