



Does ESG Performance Enhance Corporate Financial Performance in China? Evidence from Industry Heterogeneity and State Ownership

Jingfan Xu

University College London, London, UK
Jingfan.Xu@outlook.com

Abstract. This paper examines whether environmental, social and governance (ESG) performance improves corporate financial performance in China, and whether this relationship varies across industries and by state ownership. Drawing on stakeholder theory, agency theory and China's politically embedded corporate governance context, the study argues that ESG may create value by reducing information asymmetry, strengthening stakeholder legitimacy and improving access to resources, but may also destroy value when it becomes symbolic compliance or managerial overinvestment. Using Refinitiv ESG and financial data for Chinese listed companies from 2017 to 2022, fixed-effects panel regressions with robust standard errors are estimated. Financial performance is measured by return on assets (ROA) and Tobin's Q, while ESG is decomposed into environmental, social and governance pillar scores. The results show that ESG is positively associated with ROA but not with Tobin's Q in the full sample. Environmental and social pillars drive the ROA effect, whereas the social pillar is negatively associated with market valuation. State-owned enterprises benefit more from ESG in Tobin's Q terms, but industry-level regressions reveal that this advantage is uneven and sometimes reversed. The paper contributes to ESG-finance research by showing that ESG value creation in China is contingent on ownership and sectoral institutional conditions. Policy should move from generic ESG promotion toward transparent rating infrastructure, anti-greenwashing enforcement and sector-sensitive incentives.

Keywords: ESG performance; corporate financial performance; state ownership; industry heterogeneity; China.

1 Introduction

ESG has become a central category through which investors, regulators and managers interpret the economic value of corporate sustainability. For firms, ESG is no longer only a disclosure practice or reputational instrument; it increasingly structures access to capital, regulatory legitimacy and stakeholder trust. Yet the economic consequences of ESG remain theoretically and empirically contested. A large body of evidence finds a non-negative or positive ESG-financial performance relationship, but the relationship

is not universal and may depend on institutional context, measurement design and industry characteristics [1, 2].

China is a particularly important setting because ESG practices develop within a hybrid system of market discipline, state coordination and rapid sustainability transition. Listed firms face growing disclosure pressure, while state-owned enterprises (SOEs) are expected to combine profitability with broader public objectives. Prior studies on China report generally positive but uneven ESG-value relationships [3–6]. However, industry heterogeneity has often been treated as a control rather than as a substantive research object, despite evidence that CSR effects can differ sharply across sectors [7]. The central question is therefore: does ESG performance enhance corporate financial performance in China, and how does this association vary by industry and state ownership?

This study contributes to economic management research in three ways. First, it compares accounting-based and market-based outcomes, distinguishing operating efficiency from investor valuation. Second, it decomposes ESG into environmental, social and governance pillars to avoid treating ESG as a theoretically neutral composite score. Third, it examines sectoral heterogeneity and SOE moderation, showing that the economic value of ESG is shaped by industry-specific stakeholder pressures and China's ownership structure.

2 Theory and Hypotheses

The ESG-financial performance debate is commonly structured by stakeholder theory and agency theory. Stakeholder theory argues that firms create durable value when they manage relationships with employees, communities, regulators, customers, creditors and shareholders rather than maximizing short-term shareholder returns alone [8]. Better ESG performance may reduce information asymmetry, lower capital costs, improve operational efficiency and strengthen access to strategic resources. In China, stakeholder theory has a specifically institutional dimension: government is not simply an external regulator but a powerful stakeholder that can influence financing, licensing, subsidies and public legitimacy.

Agency theory offers a competing interpretation. Managers may overinvest in ESG projects to build personal reputation, respond formally to policy pressure, or satisfy symbolic disclosure expectations without improving productivity [9]. Under this view, ESG can become a cost, especially when rating improvements reflect reporting intensity rather than substantive transformation. These mechanisms lead to the first hypothesis: ESG performance is positively associated with corporate financial performance, but the strength and form of the association may differ across performance measures.

