Institutional Environment, ESG Performance, and Its Improvement Paths: A Literature-Based Analysis

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***Abstract*—This paper systematically examines the connotation, public perception, value effects, shortcomings, and avenues for improvement of corporate Environmental, Social, and Governance (ESG) performance. The existing empirical literature shows that ESG significantly promotes financial performance, with non-financial performance fully mediated, and that the institutional environment plays a moderating role. China's ESG development has drawbacks, including low disclosure rates, imperfect standards, and weak digital governance. ESG can be improved by reducing information asymmetry, strengthening carbon-emission policies, promoting a national carbon market, strengthening media supervision, integrating digital technology, and implementing new energy policies. The advancement of ESG further drives digital transformation and the development of green finance. This study clarifies the logic of ESG practice and provides references for enterprises and policymakers.**

***Keywords*—ESG performance, institutional environment, digital transformation, green finance, emission reduction**

I. Introduction

In the context of global climate governance and sustainable development, Environmental, Social, and Governance (ESG) has become the core standard of enterprise sustainable development. Existing studies show that ESG activities have a significant impact on financial performance, and non-financial performance plays a complete mediating role, while the institutional environment exerts regulatory effects. However, China's ESG practices are still in their early stages, with issues such as low disclosure rates, inconsistent standards, and insufficient digital governance. Based on the existing empirical literature, this study uses a literature review and comparative analysis to explore the connotation, public perception, value, shortcomings, and promotion paths of ESG, and to analyze its role in digital transformation and green finance. This study can clarify the logical framework of ESG practice, provide theoretical support for enterprises to improve their ESG levels, and help policymakers optimize the institutional framework for ESG and green development.

II. Connotation and Theoretical Basis of ESG Performance

A. Three Dimensions of ESG: Environment, Social, and Governance

1) Environment (E)

The environmental dimension captures a firm's capacity to mitigate ecological risks, reduce carbon intensity, and transition toward low-carbon operations. Core indicators include carbon emission control, pollutant treatment, resource efficiency, green technology innovation, clean energy adoption, and sustainable production. Firms with strong environmental performance comply better with tightening regulations, reduce operational waste, and secure strategic advantages amid carbon-neutral transitions. Environmental performance thus serves as both a compliance signal and a source of competitive differentiation. Preventing fines, reducing insurance premiums, and expanding access to green financing markets are all possible with proactive environmental management. Long-term legitimacy in high-ecological-footprint enterprises requires environmental leadership (Liu *et al.,* 2022; Wang & Liu, 2022).

2) Social (S)

The social dimension reflects how enterprises fulfill responsibilities toward employees, consumers, supply chain partners, and local communities. It encompasses employee welfare and training, consumer protection, ethical supply chain management, public welfare engagement, and community development. Good social performance improves reputation, stabilizes labor relations, and increases public trust. By lowering social risk premiums and stakeholder conflicts, these relational assets promote long-term value generation. Strong social performance also helps attract and retain talent, particularly among younger workers who prioritize purpose-driven employment. It mitigates risks linked to labor disputes, supply chain disruptions, and consumer boycotts. Thus, the social dimension bridges internal HR management and external stakeholder relations, forming a critical pillar of sustainable business models (Liu *et al.,* 2022; DasGupta & Roy, 2023).

3) Governance (G)

Governance refers to the internal mechanisms that ensure transparency, accountability, and strategic oversight. Core elements include board composition, independent directors, disclosure quality, shareholder rights protection, internal controls, and anti-corruption mechanisms. Robust governance reduces agency costs, curbs managerial short-termism, and improves decision-making efficiency. Governance quality thus forms the institutional foundation for sustainable operations and credible ESG performance. Effective governance also deters earnings management, fraud, and excessive risk-taking—behaviors often linked to environmental scandals or social irresponsibility. Mechanisms such as board-level sustainability committees and ESG linked executive compensation align incentives with long-term stakeholder value. Without sound governance, environmental or social improvements are unlikely to be sustained or properly disclosed (Liu *et al.,*

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2022; Wang & Yang, 2024; Tang, 2025).

