

-RESEARCH ARTICLE-

ESG PERFORMANCE AND FINANCIAL OUTCOMES IN CHINESE SMES: A SYSTEMATIC REVIEW OF REGIONAL AND INDUSTRIAL DISPARITIES

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—Abstract—

This study examines the influence of Environmental, Social, and Governance (ESG) performance on the financial results of Small and Medium Enterprises (SMEs) in China, emphasising variations across regions and industries. A Systematic Literature Review (SLR) provided an extensive synthesis of the ways in which ESG initiatives affect profitability, liquidity, and access to capital. The analysis indicates that SMEs in economically advanced regions, such as Shanghai and Guangdong, derive greater financial advantages from ESG practices compared with those in regions with lower levels of economic development. Furthermore, SMEs operating in the technology and renewable energy sectors exhibit superior ESG performance and financial outcomes relative to other sectors. The research highlights three key determinants—government regulation, CEO managerial competence, and methods of capital acquisition—as critical factors influencing the financial returns associated with ESG engagement. The findings underscore the need for targeted policy interventions to facilitate the adoption of ESG practices, particularly for SMEs in resource-intensive industries within less

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developed regions. Overall, the study offers practical guidance for stakeholders to establish conducive conditions for integrating sustainability into business strategies, thereby enhancing the financial performance of Chinese SMEs.

Keywords: ESG Performance, Financial Outcomes, Chinese SMEs, Regional Disparities, Industrial Disparities.

INTRODUCTION

In recent years, ESG performance has emerged as a key determinant in evaluating the sustainability and ethical responsibility of enterprises (Alhoussari, 2025). SMEs constitute the backbone of the Chinese economy, contributing over 60% of GDP and providing 80% of urban employment. Consequently, integrating ESG principles into SMEs has become increasingly crucial (Shang, 2024), as Chinese SMEs must align with global trends to satisfy the expectations of investors and regulators who increasingly prioritise ESG-compliant firms. Despite this growing importance, the adoption of ESG among Chinese SMEs remains inconsistent due to challenges such as constrained resources, limited regulatory enforcement, and uneven awareness (Zhao et al., 2018). To examine the relationship between ESG performance and financial outcomes in these firms, particularly in the context of China's regional and industrial heterogeneity, this systematic review investigates the association between these variables (Wang et al., 2025). This focus addresses a significant empirical gap in existing literature, which predominantly concentrates on large listed companies while neglecting the expansive and dynamic SME sector (Shan et al., 2024). Moreover, the study considers how regional and industrial variations, local policies, environmental conditions, and sectoral demand influence ESG integration and its consequent financial outcomes (Liu & Jin, 2023).

China's provincial landscape exhibits substantial economic disparities, ranging from highly developed coastal provinces such as Guangdong and Jiangsu to less developed inland regions like Gansu and Guizhou (Hamdi et al., 2022). These differences impact access to financial resources, regulatory oversight, ESG awareness, and stakeholder expectations, necessitating tailored management strategies in each region (Jiang et al., 2023). In economically advanced provinces, institutional support, environmental regulations, and public scrutiny may enable SMEs to achieve superior ESG performance and financial results (Zhou et al., 2022). Conversely, in less developed areas, ESG may represent an additional cost rather than a strategic investment, potentially yielding limited or negative effects on profitability (Tarczynska-Luniewska et al., 2024). These dynamics are further influenced by industry-specific factors; for example, technology or service-oriented SMEs face higher environmental compliance costs than manufacturing or heavy industry sectors, which tend to focus more on social or governance metrics.

Therefore, understanding ESG's impact on financial performance requires examining the interplay between regional and industrial disparities (Liu et al., 2022). By synthesising patterns and inconsistencies across multiple studies, this SLR investigates the factors shaping ESG adoption and financial outcomes in Chinese SMEs (Zhou et al., 2025). This research is particularly timely in light of China's national objectives for green growth, carbon neutrality, and high-quality economic development outlined in the 14th Five-Year Plan (Chen et al., 2023). Policies such as the Green Finance Guidelines and ESG disclosure requirements for selected enterprises exemplify the government's strategic intent to embed sustainability within business operations. However, evidence suggests that top-down regulations alone are insufficient to foster ESG adoption among SME. As the first systematic review focusing on the financial implications of ESG adoption in Chinese SMEs, this study contributes to both academic and policy discussions by consolidating current knowledge and highlighting regional and sectoral performance gaps. Ultimately, the review aims to offer practical guidance to stakeholders, including policymakers, investors, and SME managers, seeking to enhance the economic and social value of sustainable business practices in China's fragmented and developing business landscape (Lin, 2024).

