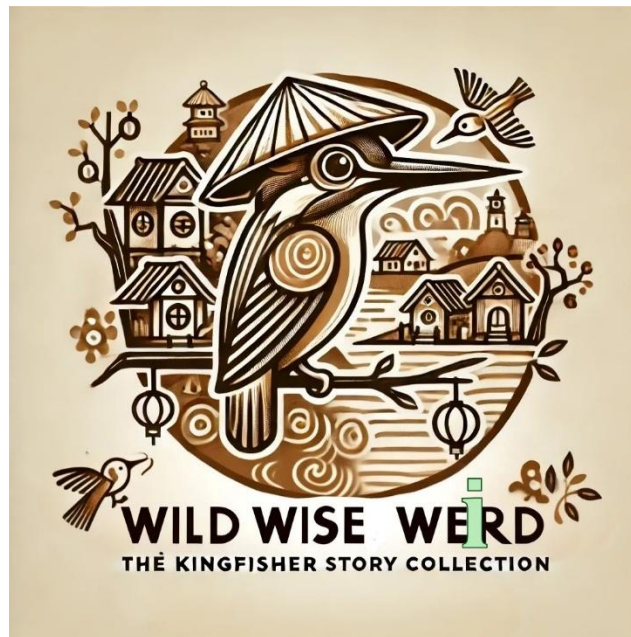


Digital Shields Against Green Deceit: How China’s Environmental Tax Law and E-Governance Combat Corporate Greenwashing

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“To ensure the health of the prophet of the Bird Village, the disciples scrambled to make preparation: nutritious vegetables, mashed cornmeal, soft rice, herbs, etc. Only fish was absolutely absent because that was the principle of the practice. This one ultimate rule could not be violated.”

In “No-Fish Dietary”; *Wild Wise Weird* [1]



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Greenwashing—the practice of companies exaggerating or fabricating their environmental credentials—undermines public trust and impedes genuine sustainability progress [2-4]. In the context of China’s transition toward greener development, addressing this issue is crucial. A recent study by Ding, Wang, and Wu [5] evaluates the impact of China’s 2018 Environmental Tax Law (ETL) on curbing greenwashing while also examining how digitalization across corporate, societal, and governmental domains moderates this effect.

Drawing on data from 1,275 publicly listed companies between 2015 and 2021, the researchers quantified greenwashing by comparing firms’ disclosed Environmental, Social, and Governance (ESG) scores with their actual environmental performance. Their analysis, using a Difference-in-Differences model and validated through Double Machine Learning techniques [6], found that the ETL significantly reduces greenwashing behavior among pollution-intensive enterprises. The law imposes direct taxes on emissions, thereby raising the cost of pollution and discouraging deceptive environmental reporting.

A key insight from the study is the critical role of digitalization in strengthening the law’s impact. While corporate digitalization enhances internal transparency and social digitalization empowers public oversight, it is government digitalization—enabled through e-governance platforms, big data, and real-time monitoring systems—that proves most effective [7,8]. This top-down digital infrastructure improves regulatory enforcement, closes information gaps, and limits firms’ ability to mislead stakeholders.

Further analysis reveals that the ETL’s effectiveness is amplified in specific contexts: regions with higher environmental tax rates, companies subject to mandatory ESG disclosures and high-tech enterprises often associated with hidden environmental risks. These findings emphasize that regulatory outcomes are shaped not only by policy design but also by local and institutional conditions.

This study illustrates how a well-designed environmental tax, when combined with robust digital governance, can effectively deter greenwashing and promote authentic corporate accountability [9]. It reinforces the importance of integrating technological innovation into environmental policy frameworks. Ultimately, bridging the gap between environmental performance and perception is essential to restoring the integrity of the nature-human nexus and advancing a more sustainable future [10].

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