The second theoretical issue concerns the multidimensionality of ESG. Composite ESG scores can conceal distinct mechanisms. Environmental performance is expected to matter most in sectors exposed to pollution control, energy efficiency and resource regulation. Social performance may affect employee stability, product responsibility and consumer trust. Governance performance may affect monitoring quality, minority shareholder protection and managerial discipline. Because these mechanisms operate

differently, the effects of environmental, social and governance pillars are expected to vary.

Industry heterogeneity is also theoretically important. ESG practices are more visible and more economically material in industries where environmental and social externalities are salient, but sensitive sectors may also be more prone to symbolic compliance. Finally, state ownership may moderate ESG value creation. SOEs may gain more from ESG because they are politically visible and better positioned to convert ESG performance into policy support. However, they may also bear heavier implicit social and environmental obligations, weakening financial returns. The study therefore expects ESG effects to vary across industries and to differ between SOEs and non-SOEs.

3 Data and Method

The study uses Refinitiv ESG and financial data for Chinese listed companies from 2017 to 2022. The starting year reflects the improvement of ESG coverage for Chinese firms in recent years. After applying ESG coverage requirements, the sample contains roughly 900 firms and 3,816 firm-year ESG observations. Firms are classified according to the Global Industry Classification Standard (GICS). The financial sector is excluded because of insufficient usable observations, leaving ten sectors: energy, utilities, real estate, materials, industrials, consumer discretionary, consumer staples, healthcare, information technology and communication services.

Two dependent variables capture different dimensions of corporate financial performance. ROA measures accounting-based operating efficiency, while Tobin's Q captures market-based valuation and investor expectations. The main independent variables are the overall ESG score and the three Refinitiv pillar scores: environmental, social and governance [10]. State ownership is coded as a dummy variable and interacted with ESG or pillar scores to test whether SOEs experience different ESG-financial performance associations. Control variables include capital expenditure, leverage, turnover, total assets, cash flow, R&D expenditure, lagged financial performance and year effects.

Panel regression is used because the data combine cross-sectional firm variation with time-series observations. Hausman tests support fixed-effects models, which control for unobserved time-invariant firm characteristics. Modified Wald tests indicate heteroskedasticity, so robust standard errors are applied. The general specification regresses financial performance on ESG or pillar scores, controls, lagged performance and year effects. Interaction models add $ESG \times SOE$, and the same models are estimated for each industry sector.

4 Results and Discussion

The full-sample results show a clear difference between operating performance and market valuation. When control variables are introduced, ESG is positively and significantly associated with ROA. This supports the stakeholder-theory view that ESG can

improve operating outcomes through efficiency, legitimacy and stakeholder cooperation. However, ESG has no significant positive association with Tobin's Q. This suggests that Chinese capital markets did not consistently price higher ESG performance as higher firm value during the sample period. One interpretation is that ESG practices improve internal operations before they become credible market signals. Another is that investors remain cautious because of rating inconsistency, greenwashing concerns or uncertainty about whether ESG disclosure reflects substantive change.

The pillar-score results deepen this interpretation. Environmental and social scores are positively associated with ROA, while governance scores are not. Environmental performance may reduce regulatory risk and improve resource efficiency, particularly under China's ecological policy priorities. Social performance may enhance labour stability, product responsibility and stakeholder trust. By contrast, governance scores may be less directly connected to short-term operating efficiency or may be insufficiently differentiated by the rating system. For Tobin's Q, the social pillar is negatively associated with market valuation, indicating a possible agency-theory mechanism: social initiatives may be interpreted by investors as costly, symbolic or only weakly linked to future cash flows.