LITERATURE REVIEW

To explore the relationship between ESG performance and financial outcomes in Chinese SMEs, the literature has been examined comprehensively. This paper consolidates findings from scholarly articles, institutional reports, and empirical studies addressing ESG integration in SMEs, as well as regional and industrial disparities. The analysed studies employ diverse methodologies, including regression modelling, comparative case studies, panel data econometrics, and multi-criteria decision-making techniques. Collectively, these works contribute to a nuanced understanding of how ESG initiatives affect profitability, operational efficiency, investor perceptions, and the sustainable development of SMEs in China. Each study's contributions are summarised, highlighting methodological advantages—such as enhanced data granularity, regional sensitivity, or analytical precision—alongside limitations, including data unavailability, short observation periods, or restricted generalisability. Identifying these knowledge gaps provides a framework for further analysis in subsequent sections.

Yang (2025) investigated ESG adoption in Chinese enterprises through a qualitative case study grounded in WTO principles, employing contextual and policy analysis to assess alignment with international trade regulations. This approach offered a strategic perspective at the policy level, enhancing understanding of ESG implementation in China. However, the lack of quantitative data and limited focus on SMEs constrained the study's relevance to firm-level financial performance. Tsang et al. (2023) examined logistics SMEs using a mixed-methods approach, combining stakeholder

interviews with an ESG capability assessment tool. This method enabled mapping of both internal and external ESG readiness in small and medium-sized logistics firms, offering industry-specific insights and practical strategies for capability development. Limitations arose from the small sample size and narrow industry scope, reducing the generalisability of the findings.

Jiang et al. (2023) integrated ESG into operations within natural resource management SMEs through applied systems analysis and sustainability indicators, including life-cycle assessment and ESG benchmarks aligned with China's dual-carbon goals. The study's strength lay in its alignment with national environmental objectives and strategic SME sustainability. Nevertheless, the complexity of the models and absence of longitudinal performance data limited insights into long-term financial impacts. Lam et al. (2025) applied survey-based econometric analysis to explore SME managers' preferences regarding ESG information in Hong Kong. This provided valuable behavioural insights into ESG-related decision-making at the firm level. However, differences in regulatory and institutional environments between Hong Kong and mainland China restricted the applicability of the findings across the broader Chinese SME context. Zhang (2025) employed panel data regression models, including fixed and random effects, to analyse the correlation between ESG scores and financial performance of listed firms on China's A-share markets. The approach leveraged reliable, large-scale financial data, substantiating a generally positive relationship between ESG and profitability. However, its focus on large, listed firms limited applicability to SMEs and did not capture the broader dynamics of ESG financial impacts within the SME sector.

While existing literature provides useful insights into ESG performance in larger Chinese enterprises and certain industries, it often overlooks the critical role of SMEs in ESG adoption. Prior research has examined macro-level frameworks, sector-specific challenges, and firm-level decision-making, yet little is known about how SMEs across diverse regions and industries implement ESG strategies and translate them into financial outcomes. Most studies focus on individual sectors or large, listed companies, offering limited understanding of how regional disparities—such as differences in regulatory enforcement and market conditions—affect ESG practices among SMEs. Furthermore, the relationship between ESG performance in SMEs and financial results remains underexplored, with few studies systematically assessing the impact across various industries and regions in China. This initial part of the review synthesises existing evidence on ESG practices and associated financial outcomes, highlighting regional and industrial variations and providing a comprehensive overview of ESG integration in Chinese SMEs.

