

Window dressing green: how performance aspiration gaps drive symbolic environmental management in the textile value chain

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ABSTRACT – REZUMAT

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Addressing the recurring phenomenon of symbolic environmental management in which firms decouple environmental commitments from actual practice, this study analyses the impact of performance aspiration gaps on such strategic behaviours within the textile industry value chain. Based on a sample of listed companies in China's textile industry value chain from 2015 to 2023, we empirically test these relationships and find that performance aspiration gaps significantly induce symbolic environmental management in firms within the textile industry value chain. Specifically, firms are more likely to engage in high-profile disclosure without substantive implementation when facing performance shortfalls. Furthermore, this effect is time-dependent; the longer the performance aspiration gap, the more significant its impact on symbolic environmental management. Mechanism tests indicate that performance aspiration gaps drive this behaviour by exacerbating financing constraints and intensifying managerial myopia. Heterogeneity analysis further reveals that the inducement effect of performance aspiration gaps on symbolic environmental management is more pronounced in firms located in regions with lower marketisation levels and weaker environmental regulations, as well as in firms with poorer actual ESG performance. This study contributes to the literature by uncovering the internal micro-mechanisms of environmental decoupling under performance pressure.

Keywords: textile industry value chain, symbolic environmental management, performance aspiration gap, behavioural theory of the firm, gap duration

„Ecologie de fațadă”: cum decalajele dintre aspirațiile de performanță determină gestionarea simbolică a mediului în lanțul valoric al industriei textile

Abordând fenomenul recurent al managementului de mediu simbolic, în cadrul căruia întreprinderile disociază angajamentele de mediu de practicile efective, acest studiu analizează impactul decalajelor dintre aspirațiile de performanță și rezultatele reale asupra unor astfel de comportamente strategice în cadrul lanțului valoric al industriei textile. Pe baza unui eșantion de societăți cotate la bursă din lanțul valoric al industriei textile din China, pentru perioada 2015–2023, testăm empiric aceste relații și constatăm că decalajele dintre aspirațiile de performanță și rezultatele reale determină în mod semnificativ adoptarea unui management de mediu simbolic de către întreprinderile din lanțul valoric al industriei textile. Mai precis, firmele sunt mai predispuse să se angajeze în divulgări de mare vizibilitate, fără o implementare substanțială, atunci când se confruntă cu deficite de performanță. În plus, acest efect depinde de timp: cu cât durata decalajului dintre aspirațiile de performanță și rezultatele obținute este mai lungă, cu atât impactul său asupra managementului simbolic de mediu este mai semnificativ. Testele de mecanism indică faptul că decalajele dintre aspirațiile de performanță și rezultatele obținute determină acest comportament prin exacerbarea constrângerilor de finanțare și intensificarea miopiei manageriale. Analiza heterogenității relevă, de asemenea, că efectul de stimulare al decalajelor dintre aspirațiile de performanță și rezultatele obținute asupra managementului simbolic de mediu este mai pronunțat în cazul firmelor situate în regiuni cu niveluri mai scăzute de comercializare și reglementări de mediu mai slabe, precum și în cazul firmelor cu performanțe ESG efective mai slabe. Acest studiu contribuie la literatura de specialitate prin dezvăluirea micro-mecanismelor interne ale decuplării de mediu sub presiunea performanței.

Cuvinte-cheie: lanțul valoric al industriei textile, managementul simbolic al mediului, decalajul dintre aspirațiile de performanță, teoria comportamentală a firmei, durata decalajului

INTRODUCTION

As one of the pillar industries of the global economy, the textile and apparel industry occupies a prominent position in global value chains. According to World Trade Organisation statistics, global apparel exports totalled \$576 billion in 2022. However, the industry's inherently complex supply chains, resource-intensive production models, and the proliferation of fast

fashion business practices pose significant challenges to environmental and social sustainability [1]. Research by the United Nations Environment Programme indicates that the textile industry annually consumes approximately 93 billion cubic meters of water, accounting for 20% of global industrial water use (UNEP, 2018). Furthermore, the textile industry emits up to 1.2 billion tons of carbon dioxide equivalent

annually, representing approximately 10% of total global greenhouse gas emissions [2]. This figure astonishingly exceeds the combined emissions of the aviation and shipping industries [2, 3]. These data underscore the formidable challenges confronting the textile industry within the global sustainable development agenda [4].

In response to increasingly stringent environmental regulations and stakeholder demands for sustainable development, a growing number of textile enterprises have begun publishing ESG reports and proclaiming environmental commitments. However, beneath these green declarations lies a troubling phenomenon of symbolic environmental management. A European Commission (2021) survey revealed that in screening online environmental claims, 53.3% contained vague, misleading, or unsubstantiated information, while 42% were identified as false or deceptive. The textile and fashion industry represents a particularly hard-hit sector for greenwashing practices. The Changing Markets Foundation (2021) report exposes the widespread tendency of fast fashion brands to exaggerate sustainability claims, employing vague terms such as “eco-friendly”, “green” and “sustainable” without substantive supporting evidence. Such symbolic environmental management not only undermines market information efficiency and erodes investor confidence in ESG practices but also impedes the textile industry’s transition toward genuinely sustainable business models [5] and may trigger spillover effects of greenwashing throughout supply chains [6,7]. Although institutional investors’ ESG activism can improve corporate green supply chain management performance to some extent [8], the prevalence of greenwashing suggests that external pressure alone cannot fundamentally resolve this issue.

What internal driving forces, then, motivate firms to engage in symbolic environmental management? Behavioural theory of the firm provides an insightful explanatory framework [9]. Central to this theory is the notion that decision-makers’ reference points are crucial in determining their course of action. At the organisational level, this reference point manifests as the firm’s aspiration level, and decision-makers determine subsequent firm behaviour by assessing the gap between actual performance and aspirations (i.e., performance-aspiration gap). When a firm’s actual performance falls short of aspirations (that is, when a performance-aspiration gap exists), its propensity for risk-taking becomes significantly activated. Existing research has confirmed that performance-aspiration gaps can trigger speculative motives, prompting firms to window-dress performance through financial irregularities such as earnings manipulation and related-party transactions [10–12]. However, performance pressure exhibits a dual effect. On one hand, moderate pressure may stimulate employee innovative thinking [13] and boundary-spanning behaviours [14]. On the other hand, excessive pressure may induce opportunistic conduct. This raises a critical research question:

under the intense pressure of performance-aspiration gaps, do firms also resort to “strategic” ESG opportunism? Specifically, do they exaggerate or selectively conceal information in ESG disclosures?