State ownership matters, but not uniformly. In the full sample, SOEs obtain a stronger positive association between ESG and Tobin's Q. This is consistent with the idea that ESG performance is more credible or more politically valuable for firms closely connected to the state. Investors may expect high-ESG SOEs to receive stronger regulatory support or to face lower policy risk. However, no comparable SOE advantage appears for ROA, implying that political legitimacy and market valuation do not necessarily translate into operating efficiency.

Industry-level regressions confirm substantial heterogeneity. ESG is positively associated with ROA in industrials, information technology and communication services, but negatively associated with ROA in healthcare. For Tobin's Q, healthcare again shows a negative relationship. Strikingly, some conventionally sensitive sectors, including energy and utilities, do not show significant ESG-financial performance associations. This finding challenges the assumption that ESG is automatically more valuable in environmentally exposed sectors. It may indicate that firms in highly regulated industries engage in compliance-oriented ESG practices that are not yet financially productive, or that investors discount ESG improvements when they suspect formalism.

Pillar-level industry results show that the value of ESG depends on the match between pillar characteristics and sectoral stakeholder pressures. Environmental scores are positively associated with ROA in materials and industrials, where environmental management is operationally material. Social scores are positively associated with ROA in information technology and communication services, where product responsibility, human capital and user trust are central. Governance scores are rarely positive for ROA. These patterns support the argument that ESG is not a single managerial input; it is a bundle of sector-specific capabilities whose financial value depends on institutional and industrial fit.

The main empirical relationships and their economic interpretations are summarized in Table 1.

Table 1. Condensed empirical implications

Tested relationship	Empirical result	Interpretation
Overall ESG -> ROA	Positive and significant after controls	Supports stakeholder-theory mechanism through efficiency, legitimacy and stakeholder cooperation.
Overall ESG -> Tobin's Q	No robust positive association	Market valuation does not yet consistently capitalize ESG performance in China.
Pillars -> ROA	Environmental and Social positive; Governance insignificant	Operating value is generated mainly by ecological and social capabilities.
Pillars -> Tobin's Q	Social negative; Environmental/Governance mostly insignificant	Possible agency, overinvestment or symbolic-compliance interpretation.
ESG x SOE	Positive for Tobin's Q; not for ROA	SOE ESG legitimacy is valued by markets but does not necessarily raise operating efficiency.

5 Policy Implications and Conclusion

The findings imply that China remains in an early stage of ESG market development. The positive ESG-ROA relationship suggests that sustainability practices can improve operating performance, but the weak Tobin's Q results reveal that market recognition is still incomplete. Policy should therefore focus not only on encouraging ESG disclosure, but also on improving the credibility, comparability and economic interpretability of ESG information.

First, China needs a transparent ESG rating infrastructure adapted to domestic institutional conditions while remaining comparable internationally. International rating systems may understate China-specific responsibilities, but purely domestic systems risk losing credibility if methodologies are opaque. Second, regulators should strengthen anti-greenwashing enforcement. If ESG becomes formalistic, ratings will fail to signal real transformation and investors will continue to discount ESG claims. Third, policy incentives should be sector-sensitive. Environmental incentives are more likely to generate financial value in resource- and pollution-intensive industries, while social-performance incentives may be more relevant in technology, communication and consumer-facing sectors. Fourth, SOE policy should recognize the trade-off between public responsibilities and financial performance. ESG obligations imposed on SOEs may enhance legitimacy, but excessive implicit burdens can weaken efficiency and distort comparisons with private firms.

This study shows that ESG can enhance corporate financial performance in China, but only conditionally. ESG is associated with higher operating performance, mainly through environmental and social pillars, while market valuation effects are weaker and depend strongly on state ownership and industry. Theoretically, the results reconcile

stakeholder and agency perspectives: ESG creates value when it is institutionally credible and operationally material, but may impose costs when it is symbolic, mispriced or weakly aligned with sectoral conditions. For economic management research, the central implication is that ESG should be treated not as a universal value-enhancing label, but as a context-dependent governance mechanism embedded in ownership structures, industry characteristics and policy regimes.

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