METHODOLOGY

This study adopted a systematic and structured methodology to examine the

relationship between ESG performance and financial outcomes, taking into account regional and industrial disparities among Chinese SMEs. An initial dataset was compiled from academically recognised databases, including CNKI, Web of Science, Scopus, and Google Scholar, using keywords such as “ESG in Chinese SMEs”, “Sustainable finance”, “Regional ESG policy in China”, “SME green performance”, and “Industry-level ESG outcomes.” The review was conducted in two phases. In the first phase, the titles and abstracts of all collected studies were screened to ensure alignment with the study’s core objectives: 1) the impact of ESG performance on Chinese SMEs, 2) positive and negative financial outcomes, and 3) the influence of regional and industry-specific factors. Studies that did not explicitly address SMEs or lacked sufficient relevance to ESG-financial linkages were excluded. The second phase involved a detailed evaluation of the remaining studies, focusing on methodological rigor, empirical depth, regional or sectoral specificity, and theoretical contributions to the challenges faced by SMEs regarding ESG in China. Particular attention was given to studies examining regional policy variations between economically advanced coastal cities and less developed inland provinces, as well as industry characteristics such as pollution intensity and levels of technological innovation.

Study Selection Process

The systematic review followed PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-Analyses) guidelines to maintain methodological rigor and ensure transparency throughout the research process. The review was conducted through multiple sequential phases:

- Records Identified through Database Search: 432
- Duplicates Removed: 90
- Titles and Abstracts Screened: 342
- A Relevance Check Eliminated 276 of the Records
- Full-Text Articles Assessed for Eligibility: 66
- Full-Text Articles Excluded: 37

Studies considered for inclusion excluded those that did not focus on SMEs, lacked specific applicability to the Chinese context, or provided insufficient methodological detail. The final dataset for the systematic review comprised 29 studies. The process of article selection is illustrated using a PRISMA flow diagram, presented in [Figure 1](#).

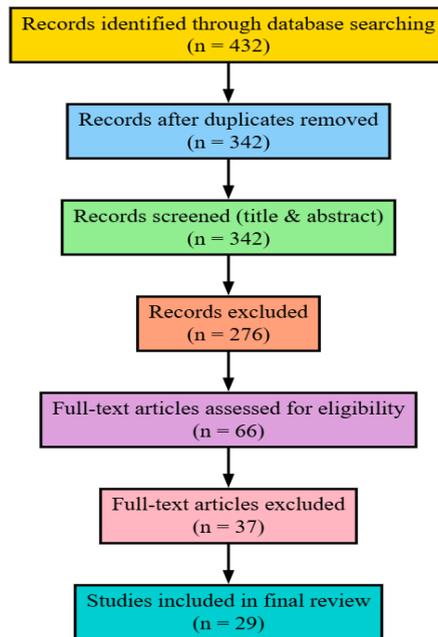


Figure 1: PRISMA Flow Diagram for Article Selection Process

Methodological Overview of Included Studies

The analysis encompassed 29 studies, of which 20 employed quantitative assessment methods.

- Twenty studies utilised quantitative approaches, applying econometric techniques to firm-level or regional data to examine the financial outcomes of ESG adoption.
- Nine studies employed alternative methodologies, including qualitative case studies of SME clusters, policy evaluations, or mixed-methods frameworks.

The selected studies span multiple disciplines, including Sustainability, Finance, Policy Studies, and Business Management, reflecting the interdisciplinary nature of ESG research. The diversity of research approaches is indicative of the complexities involved in implementing ESG standards across China's heterogeneous and regionally varied SME sector. Collectively, these studies provide a range of methodological perspectives, from quantitative econometric analyses based on industry, firm-level, or regional data, to qualitative investigations of SME clusters and policy frameworks.

Exclusion and Inclusion Conditions

The research methodology employed clearly defined inclusion and exclusion criteria to identify the most suitable studies for the comprehensive literature review. These criteria were systematically applied during the data selection process to organise, evaluate, and shortlist the most relevant studies from the larger pool of research papers.