There is broad consensus that even when experiencing poor performance, firms must signal their embrace of ESG principles to satisfy legitimacy requirements. Under performance pressure, textile enterprise management confronts a twofold dilemma. On one hand, they must meet stakeholder expectations through ESG information disclosure. On the other hand, they are constrained by the high costs of substantive environmental performance improvement. This dilemma may induce textile firms to adopt symbolic environmental management, exaggerating or selectively concealing information in ESG disclosures. Despite the prevalence of this problem in practice, systematic theoretical analysis and empirical testing remain lacking.

China’s textile industry provides a uniquely valuable global research context for examining this issue. First, China is unquestionably the world’s largest textile producer and exporter [15]. According to statistics, textile fibres produced by China’s textile industry in 2022 accounted for over 50% of global output, while its textile and apparel exports consistently represent more than one-third of the global total. Second, China’s textile industry is classified as a key heavily polluting sector. As early as 2008, it was listed by the former Ministry of Environmental Protection among 14 heavily polluting industries in the “Directory of Industry Classification Management for Environmental Protection Verification of Listed Companies”. In 2022, the textile industry’s chemical oxygen demand and ammonia nitrogen emissions totalled 56,251 tons, representing 16.4% of the national total and ranking first among all industries. This inherently polluting nature subjects the industry to immense environmental governance pressure. Finally, China’s current environmental information disclosure regime (particularly the insufficiency of mandatory requirements and the lack of standardised disclosure protocols) further enhances the value of our research [16–18]. This institutional design objectively provides ample opportunities for regulatory arbitrage in symbolic environmental management [19]. On one hand, firms can selectively disclose favourable environmental information while downplaying or avoiding unfavourable information. On the other hand, the relative inadequacy of external audit and regulatory mechanisms means that information authenticity and completeness lack effective oversight, thereby lowering the potential costs of ESG information exaggeration.

Accordingly, we examine samples of Chinese A-share textile industry firms and their supply chain enterprises from 2015 to 2023 to empirically test the impact of performance-aspiration gaps on symbolic environmental management. Our main findings are as follows. Performance-aspiration gaps induce symbolic environmental management behaviour in textile firms. Moreover, the longer such gaps persist, the

more pronounced their impact becomes. Further mediation analysis reveals that performance-aspiration gaps worsen financing constraints and intensify managerial myopia, thereby leading to exaggerated or concealed ESG disclosures. Additionally, heterogeneity analysis demonstrates that the effect of performance-aspiration gaps on symbolic environmental management is more pronounced in firms operating in less marketised regions, facing weaker environmental regulations, and exhibiting poorer actual ESG performance.

Our marginal contributions are primarily manifested in the following aspects.

First, we develop a novel theoretical framework grounded in behavioural theory of the firm to explain how performance-aspiration gaps trigger symbolic environmental management, addressing the limitation that existing research overly relies on agency theory or legitimacy theory while neglecting the role of internal performance pressure. The extant literature predominantly attributes greenwashing to external legitimacy demands or internal agency conflicts [20–22], yet research examining how internal performance pressure alters managerial risk preferences and thereby affects ESG information quality remains notably insufficient. We demonstrate that when firms experience performance-aspiration gaps, endogenous pressure inclines management toward symbolic and opportunistic ESG disclosure strategies rather than substantive ESG performance improvement. This contribution genuinely bridges the greenwashing literature with behavioural theory, advancing greenwashing research from an “external pressure response paradigm” toward an “internal pressure inducement paradigm” and providing a novel explanatory pathway for understanding the micro-level drivers of ESG information distortion.

Second, we demonstrate that performance-aspiration gaps exert not only triggering effects but also cumulative effects, contributing a temporal dynamics perspective to the application of behavioural theory of the firm in sustainability research. While existing literature has discussed how performance pressure may trigger short-term risk-taking behaviours [23, 24], systematic evidence on how such “temporal dynamics” influence non-financial information quality remains virtually absent. Our findings indicate that performance gaps generate both triggering effects (initiating symbolic environmental management strategies) and cumulative effects (amplifying such behaviour over time). This finding not only addresses the gap in behavioural theory of the firm regarding temporal considerations but also reveals that symbolic environmental management is not merely a short-term response. Instead, it may evolve into a sustained strategic information management pattern under prolonged performance pressure. This offers important insights for understanding how emerging market firms develop “institutionalised greenwashing” phenomena within chronically high-pressure operating environments.

Third, we identify the internal mechanisms through which performance-aspiration gaps lead to symbolic environmental management and reveal its heterogeneity across different institutional contexts, further advancing the micro-mechanistic and contextualised development of greenwashing research. Empirical analysis demonstrates that performance-aspiration gaps induce opportunistic ESG information behaviour through two channels: intensifying financing constraints and strengthening managerial myopia. Regarding financing constraints, performance pressure may prompt firms to allocate limited resources toward short-term financial assets rather than long-term environmental investments. Concerning managerial myopia, performance pressure incentivises management to prioritise cultivating a green image over advancing substantive innovation. While authentic ESG disclosure can promote corporate green innovation [25], firms under performance pressure tend to favour symbolic strategies. This not only deepens theoretical understanding of greenwashing drivers but also engages with research on financing and managerial pressures [26].

Fourth, this study elucidates the moderating roles of institutional environment and firm resource endowments in shaping ESG behaviour, providing contextualised evidence for understanding ESG governance in emerging markets. Heterogeneity analysis reveals that the inducing effect of performance-aspiration gaps on symbolic environmental management is more pronounced in contexts characterised by lower marketisation, weaker environmental regulation, and poorer actual firm ESG performance. This finding carries important theoretical implications. First, it supports institutional theory’s proposition that “institutional voids induce opportunism” [27], demonstrating that absent formal institutional constraints, performance pressure more readily transforms into opportunistic disclosure behaviour. Second, it resonates with the resource-based view’s “legitimacy deficit” hypothesis [28], suggesting that firms with inferior actual ESG performance face greater legitimacy pressures and thus are more inclined to compensate through exaggerated disclosures. Finally, this study furnishes empirical evidence for understanding institutionalised variations in ESG behaviour across emerging markets, responds to calls for research on “context dependency” [29], and provides theoretical grounding for optimising ESG governance pathways in emerging market contexts.

