

# **How to Drive Low-carbon Development in Industrial Transfer Recipient Regions**

**Qiushi Wang**

*Anhui University of Science and Technology, China*

## **Abstract**

China stands at a pivotal juncture in its low-carbon industrial transformation, and effectively aligning stakeholder incentives is the linchpin of success when hosting relocated industries. This paper begins by identifying and categorizing the principal actors—government agencies, private firms, financial institutions, and civil society organizations—and clarifying their distinct objectives in the context of low-carbon industrial relocation. We then employ principal component analysis to quantify the relative importance of diverse incentive drivers within an overarching benefit-sharing framework. Building on these results, we introduce an enhanced Shapley-value mechanism that integrates each stakeholder's level of investment, emissions-reduction contribution, and risk exposure, thereby constructing a cooperative incentive scheme tailored to regional low-carbon development. Finally, through an empirical case study of a representative host region, we assess the performance of the proposed benefit-allocation plan and outline strategic pathways to accelerate low-carbon industrial transfer. Our findings advance the theoretical foundations of regional incentive design and offer actionable insights for policymakers and practitioners seeking to establish sustainable, collaborative models for low-carbon growth.

**Keywords:** Industrial Transfer; Low-Carbon Development; Benefit-Driven; Shapley Value Method