Inclusion Criteria

- Consistent with Research Objectives: Studies were included if they investigated ESG performance and its relationship with financial outcomes, encompassing profitability, access to capital, and risk mitigation, specifically within Chinese SMEs.
- List of Criteria: Eligible studies were empirical in nature, including (1) quantitative, (2) qualitative, or (3) mixed-methods approaches combining both quantitative and qualitative elements.
- Papers with Regional and Industrial Focus: Preference was given to studies addressing regional disparities (e.g., Eastern versus Western China) and sector-specific ESG effects (e.g., manufacturing, technology, or service sectors), aligning with the review's objective of examining such variations.
- Publication Credibility: Only articles published in peer-reviewed academic journals or conference proceedings were considered, ensuring reliability and scholarly rigor.
- Language Requirement: Studies published in English were selected to maintain consistency in reading and interpretation throughout the review process.

Exclusion Criteria

Negatively or Irrelevant to SMEs and ESG: Studies were excluded if they did not address the ESG-financial performance relationship within Chinese SMEs, including research limited to large listed firms or conducted in non-Chinese contexts.

- Exclusion of Non-Empirical Work: The review omitted studies that were purely theoretical, conceptual, or literature-based and lacked empirical analysis.
- Exclusion of Non-Refereed Publications: Articles such as opinion pieces, editorials, book chapters, or unpublished theses were excluded due to the absence of formal peer review.
- Exclusion of Non-English Language: Studies published in languages other than English were excluded, reflecting limitations in language proficiency and translation constraints for future dissemination.

Thematic Analysis

The primary research objectives and themes were employed to construct a coding framework. The framework incorporated dimensions such as the following:

- Geographical Region (e.g., Yangtze River Delta, Western China, Pearl River Delta)
- Mechanical / Electrical Subtypes (Technology, Manufacturing, Services)
- ESG Dimension (Environmental, Social, or Governance Focus)
- Financial Metrics (e.g., ROA, Credit Access, Investment Inflow)
- Policy or Regulatory Influence (Local Subsidies, Green Finance Programs, ESG

Pilot Zones)

The thematic analysis is presented in Table 1. Each selected study was systematically coded using this framework. During the data extraction phase, key findings, methodological approaches, central arguments, and the evidential basis for the relationship between ESG engagement and financial outcomes in SMEs were recorded. Particular attention was given to identifying regional disparities, such as access to green capital or the enforcement of environmental regulations, as well as sectoral differences in ESG implementation and resulting outcomes. The extracted data were subsequently organised and compared, then analysed thematically to detect patterns, inconsistencies, and research gaps. This process enabled the systematic review to provide a detailed, context-sensitive understanding of how ESG practices influence financial performance in Chinese SMEs, considering the mediating effects of geographic and industrial factors. In the systematic literature review, a final set of 35 studies was selected through the rigorous application of the defined inclusion and exclusion criteria. This approach provided a contextually grounded, credible, and relevant basis for examining the costs and financial implications of ESG performance in Chinese SMEs across different regions and industries.

Table 1: Thematic Analysis

| Theme No. | Themes | Description |
|-----------|--|--|
| 1 | Environmental Performance in the Context of Chinese SMEs | Investigates how SMEs implement environmental initiatives, including emissions reduction, resource optimisation, and green innovation, and examines the factors that drive or constrain these practices. |
| 2 | Financial Outcomes in Chinese SMEs | Analyses the influence of ESG activities on financial indicators such as Return on Assets (ROA), liquidity ratios, investment inflows, and credit accessibility. |
| 3 | Regional Disparities in ESG Performance | Highlights the geographic variability in ESG adoption and performance, emphasising contrasts between economically advanced regions (e.g., Shanghai, Guangdong) and less developed areas. |
| 4 | Industrial Disparities in ESG Performance | Compares ESG outcomes across industry sectors, noting stronger performance in technology and renewable energy SMEs relative to traditional manufacturing sectors. |
| 5 | Factors Influencing ESG and Financial Outcomes | Identifies critical determinants, including government policies, executive leadership, and capital accessibility, which shape the link between ESG engagement and financial performance. |

SLR RESULTS AND DISCUSSION

Theme 1: Environmental Performance in the Context of Chinese SMEs

This study investigates ESG performance within Chinese SMEs, emphasising environmental performance as a pivotal determinant of both sustainability outcomes and financial returns. Environmental performance reflects a firm’s sophistication in ecological knowledge, awareness of environmental challenges, and proactive

engagement in safeguarding ecological integrity as shown in [Table 2](#). The extent of environmental knowledge—encompassing understanding of resource depletion, pollution, and climate change—exerts a profound influence on corporate conduct, particularly in resource-intensive or pollution-prone sectors ([Liu et al., 2022](#)). In economically advanced regions such as the Yangtze River Delta and Guangdong province, where environmental regulation is rigorously enforced, SMEs possessing elevated environmental knowledge anticipate policy shifts and implement pre-emptive operational adjustments to minimise compliance risks and enhance operational resilience ([Chen et al., 2022](#)).