THEORETICAL ANALYSIS AND RESEARCH HYPOTHESES

Behavioural theory of the firm posits that absolute performance indicators fail to provide clear evaluation benchmarks for boundedly rational managers [9]. Consequently, decision-makers typically establish an aspiration level and assess firm status by comparing actual performance against this benchmark, thereby simplifying the decision-making process. Specifically, when actual performance exceeds the aspiration

level, the firm operates in a relatively comfortable state, and management tends to maintain the status quo while avoiding unnecessary risks. Conversely, when actual performance falls below the aspiration level (i.e., when a performance-aspiration gap exists), this negative deviation activates management's problemistic search mechanism, prompting more risk-taking response strategies to close the performance gap. Performance pressure, as a salient manifestation of performance-aspiration gaps, may both stimulate employees' boundary-spanning behaviours [14] and induce strategic firm responses. Existing research demonstrates that performance-aspiration gaps significantly alter firms' risk-taking preferences and strategic choices. In the financial domain, firms experiencing performance difficulties are more prone to engage in financial opportunism such as earnings manipulation and related-party transactions [10, 11]. However, as financial regulation becomes increasingly stringent and auditing technology advances, opportunities for manipulating financial information have gradually narrowed, prompting firms to redirect opportunistic behaviour toward the relatively weakly regulated non-financial information domain. Compared with financial information, non-financial information lacks unified disclosure standards, proves difficult to verify, and exhibits higher information asymmetry, thereby affording firms greater latitude for strategic manipulation [30]. Based on a cost-benefit analytical framework, we argue that symbolic environmental management represents a rational choice for textile firms experiencing performance-aspiration gaps.

First, from a benefit perspective, symbolic environmental management by textile firms manifests primarily through two mechanisms: legitimacy maintenance and green marketing. Environmental performance has become a critical component of organisational legitimacy, particularly salient in the textile industry. When performance deteriorates, firms face scrutiny from investors, regulators, and the public, threatening their social legitimacy [20]. In this context, some firms selectively disclose environmental information to cultivate the impression that "performance decline stems from environmental investment", thereby attributing operational difficulties to environmental responsibility fulfilment and mitigating stakeholders' negative evaluations of managerial competence [31].

Additionally, symbolic environmental management serves as a vital tool for implementing green marketing strategies in textile firms. With growing global consumer environmental consciousness and downstream brand emphasis on supply chain environmental performance, ESG performance has increasingly become a key determinant of textile product competitiveness. However, genuine environmental performance improvement often necessitates substantial sustainability transformation investments, imposing considerable burdens on firms facing performance pressures. Under these circumstances, cultivating a

green image through ambiguous labels such as "sustainable" and "eco-friendly fabrics" becomes a low-cost, high-efficiency short-term response strategy [32]. Even with limited substantive environmental practices, such strategic positioning may enhance product competitiveness and short-term sales in green consumer markets. Therefore, firms experiencing performance-aspiration gaps possess stronger incentives to intensify green marketing rhetoric and pursue performance improvement through exaggerated ESG disclosures.

Second, from a cost perspective, the low-cost nature of symbolic environmental management constitutes an important inducement for textile firms. On one hand, firms in performance difficulty often confront resource constraints that preclude substantial sustainability transformation expenditures. Substantive environmental improvement in the textile industry typically involves capital-intensive investments including production equipment upgrades, clean technology adoption, and wastewater treatment facility construction. According to United Nations Environment Programme research, textile industry green transformation demands considerable capital investment, yet firms experiencing performance-aspiration gaps typically allocate limited funds toward maintaining operations and short-term profitability. In contrast, strategic disclosure featuring ESG-oriented messaging entails lower costs with potentially higher returns. Consequently, when substantive ESG implementation proves challenging, strategic ESG communication becomes a pragmatic choice for firms experiencing performance-aspiration gaps [32].

On the other hand, firms in performance difficulty bear relatively lower reputational sanction costs. Reputation theory suggests that corporate reputation, as an intangible asset, derives value from stakeholder trust and recognition. Firms experiencing performance difficulties typically already possess diminished reputational standing. Even if symbolic environmental management is exposed, such firms incur lower marginal reputational losses compared with firms enjoying both strong reputation and performance. This "reputational floor effect" reduces the expected costs of opportunistic behaviour. More importantly, as performance-aspiration gaps widen, the marginal reputational costs from negative events progressively decline. This decreasing marginal cost structure incentivises firms to adopt increasingly opportunistic approaches, thereby intensifying symbolic environmental management [33].

Based on the foregoing analysis, we propose:

H1: *Ceteris paribus*, performance-aspiration gaps increase symbolic environmental management in textile firms.

Performance-aspiration gaps, as a multifaceted concept, exhibit multiple dimensions. Beyond the intensity dimension reflecting the magnitude by which current performance falls short of expectations, scholars should also examine the temporal dimension of persistence. Most existing research focuses on the

intensity of performance-aspiration gaps, yet in practice, the persistence of performance difficulties equally influences firm behavioural decisions [10, 11].

Performance-aspiration gap persistence refers to situations where firm performance consecutively falls below aspiration levels across multiple operating periods [34]. Incorporating this temporal dimension proves critical for understanding firm behaviour. When confronting isolated performance-aspiration gaps, firms are more likely to employ external attribution, ascribing substandard performance to uncontrollable external factors such as economic fluctuations, natural disasters, or policy changes, thereby assuaging stakeholder concerns about operational deficiencies. Such external attribution typically garners understanding and tolerance in the short term, preserving organisational reputation and stakeholder trust.