B. Supporting Theories

1) Stakeholder theory

Stakeholder theory posits that firms must balance the interests of multiple parties—shareholders, employees, customers, suppliers, communities, and regulators—rather than pursuing short-term profit maximization alone. ESG practices serve as a strategic instrument to coordinate these diverse claims, securing social resources, enhancing relational capital, and fostering long-term stability. This lens explains why ESG performance is positively associated with firm resilience and stakeholder cooperation. Different stakeholder groups prioritize different aspects of ESG: investors are becoming more concerned with governance quality, while employees may place more emphasis on social performance. Therefore, both targeted responsiveness and overall improvement are necessary for effective ESG management (Liu *et al.,* 2022; DasGupta & Roy, 2023).

2) Legitimacy theory

Legitimacy theory emphasizes that organizations must operate within socially accepted norms and legal regulations to obtain societal approval. Poor ESG performance threatens corporate legitimacy, potentially triggering public criticism, consumer boycotts, or regulatory sanctions. On the other hand, enhancing ESG performance might be viewed as a step toward regaining legitimacy. According to this viewpoint, ESG practices are motivated by the necessity of conforming to external standards in order to guarantee existence and expansion. Legitimacy concerns are especially salient in industries with high environmental impact or close public scrutiny, such as energy, mining, and consumer goods. Legitimacy deficits are costly to reverse, as lost public trust may take years to rebuild. Firms thus use ESG disclosures, certifications, and third-party ratings as legitimacy signals (Liu *et al.,* 2022; DasGupta & Roy, 2023).

3) Institutional Theory

Institutional theory suggests that external pressures—legal frameworks, government policies, cultural norms, and public opinion—shape corporate behavior. Firms improve ESG performance as an adaptive response to institutional expectations, often leading to institutional isomorphism, whereby organizations in the same field adopt similar ESG practices to gain support and avoid penalties. Unlike stakeholder theory, institutional theory highlights coercive (e.g., regulatory pressures), mimetic (e.g., imitation of peers), and normative (e.g., professional standards) pressures. The global proliferation of ESG rating agencies and sustainability reporting frameworks exemplifies mimetic isomorphism, as firms adopt prevailing practices to appear legitimate to international investors (Liu *et al.,* 2022; DasGupta & Roy, 2023; Tang, 2025).

4) Comparative synthesis

Together, these three theories offer complementary explanations. Stakeholder theory focuses on "whom" firms should respond to; legitimacy theory explains "why" external approval matters; and institutional theory describes "how" external pressures diffuse across fields. ESG performance emerges from strategic choice, the maintenance of the social contract, and adaptation to external constraints. This pluralism is essential for understanding ESG heterogeneity across firms, industries, and countries.

C. Measurement Methods of ESG Performance

ESG performance is most commonly assessed through third-party rating systems, which generate aggregate ESG scores and dimension-specific scores for E, S, and G. Widely used commercial databases include MSCI, Sustainalytics, and China's SynTao Green Finance. These systems vary significantly in methodologies and data sources, leading to low-to-moderate cross-rater correlations. Researchers often use multiple rating sources or averaged scores to enhance reliability.

Beyond composite ratings, empirical studies rely on measurable proxies such as ESG disclosure quality, green patent applications, carbon emission intensity, board independence, and standalone CSR reports. These indicators enable cross-sectional comparisons and longitudinal tracking, facilitating research on antecedents and consequences of ESG performance. Each proxy captures a distinct aspect: board independence indicates strong governance, green patents show environmental innovation, and disclosure quality reflects transparency. Since individual proxies and aggregated scores are not interchangeable, researchers must match measurement techniques to study topics. (Liu *et al.,* 2022; Wang & Yang, 2024; Li, 2023; Ju, 2022).

III. Multi-dimensional Paths to Improve ESG Performance

A. Reducing Information Asymmetry and Improving Disclosure Quality

Standardized and transparent ESG disclosure narrows the information gap between firms, investors, analysts, and the public. This transparency restrains opportunistic behavior such as greenwashing, enhances market trust, improves analyst forecast accuracy, and directly elevates ESG ratings. High-quality disclosure also reduces external monitoring costs and facilitates capital allocation toward responsible firms. Practical instructions are provided by frameworks like TCFD and GRI. Thus, disclosure quality functions as a means of improving ESG evaluation as well as a governance mechanism. However, if discrepancies are revealed, sharing without significant progress could backfire. Alignment between reported data and verifiable actions is necessary for credible disclosure. (Wang & Yang, 2024; Ju, 2022).