Table 2: SLR Validation of Environmental Performance in the Context of Chinese SMEs

| Year | Author | Description |
|------|---|--|
| 2022 | (Chen et al., 2022) | Reassesses the Porter Hypothesis within the Chinese SME context, demonstrating that environmental regulation enhances ESG performance when firms actively innovate in response. |
| 2023 | (Liu & Jin, 2023) | Although centred on export performance, links environmental strategies in manufacturing SMEs to enhanced global competitiveness and improved ESG compliance. |
| 2023 | (Zhao et al., 2023) | Examines the influence of supply chain management on environmental performance in SMEs, highlighting the mediating role of financial development in green supply chain adoption. |
| 2025 | (Xin et al., 2025) | Highlights the reciprocal relationship between CSR and environmental performance, encouraging SMEs to adopt integrated sustainability frameworks. |
| 2022 | (Liu et al., 2022) | Investigates how corporate environmental responsibility enhances firm performance, with green innovation serving as a critical mediating factor. |

This dimension encompasses environmental awareness, defined as the recognition of the strategic importance of adopting sustainable practices alongside a corporation's responsibility to mitigate environmental degradation. SMEs in China demonstrating higher environmental awareness are more adept at implementing cleaner production methods, monitoring carbon emissions, and integrating green logistics into their operations. Nevertheless, both awareness and adoption levels vary markedly across regions, with coastal SMEs exhibiting greater engagement with green finance compared to their inland counterparts, largely due to superior infrastructure, policy incentives, and access to green financial resources ([Li & Li, 2023](#)). Environmental concern reflects an organisational ethos oriented toward sustainability, extending beyond mere regulatory compliance. At the SME level, firms often invest in research and development, adopt environmentally friendly technologies, and initiate local environmental projects, such as reforestation or water conservation efforts. This orientation not only promotes environmental stewardship but also underpins competitive differentiation in sectors such as green manufacturing and sustainable energy ([Zhou et al., 2022](#)).

Empirical evidence from Chinese SMEs highlights multiple advantages associated

with robust environmental performance, including enhanced operational efficiency, reduced resource consumption, lower waste management costs, and elevated brand equity among environmentally conscious consumers, investors, and regulators. Moreover, strong environmental performance has been linked to improved access to green finance, greater resilience to regulatory sanctions, and entry into emerging green markets, particularly under regional initiatives such as China's Green Credit Guidelines and local ESG pilot zones. Crucially, these benefits are not evenly distributed. Regional and sectoral disparities persist, with eastern Chinese SMEs more readily achieving ESG-related financial gains due to stronger institutional support, whereas SMEs in western provinces experience limitations arising from infrastructure deficits and restricted funding. Similarly, technology-enabled SMEs exhibit greater environmental innovation capabilities compared to traditional manufacturing sector SMEs, highlighting the necessity for targeted policy interventions and capacity-building programmes to promote equitable ESG adoption (Xin et al., 2025).

Theme 2: Financial Outcomes in Chinese SMEs

In Table 3, ESG performance is increasingly influencing the financial outcomes of Chinese SMEs. Empirical evidence suggests that ESG initiatives can enhance profitability, reduce operational costs, and support business expansion (An & Madni, 2023). Key financial indicators for assessing SME performance include return on assets and equity, liquidity measures such as current and quick ratios, and operational efficiency (Li et al., 2025). ESG practices contribute to cost reduction through improved resource efficiency, waste minimisation, and strengthened governance, while also facilitating access to capital via green financing mechanisms (Nguyen & Vien, 2023).