However, when firms repeatedly and persistently experience performance-aspiration gaps, the effectiveness of external attribution significantly diminishes. Attribution theory suggests that when phenomena persist over time, observers become more inclined to attribute them to internal stable factors rather than external temporary circumstances [35].

Consequently, persistent performance-aspiration gaps reduce the credibility of external attribution, with stakeholders more likely attributing poor performance to insufficient operational capabilities, strategic missteps, or managerial deficiencies [34]. For textile firms, this persistent underperformance proves especially problematic. The textile industry operates within an environment characterised by intense competition, low profit margins, and excess capacity, subjecting the sector to substantial operational pressures. In this context, prolonged poor performance is perceived as a credible signal of competitive weakness, eroding investor and downstream brand confidence in sustainable operational capability and consequently affecting financing access and order acquisition.

To mitigate trust crises triggered by persistent performance difficulties, textile firms become more likely to engage in symbolic environmental management. The rationale for this behaviour involves creating an illusory green image to redirect external attention, mitigate negative perceptions of operational deficiencies, and obscure stakeholder assessments. Specifically, when firms persistently fail to meet performance expectations, managerial pressure stems not only from performance itself but also from doubts regarding long-term organisational viability. Under these circumstances, firms attempt to construct a narrative framework suggesting that “despite poor short-term financial performance, the firm retains competitiveness in long-term sustainable development” by amplifying positive ESG disclosures and exaggerating environmental investments and achievements [30]. This narrative can partially offset negative expectations from sustained poor performance and maintain stakeholder confidence [31].

Moreover, from an environmental strategy implementation perspective, remaining persistently in performance-aspiration gap states often precipitates resource scarcity, as firms face mounting pressures in capital raising and resource allocation [34]. Textile firms typically exhibit high energy consumption and emissions in spinning, dyeing, and printing processes, while environmental transformation requires substantial capital investment. When firms persistently experience performance-aspiration gaps, resource constraints intensify further. On one hand, sustained poor performance weakens internal financing capacity, as reduced operating cash flows limit internal fund deployment [36]. On the other hand, persistent performance difficulties deteriorate external financing conditions, with declining credit ratings and rising financing costs further constraining available resources. Under these circumstances, firms typically prioritise limited funds toward maintaining operations and short-term profitability, while adopting a “low investment, high disclosure” approach to environmental governance. This strategic choice manifests as cultivating superficial green images at minimal cost rather than pursuing substantive environmental performance improvements. As performance-aspiration gap duration extends, this resource constraint effect accumulates, correspondingly strengthening firms’ motivation and intensity for implementing symbolic environmental management. More critically, performance-aspiration gap persistence also triggers systematic changes in managerial cognition and behavioural patterns. Behavioural theory suggests that sustained poor performance leads management to develop more pessimistic self-efficacy perceptions, diminishing confidence in reversing difficulties through substantive reform [37]. In this psychological state, management becomes more inclined toward short-term, superficial responses rather than substantive transformations requiring long-term investment with delayed returns. Symbolic environmental management exemplifies this short-term response strategy. Through strategic information disclosure, firms can rapidly obtain external green recognition without substantive environmental investment, alleviating anxiety and scrutiny from performance pressures.

Based on the foregoing analysis, we propose:

H2: *Ceteris paribus*, the longer the duration of performance-aspiration gaps, the more pronounced their impact on symbolic environmental management in textile firms.

The theoretical framework appears in figure 1.

RESEARCH DESIGN

Data sources and sample selection

We select listed companies in China’s A-share textile value chain from 2015 to 2023 as our initial sample. Regarding industry classification, following existing research [38, 39], we adopt the “Guidelines for Industry Classification of Listed Companies” revised by the China Securities Regulatory Commission in

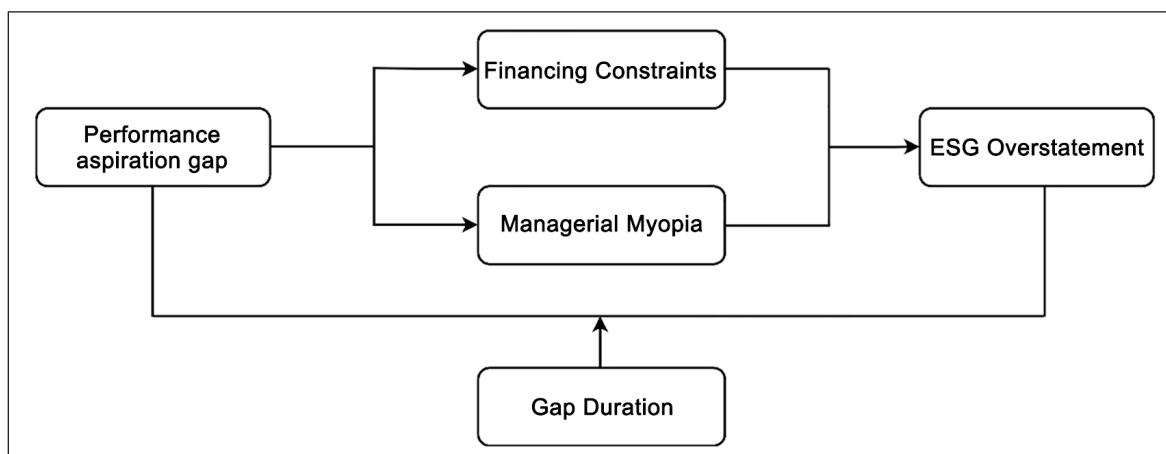


Fig. 1. Theoretical framework

2012. We select six industry categories integral to the textile value chain: C17 (Textile Industry), C18 (Textile, Apparel and Accessories), C19 (Leather, Fur, Feather and Related Products and Footwear), C26 (Chemical Raw Materials and Chemical Products Manufacturing), C28 (Chemical Fibre Manufacturing), and C29 (Rubber and Plastic Products).

This industry scope encompasses key segments of the textile value chain, including upstream raw material supply (chemical fibres and raw materials), mid-stream production and manufacturing (textiles and apparel), and downstream auxiliary materials (leather and plastic products), thereby comprehensively capturing ESG practice patterns across the industry. The data used in this study are primarily sourced from the China Stock Market & Accounting Research (CSMAR) database and hand-collected from firms' annual reports and CSR reports. Our sample selection process adheres to rigorous data quality standards. We exclude firm-year observations in which the company is designated as ST or *ST in that year, and winsorize all continuous variables at the 1st and 99th percentiles to mitigate the influence of outliers. After the above screening, the final sample comprises 3715 valid firm-year observations.