B. Carbon Emission Policies and National Carbon Market

Mandatory carbon-reduction policies—exemplified by China's national carbon-emission trading market—compel firms to internalize emission costs and scale up green investments. For covered entities, particularly state-owned enterprises and those in non-pilot regions, participation in the carbon market significantly improves ESG performance by alleviating financing constraints and mitigating managerial short-termism. This mechanism suggests that market-based environmental regulation can function as an effective governance device for ESG enhancement. Carbon pricing not only reduces emissions but also reshapes corporate incentives toward broader ESG improvement.

However, effectiveness depends on carbon price levels, allowance allocation, and enforcement intensity. The disciplinary effect might be restricted if carbon costs are too low. It could be required to implement complementary policies like carbon floor prices (Wang & Yang, 2024; Tang, 2025).

C. Media Supervision and Social Credit Environment

Media plays an external governance role by exposing violations, highlighting social risks, and restricting misconduct. Such public scrutiny exerts reputational pressure, compelling firms to rectify poor ESG practices. Meanwhile, a well-functioning social credit system reinforces these constraints by linking ESG performance to credit access, default risk, and regulatory oversight, thereby promoting standardized ESG conduct. Together, media as informal supervision and social credit as semi-formal enforcement create a robust external governance environment for ESG improvement. Media effects are stronger in regions with high internet penetration and an active civil society, while social credit systems are particularly influential in regions with advanced government–business information integration. These mechanisms interact: media coverage often triggers social credit adjustments, amplifying consequences of poor ESG behavior (Ju, 2022).

IV. ESG Promotion to Digital Transformation and Green Finance

A. ESG Improves Enterprise Digital Management Ability

Improved ESG performance encourages firms to adopt digital technologies—such as big data, AI, and cloud computing—for real-time environmental monitoring, standardized data governance, intelligent operations, and transparent reporting. Digital transformation, in turn, enhances the precision of emission reductions and the efficiency of internal controls. This bidirectional relationship creates a positive feedback loop between ESG and digital capability. ESG is thus not merely an outcome of digitalization but also a driver of corporate digital upgrading. Firms with higher ESG scores tend to invest more heavily in digital infrastructure. IoT sensors enable continuous emissions tracking, while blockchain-based platforms enhance the traceability of social responsibility. As digital tools lower the marginal cost of ESG data collection, firms achieve more frequent and granular reporting, further improving ratings. ESG and digital transformation should be viewed as co-evolving organizational capabilities (Wang & Liu, 2022; Peng, 2024; Zhang & Li, 2022).

B. ESG Drives the Development of Green Credit and Green Finance

Firms with superior ESG performance are more likely to secure green credit, green bonds, and other green financial support. High ESG scores reduce perceived credit risk and information asymmetry, thereby lowering financing costs and expanding green capital availability. Through this mechanism, ESG performance helps channel financial resources toward low-carbon and sustainable industries, reinforcing the green transition. Financial institutions increasingly integrate ESG criteria into credit assessment, making ESG a material factor in capital allocation. ESG thus serves as a bridge between corporate responsibility and the development of the green financial market. Businesses are encouraged to upgrade their ESG data infrastructure as a result of the demand for more standardized ESG measures created by the expansion of green finance. This virtuous cycle—better ESG attracting capital, and capital demanding better ESG—accelerates resource reallocation toward sustainable activities. However, greenwashing risks in financial products (e.g., mislabeled green bonds) remain a concern, underscoring the need for independent verification (Li, 2023; Zhang & Li, 2022).

V. Conclusion

This study systematically summarizes the connotation, public cognition, value effects, shortcomings, and improvement paths of ESG performance. ESG is a comprehensive performance system encompassing environment, society, and governance, which significantly improves financial performance by fully mediating non-financial performance, and the institutional environment plays a moderating role. The public has a positive cognitive attitude towards ESG, and media supervision serves as an external constraint. Advocating ESG helps enterprises improve performance, ease financing constraints, optimize governance, and enhance competitiveness. Compared with developed countries, China's ESG has shortcomings in disclosure rates, standard-setting, rating systems, and institutional adaptation. ESG performance can be improved by reducing information asymmetry, strengthening carbon policies, using a national carbon market, strengthening media supervision, integrating digital technology, and implementing new energy policies. Improving ESG can further promote enterprise digital transformation and boost green finance development. The limitation of this study is that it relies primarily on a literature review rather than empirical testing. Future research can use panel data to conduct empirical tests and analyze industry- and region-specific heterogeneity.

Conflict of Interest

The authors declare no conflict of interest.

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