The financial impact of ESG, however, varies considerably across sectors and regions. For instance, innovation-driven sustainability strategies may yield substantial benefits for high-technology SMEs, whereas immediate energy-efficient interventions may be more advantageous for manufacturing enterprises (Ahmadov et al., 2024). Regional disparities further influence outcomes, with SMEs in economically advanced areas such as Shanghai and Guangdong enjoying superior access to resources and institutional support for ESG adoption compared with firms in less developed regions. Despite generally positive correlations, empirical evidence on the financial benefits of ESG investments remains constrained by limited data availability and extended gestation periods (Zheng & Jin, 2023). Overall, integrating ESG principles into Chinese SMEs enhances financial performance, although the magnitude of these benefits is contingent upon industry characteristics, regional context, and the specific ESG strategies employed.

Regional disparities in ESG performance among Chinese SMEs are largely attributable to variations in economic development, governmental regulations, and

access to resources.

Table 3: SLR Validation of Financial Outcomes in Chinese SMEs

| Year | Author | Description |
|------|------------------------|---|
| 2023 | (An & Madni, 2023) | Investigates green investment as a key driver of sustainable performance, revealing a positive correlation between ESG investment and financial metrics such as profitability and operational efficiency in Chinese firms, particularly those accessing green finance channels. |
| 2025 | (Li et al., 2025) | Explores the influence of environmental regulation on enhancing firms' green reputation and financial competitiveness, demonstrating that green supply chain strategies improve financial outcomes via compliance and public perception. |
| 2023 | (Nguyen & Vien, 2023) | Although focused on Vietnam, provides transferable insights for China, showing that CSR and green innovation positively impact both environmental and financial performance through collaborative networks, with financial gains derived from enhanced resource efficiency and stakeholder support. |
| 2024 | (Ahmadov et al., 2024) | Analyses SME sustainability in Estonia, offering comparative perspectives for Chinese SMEs; highlights that strategic ESG initiatives and stakeholder engagement drive improved firm performance, particularly profitability and long-term growth, even under resource constraints. |
| 2023 | (Zheng & Jin, 2023) | Examines the Chinese SME context, concluding that green investments enhance financial sustainability, evidenced by reduced operational costs and increased investment inflows for firms implementing ESG practices, especially in technology-driven and urban regions. |

Theme 3: Regional Disparities in ESG Performance

In Table 4, SMEs located in economically advanced regions such as Shanghai, Beijing, and Guangdong demonstrate higher levels of ESG engagement due to superior infrastructure, robust financial systems, and stronger institutional support for sustainability initiatives (Wan et al., 2024). Stricter environmental regulations in these regions further compel SMEs to adopt greener technologies and enhanced governance frameworks (Tarczynska-Luniewska et al., 2024). Conversely, SMEs in less developed regions often encounter significant barriers to ESG adoption, including limited capital, weaker regulatory environments, lower environmental awareness, and inadequate resources to implement sustainable practices (Bui et al., 2024). Regional economic conditions also shape the capacity of SMEs to invest in ESG-related innovations, as firms in wealthier areas frequently perceive sustainability as a strategic avenue for competitive advantage (Nureen et al., 2023). Furthermore, governmental support for enterprise participation in ESG programmes varies considerably across regions, influencing sector-specific performance, such as in solar energy firms (Khan & Liu, 2023). Overall, these regional disparities critically determine how SMEs across China implement ESG practices and the financial returns generated from these initiatives.

Table 4: SLR Validation of Regional Disparities in ESG Performance

| Year | Author | Description |
|------|------------------------------------|--|
| 2024 | (Wan et al., 2024) | Investigates how ESG performance differs across regional market development and ownership structures, finding that firms in economically advanced regions achieve superior ESG outcomes due to higher innovation efficiency and stronger government support. |
| 2024 | (Tarczyska-Luniewska et al., 2024) | Highlights the influence of regional financing constraints on ESG adoption, showing that companies in wealthier regions encounter fewer barriers and achieve better ESG integration than those in underdeveloped areas. |
| 2023 | (Ahmad et al., 2023) | Demonstrates that stronger CSR initiatives and organisational support, more prevalent in developed regions, mediate enhanced environmental and financial performance among manufacturing SMEs. |
| 2023 | (Nureen et al., 2023) | Examines how CSR and green innovation drive improved firm performance, with effects being more significant in regions offering advanced infrastructure and greater access to resources. |
| 2023 | (Khan & Liu, 2023) | Analyses the impact of ESG and green innovation on corporate outcomes, emphasising that regional economic strength dictates firms' capacity and willingness to invest in sustainable practices. |
| 2024 | (Erfanian et al., 2024) | Focuses on the Chinese food industry, revealing that sustainable supply chain practices are more effectively implemented in regions with robust institutional frameworks and economic support. |