Variable definition

Symbolic Environmental Management (ESG_gap)

Symbolic environmental management mainly manifests as enterprises shaping a green image through a relatively high level of environmental information disclosure, but their actual environmental governance investment is relatively insufficient. Based on this, we use the difference between enterprise environmental information disclosure intensity and substantive environmental investment intensity to measure the degree of enterprise symbolic environmental management. Among these, enterprise environmental information disclosure intensity is measured by taking the natural logarithm of the frequency of occurrence of environment-related words in annual reports or social responsibility reports plus 1, and enterprise substantive environmental investment intensity is

measured by the ratio of the amount of environmental investment to operating revenue. To eliminate scale differences, this paper standardises the two separately and constructs the following indicator:

$$ESG_gap_{i,t} = \frac{ENV_DIS_{i,t} - ENV_DIS}{\sigma_{DIS}} - \frac{ENV_INV_{i,t} - ENV_INV}{\sigma_{INV}} \quad (1)$$

where $ENV_DIS_{i,t}$ represents the environmental information disclosure intensity of enterprise i in year t , $ENV_INV_{i,t}$ is the substantive environmental investment intensity of enterprise i in year t , ENV_DIS and ENV_INV represent the sample means of environmental information disclosure intensity and environmental investment intensity, respectively, and represents the corresponding sample standard deviation. The larger the value, the higher the enterprise's level of environmental information disclosure relative to actual environmental investment, that is, the enterprise is more likely to have "overstating" symbolic environmental management behaviour.

Performance-Aspiration Gap (Per_gap)

According to behavioural theory of the firm, firms establish expected performance levels with reference to both historical and industry average performance, then assess whether performance-aspiration gaps exist by comparing actual performance against these aspirations. We therefore employ formula 2:

$$Per_gap_{i,t} = \begin{cases} |P_{i,t} - A_{i,t}|, & \text{if } P_{i,t} < A_{i,t} \\ 0 & \text{others} \end{cases} \quad (2)$$

where $P_{i,t}$ represents actual firm performance measured by return on assets (ROA), and $A_{i,t}$ represents expected performance calculated as a linear combination of historical and industry performance, as shown in formula 3:

$$A_{i,t} = \alpha_1 HA_{i,t} + \alpha_2 SA_{i,t} \quad (3)$$

Here, $HA_{i,t}$ denotes historical aspiration, fitted from the firm's actual performance (ROA) over the prior three years and representing the performance level the firm should achieve under normal operating conditions. $SA_{i,t}$ represents social aspiration, measured

as the average performance of all firms in the focal firm's industry excluding the focal firm itself. The parameter α_1 denotes the weight assigned to historical aspiration; we report results using $\alpha_1 = 0.5$.

For performance-aspiration gap persistence (Cons), following existing research (Zhao & Xiao, 2024), we measure persistence as the number of consecutive periods during which performance-aspiration gaps occur. Specifically, *Cons* equals 1 when performance-aspiration gaps persist for two or more consecutive periods and 0 otherwise.

Control variables

To mitigate omitted variable bias, we control for factors that may influence symbolic environmental management intensity, including firm size (Size), firm age (Age), profitability (Profit), cash flow level (Cash), growth opportunities (Growth), leverage (Lev), ownership concentration (Balance), CEO-chairman duality (Dual), executive ownership (Share), executive overseas experience (Overseas), board size (Board), board independence (Indep), and board gender diversity (Female).

Model design

We estimate model 4 to examine the impact of performance-aspiration gaps on symbolic environmental management:

$$ESG_gap_{i,t} = \alpha_0 + \alpha_1 Per_gap_{i,t} + \alpha_i Controls_{i,t} + Year + Firm + \varepsilon_{i,t} \tag{4}$$

In model 4, subscripts *i* and *t* denote firm and year, respectively. *Controls_{i,t}* denotes a vector of control variables, including firm financial characteristics and corporate governance variables. To account for unobservable heterogeneity, we include firm and year fixed effects, with standard errors clustered at the firm level. The term $\varepsilon_{i,t}$ represents the idiosyncratic error term.

EMPIRICAL RESULTS

Benchmark regression

Figure 2 reports baseline regression results examining the impact of performance-aspiration gaps on symbolic environmental management. Panel A controls only for firm and year fixed effects. The coefficient

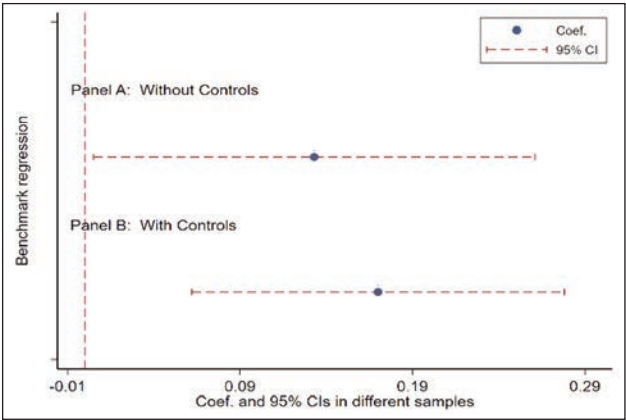


Fig. 2. Benchmark regression

on *Per_gap* is 0.133 and statistically significant at the 5% level, indicating that performance-aspiration gaps significantly increase symbolic environmental management intensity.

Panel B incorporates all control variables. The coefficient on *Per_gap* rises to 0.170 and achieves significance at the 1% level, demonstrating enhanced statistical significance. This finding aligns with behavioural theory's core prediction: when actual performance falls below aspirations, managerial performance pressure activates problemistic search mechanisms, prompting risk-taking responses. Collectively, these results support H1.