Theme 4: Industrial Disparities in ESG Performance

In Table 5, Industrial divergences in ESG performance among Chinese SMEs are fundamentally determined by sectoral characteristics, regulatory stringency, and the intrinsic complexities of institutionalising sustainable practices within specific industries. SMEs operating within technology, renewable energy, and service sectors consistently demonstrate heightened ESG engagement, as growth in these domains is contingent upon innovation, operational efficiency, and brand differentiation. Governmental incentive schemes further reinforce ESG alignment in these sectors, facilitating adherence to global sustainability trajectories. Moreover, these industries enjoy superior access to capital and elevated market demand for sustainable products and services, providing a compelling impetus for ESG investment (Yang, 2025).

Conversely, ESG adoption presents substantial challenges in manufacturing, construction, and mining sectors, with additional lags observed in healthcare and finance (Ferrari et al., 2025). These sectors are typically resource-intensive, necessitating significant capital outlays for environmentally sustainable technologies and supply chain practices, which may exceed the financial capacity of SMEs, thereby limiting regulatory compliance. Furthermore, social and governance components of ESG, including labour standards, occupational safety, and corporate transparency, are frequently subordinated to operational and cost constraints (Zhang & Lucey, 2022). As a result, ESG performance and its consequent financial benefits exhibit pronounced industry-specific disparities, with SMEs in innovation-driven and

sustainability-focused sectors outperforming counterparts in resource-intensive and heavily regulated industries. The systematic review underscores that the integration of ESG principles within SMEs is inherently contingent upon sectoral dynamics, moderated by regulatory pressures, financial constraints, and the market viability of sustainable products and practices.

Table 5: SLR Validation of Industrial Disparities in ESG Performance

| Year | Author | Description |
|------|------------------------|--|
| 2025 | (Yang, 2025) | Analyses industry responses to ESG within the WTO framework, highlighting that export-oriented sectors, such as manufacturing, must comply with stricter ESG standards, resulting in differential performance across industries. |
| 2025 | (Ferrari et al., 2025) | Provides empirical evidence showing that ESG practices yield more positive financial outcomes in innovation-driven sectors, such as technology and renewable energy, compared to traditional industries like manufacturing. |
| 2022 | (Zhang & Lucey, 2022) | Highlights that alleviation of financial constraints enhances sustainable practices, with superior outcomes observed in capital-accessible sectors, such as services and finance, relative to resource-intensive industries. |

Theme 5: Factors Influencing ESG and Financial Outcomes

In Table 6, several moderating factors shape the influence of ESG performance on the financial outcomes of Chinese SMEs. Key determinants include governmental regulations, CEO leadership, access to capital, and industry-specific dynamics, all of which affect SMEs' capacity to implement ESG practices and the resultant financial impact of these initiatives (Zhang, 2025). Among these, governmental regulations constitute a particularly significant moderating factor, as policy frameworks and sustainability incentives can either facilitate or constrain ESG adoption. Strongly articulated environmental legislation and robust support for green initiatives increase the likelihood that SMEs will invest in sustainable practices, thereby enhancing financial performance through cost efficiencies, reputation gains, and improved access to financing (Yang et al., 2022).

CEO leadership represents another critical moderating factor influencing ESG adoption within Chinese SMEs. Executive commitment and strategic vision can significantly shape the integration of ESG principles into organisational practices. CEOs with a sustainability-oriented perspective are more likely to embed ESG considerations into corporate strategy, which can yield long-term financial advantages by enhancing investor confidence and fostering customer loyalty. Conversely, insufficient leadership support often results in weak ESG implementation, thereby diminishing potential financial gains. Access to capital further moderates the ESG–financial performance relationship. Availability of green financing or low-cost capital enables SMEs to invest in ESG initiatives effectively, whereas financial constraints may limit even the adoption of high-impact ESG practices (Zhou et al., 2022). Industry-specific dynamics also play a moderating role, as certain sectors are

inherently more conducive to ESG integration due to market responsiveness, regulatory pressures, and technological adaptability. Collectively, these moderating factors shape the extent to which ESG practices contribute to the financial success of Chinese SMEs (Zhou et al., 2025).