Sub-sample regression

We partition the sample based on performance-aspiration gap persistence and re-estimate model 4 for each subsample. Figure 3 shows that in the high-persistence subsample (*Cons* = 1), the coefficient on *Per_gap* is positive and significant at the 1% level, whereas in the low-persistence subsample (*Cons* = 0), the coefficient is positive but insignificant. These results indicate that longer-lasting performance-aspiration gaps exert stronger effects on symbolic environmental management, thereby supporting H2.

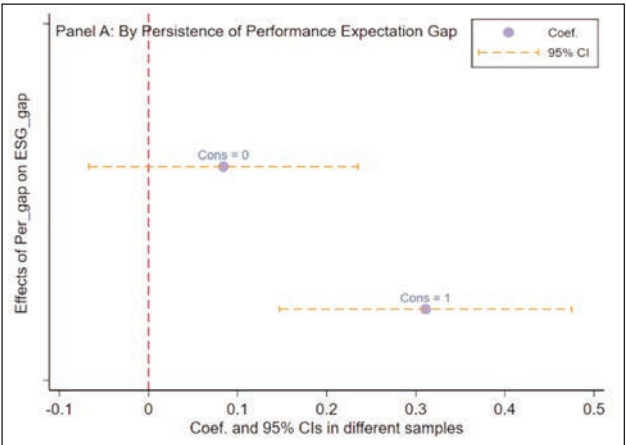


Fig. 3. Subsample regression results

Robustness tests

PSM and EBM

To mitigate potential bias from systematic differences across firms, we partition the sample into treatment (firms with performance-aspiration gaps) and control (firms without performance-aspiration gaps) groups and employ propensity score matching (PSM) with nearest-neighbour (1:1) matching. Figure 4 demonstrates that after propensity score matching, differences in control variables between treatment and control groups substantially diminish. Because PSM entails some sample loss, we further implement entropy balancing matching (EBM) as an alternative matching procedure. Results remain robust across both approaches. As shown in figure 5, the coefficient on *Per_gap* is positive and statistically significant in both specifications.

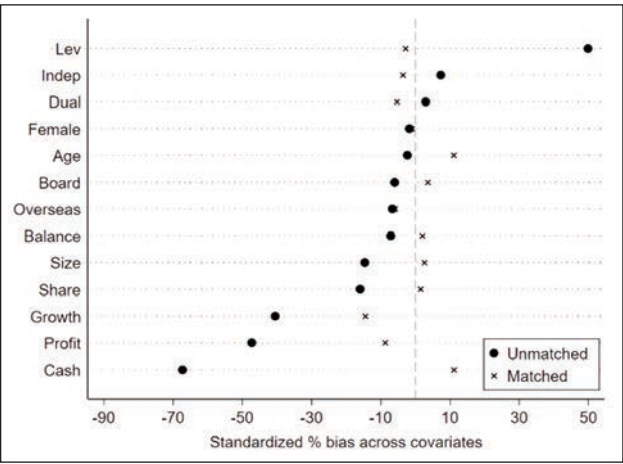


Fig. 4. Covariate balance diagnostics

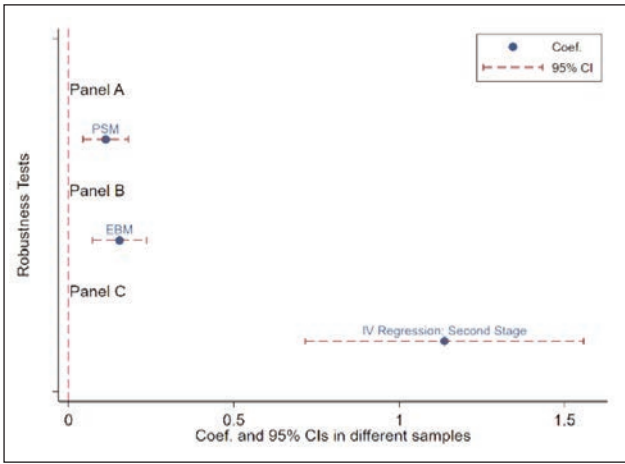


Fig. 5. Robustness tests

Instrumental variables

We construct an instrumental variable based on adjusted satellite nighttime luminosity data. To exploit temporal variation, we use the provincial-level average growth rate in nighttime light intensity as an instrument (IV) for performance-aspiration gaps. This variable satisfies the relevance condition: nighttime luminosity objectively reflects regional economic activity and development. Rising nighttime light intensity typically indicates improving local economic conditions, expanding market demand, and enhanced resource mobility, which collectively improve firm operating environments. Favourable macroeconomic conditions alleviate performance pressure and reduce the likelihood of persistent underperformance, thereby correlating with performance-aspiration gaps. This instrument also plausibly satisfies the exclusion restriction. Variation in nighttime luminosity primarily reflects regional-level macroeconomic fluctuations, infrastructure development, and policy interventions, which are unlikely to directly affect firm-level symbolic environmental management decisions.

We implement instrumental variable regression through the following two-stage specification [40]:

$$\begin{aligned} Per_gap_{i,t} = & \alpha_0 + \alpha_1 IV_{i,t} + \alpha_i Controls_{i,t} + \\ & + Year + Firm + \varepsilon_{i,t} \end{aligned} \quad (5)$$

$$\begin{aligned} ESG_gap_{i,t} = & \alpha_0 + \alpha_1 M_Per_gap_{i,t} + \alpha_i Controls_{i,t} + \\ & + Year + Firm + \varepsilon_{i,t} \end{aligned} \quad (6)$$

where $M_Per_gap_{i,t}$ denotes the first-stage predicted value, and other variables follow model 4. As shown in figure 5, the main findings remain robust.

Alternative measurement of performance aspiration gap

We employ two alternative measures. First, we measure performance-aspiration gaps (Per_gap1) as the shortfall when actual performance falls below analyst forecasts (winsorized at zero). Second, we vary the aspiration weighting by setting $\alpha_1 = 0.6$ (Per_gap2). As shown in figure 6, the main conclusions remain unchanged.

Adding fixed effects

To account for unobservable regional characteristics, we augment the baseline specification with province fixed effects, controlling for cross-provincial variation in institutional environment and economic development. As shown in figure 6, the main results remain robust.