Table 6: SLR Validation of Factors Influencing ESG and Financial Outcomes

| Year | Author | Description |
|------|---------------------|--|
| 2025 | (Zhang, 2025) | Examines how regional variations, particularly in Shanghai and Shenzhen, shape the ESG–financial performance relationship; demonstrates that robust governance and executive leadership amplify financial returns from ESG adoption. |
| 2022 | (Yang et al., 2022) | Provides empirical evidence from power generation firms, highlighting government regulations and green financing as critical determinants of ESG outcomes; illustrates how policy compliance affects profitability. |
| 2022 | (Zhou et al., 2022) | Identifies financial performance as a mediating mechanism between ESG practices and market valuation; underscores access to capital as a key moderating factor in ESG adoption success. |
| 2025 | (Zhou et al., 2025) | Connects corporate governance innovations, including AI-enabled management systems, to improvements in ESG performance; suggests that technological capabilities and managerial commitment enhance ESG outcomes. |
| 2025 | (Zhu et al., 2025) | Focuses on SMEs, showing that government subsidies significantly moderate the ESG–value creation nexus; financial support from state agencies strengthens returns on ESG investments. |

To ensure reliability and robustness of the systematic review findings, multiple validation strategies were employed. Triangulation was utilised, combining data from peer-reviewed journals, government publications, and industry reports spanning 2018–2024. This approach confirmed the consistency of ESG patterns across diverse industries and regions. Empirical studies employing panel regressions, structural equation modelling, and case-based analyses were prioritised to verify financial outcomes associated with ESG practices. Key patterns, such as superior ESG performance among SMEs in eastern China and within technology sectors, were corroborated by national ESG monitoring agencies and sectoral benchmarking reports. Supplementary validation drew on data from the China Securities Regulatory Commission (CSRC) and provincial policy briefs, aligning academic findings with regulatory evidence. Standardised criteria and consensus among reviewers ensured consistent article screening and ratings. These validation methods substantiate the originality of the analysed outcomes, demonstrating that the conclusions reflect broad research evidence rather than isolated observations.

CONCLUSION AND IMPLICATIONS

Chinese SMEs exhibit heterogeneous relationships between ESG performance and financial outcomes, reflecting the influence of multiple determinants, including governmental interventions, regional market conditions, sectoral characteristics, executive leadership, and access to financial resources. The financial benefits of ESG

adoption are most pronounced in economically advanced regions with strong sustainability alignment, whereas SMEs in less developed areas and resource-intensive industries face challenges in realising these advantages due to limited resources and elevated implementation costs. Successful ESG integration is heavily contingent upon regulatory frameworks, CEO leadership, and capital accessibility, which can either facilitate or constrain sustainable practice adoption.

The findings of this review yield critical implications for both practitioners and policymakers. SMEs that strategically implement ESG practices tend to achieve superior financial outcomes when operating in sectors and regions with robust sustainability support and viable markets for sustainable products. Conversely, SMEs in resource-intensive industries may struggle to implement ESG initiatives without targeted financial incentives and policy guidance provided by governmental authorities. Executive leadership is pivotal, as committed CEOs act as catalysts for embedding sustainability programmes within organisational strategy. Policymakers should recognise the necessity of establishing regulatory and institutional frameworks that encourage ESG adoption across all SME sectors and regions. Targeted interventions, including funding, tax incentives, and access to green finance, should prioritise resource-intensive SMEs operating in economically disadvantaged areas. Furthermore, educational programmes and awareness campaigns highlighting the financial and strategic benefits of ESG can facilitate broader adoption. To optimise the financial returns from ESG performance, SMEs require tailored approaches that consider their sectoral positioning, regional presence, and relevant moderating factors influencing ESG integration.

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