Alternative model specification

To further verify robustness, we alter the standard error clustering approach. Because our sample comprises exclusively textile firms, we cluster standard errors at the province rather than the firm level to address potential within-province correlation. As shown in figure 6, the main findings remain unchanged.

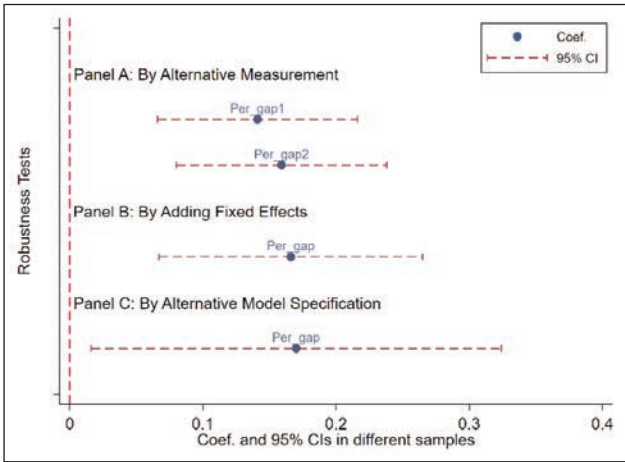


Fig. 6. Robustness tests

Double machine learning

Although baseline regressions reveal the relationship between performance-aspiration gaps and symbolic environmental management, linear models may suffer from misspecification bias. Linear specifications may fail to capture nonlinear relationships and interaction effects among variables. Moreover, high-dimensional controls may induce the curse of dimensionality and multicollinearity, compromising estimation precision and robustness. We therefore employ double/debiased machine learning [41]. Specifically, we

implement a partially linear model using random forests with 1:4 and 1:7 cross-fitting splits, controlling for year and firm fixed effects and including both linear and quadratic control terms. The results show that the coefficients are all positive and statistically significant at the 1% level. Due to space limitations, the robustness results are available upon request.

FURTHER ANALYSIS

Mechanism tests

Based on our theoretical framework, performance-aspiration gaps may induce symbolic environmental management through two mechanisms.

First, resource constraints: underperformance deteriorates firm financial conditions [36] and intensifies financing constraints, forcing firms to trade off high-cost substantive environmental investment against low-cost symbolic disclosure [42], thereby favouring symbolic environmental management strategies. Second, cognitive biases: performance pressure strengthens managerial short-termism, prompting managers to prioritise green image cultivation over substantive innovation [23]. To test these mechanisms, we examine financing constraints and managerial myopia as mediating pathways.

We employ a two-stage mediation approach. First, we estimate the effect of performance-aspiration gaps on mediating variables (M). Second, we estimate the effect of fitted mediator values ($\hat{M}$) on symbolic environmental management. This approach follows the two-equation system:

$$M_{i,t} = \alpha_0 + \alpha_1 Per_gap_{i,t} + \alpha_i Controls_{i,t} + Year + Firm + \varepsilon_{i,t} \quad (7)$$

$$ESG_gap_{i,t} = \alpha_0 + \alpha_1 \hat{M}_{i,t} + \alpha_i Controls_{i,t} + Year + Firm + \varepsilon_{i,t} \quad (8)$$

where M denotes mediating variables, specifically two mediators: financing constraints (FC), measured using the absolute value of the SA index [43], where higher values indicate tighter constraints, and managerial myopia (Short), measured as short-term

investment scaled by lagged total assets, where higher values indicate greater myopia.

Figure 7 shows that first-stage results indicate performance-aspiration gaps positively and significantly correlate with both financing constraints (coefficient = 0.131) and managerial myopia (coefficient = 0.114), confirming that performance-aspiration gaps intensify financing constraints and strengthen managerial short-termism. Second-stage results show that fitted values of both mediators positively and significantly affect symbolic environmental management intensity. Regarding financing constraints, performance-aspiration gaps create resource pressures, forcing firms to prioritise liquid asset accumulation and crowding out substantive environmental investment, thereby amplifying symbolic environmental management. Regarding managerial myopia, performance pressure induces short-term orientation, prompting managers to favour strategies yielding quick performance gains. Because green image cultivation delivers faster results than substantive innovation, myopic managers favour symbolic approaches.

Heterogeneity analysis

The effect of performance-aspiration gaps on symbolic environmental management varies across contexts. Organisational embeddedness theory [44] and institutional theory [45] posit that firm behaviour is shaped by both external institutional environments and internal resource endowments. In the textile industry, an environmentally sensitive, high-risk sector, significant variation in institutional environments and ESG foundations across firms may generate heterogeneity in opportunistic responses [46]. To identify context-dependent effects, we examine whether marketisation level, regulatory stringency, and firm ESG performance moderate the effect of performance-aspiration gaps on symbolic environmental management.

Marketisation

Marketisation reflects institutional quality and competitive intensity. In environmentally sensitive industries like textiles, marketisation constrains firms' conversion of performance pressure into opportunistic ESG disclosure. In highly marketised regions, stronger legal institutions and enforcement increase detection probability and sanction costs for opportunistic behaviour [47]. Additionally, intense market competition and mature stakeholder networks (including institutional investors, analysts, and media) create multilayered monitoring of high-emission, resource-intensive firms [48]. These forces encourage textile firms to address performance gaps through substantive improvements rather than information manipulation. Conversely, in weakly marketised regions, institutional voids enable opportunistic behaviour [27], and firms exploit information asymmetries to cultivate green images.

We measure provincial marketisation using the China Marketisation Index, which encompasses five dimensions: government-market relations, private sector

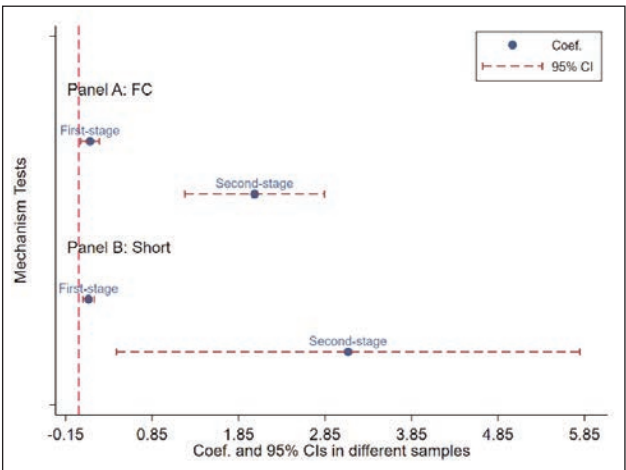


Fig. 7. Mechanism tests

development, factor market development, intermediary organisation development, and legal environment. We partition the sample at the median marketisation level.

Panel A of figure 8 shows that performance-aspiration gap coefficients are insignificant in highly marketised regions but positive and significant in weakly marketised regions. This indicates that in institutionally weaker regions, textile firms resort to symbolic environmental management when facing performance pressure. This finding aligns with institutional theory: firms in institutional voids adopt symbolic strategies to secure legitimacy.

Environmental regulation

The textile industry is characterised by high pollution and energy intensity, rendering firms' ESG disclosure particularly sensitive to environmental regulation. Regulatory stringency, as a key institutional constraint, enhances disclosure credibility by establishing stricter compliance standards and monitoring [49]. In stringently regulated regions, stricter emission standards and monitoring increase detection probability for misreporting [50]. Additionally, green finance instruments like green credit facilitate financing for substantive environmental investment [51], alleviating financing constraints. Environmental regulation both directly constrains emissions and indirectly enhances environmental performance by inducing green innovation [52, 53]. Stringent regulation also promotes digital transformation, which catalyses green innovation [54], creating a regulation-innovation-performance virtuous cycle. Conversely, lax regulation enables opportunism, prompting firms to resort to symbolic disclosure to address legitimacy pressures [55].

We measure regulatory stringency using keyword frequency in provincial government work reports, specifically counting mentions of "environmental protection", "pollution control", "energy conservation and emission reduction" and "green development". Higher frequency indicates stronger regulatory commitment. We partition the sample at the median.

Panel B of figure 8 shows that performance-aspiration gap coefficients are positive and significant in weakly regulated regions but insignificant in stringently regulated regions. This indicates that in lax regulatory environments, textile firms favour low-cost symbolic environmental management to deflect pressure over costly substantive investments. This result aligns with the Porter Hypothesis [56]: moderate environmental regulation induces substantive innovation, whereas regulatory laxity enables opportunism.

ESG performance

Within the textile industry, variation in ESG foundations shapes behavioural responses to performance-aspiration gaps. The resource-based view [28] and impression management theory [57] suggest that firms with weak ESG foundations face larger legitimacy deficits and resort to opportunistic disclosure to cultivate green images and deflect pressure [33]. ESG laggards typically lack robust environmental management systems and adequate environmental

resources, face higher marginal costs of substantive improvement, and thus favour impression management over genuine improvement [58]. Financial constraints further push these firms toward liquid asset accumulation over environmental investment [59], amplifying symbolic management incentives. Conversely, ESG leaders possess robust environmental management systems and stakeholder communication mechanisms. Their valuable reputation capital makes them cautious about disclosure. They prioritise reputation preservation and avoid risking long-term reputation for short-term gains [60].

We measure ESG foundations using Bloomberg ESG performance scores and partition the sample at the median.

Panel C of figure 8 shows that coefficients on performance-aspiration gaps are positive and significant among ESG laggards but insignificant among ESG leaders. These results support the legitimacy deficit hypothesis: ESG laggards inflate disclosure to compensate for legitimacy deficits when facing performance pressure, whereas ESG leaders prioritise reputation preservation over opportunistic tactics.

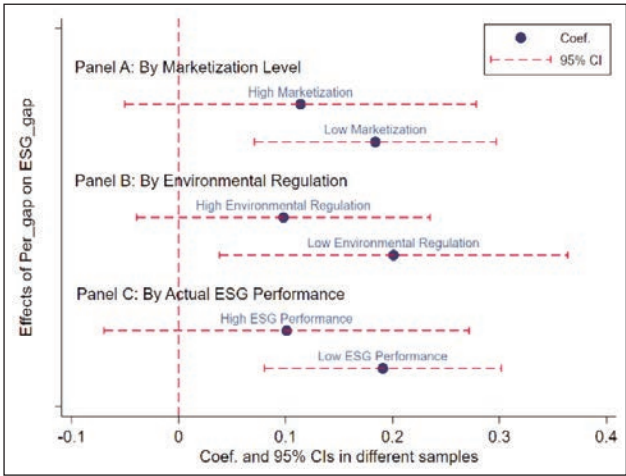


Fig. 8. Heterogeneity analysis results

CONCLUSION AND DISCUSSION

With the advancement of the global sustainable development concept, enterprise ESG information disclosure has increasingly become an important basis for stakeholders to evaluate their environmental responsibility. However, the significant divergence between enterprise ESG information disclosure and actual performance has become a key problem hindering the effective operation of the ESG system. Based on the behavioural theory of the firm, this study systematically analyses the influence mechanism of the performance-aspiration gap on enterprise symbolic environmental management, and conducts empirical testing using Chinese textile industry listed companies from 2015 to 2023 as a sample.

The results show that the performance-aspiration gap significantly induces textile enterprise symbolic environmental management behaviour, and this effect strengthens with the extension of performance

pressure duration. Mechanism testing shows that the performance-aspiration gap leads to symbolic environmental management behaviour through two pathways: deteriorating enterprise financing constraints and intensifying managerial myopia. Heterogeneity analysis further reveals that in contexts of lower marketisation degree, weaker environmental regulation intensity, and poorer ESG actual performance, the inducing effect of the performance-aspiration gap on enterprise symbolic environmental management is more significant.

Theoretical contributions

The theoretical contributions of this study are manifested in the following four aspects.

First, it expands the application of behavioural theory of the firm in the ESG disclosure field, revealing the mechanism by which the performance-aspiration gap as an endogenous micro-motivation triggers greenwashing behaviour. Existing research mostly focuses on formal institutional pressure or external market supervision on greenwashing behaviour [33], while paying less attention to how internal operational pressure triggers opportunistic disclosure. This study introduces the concept of performance-aspiration gap from behavioural theory of the firm, constructs a theoretical framework with internal operational pressure as the core driving force, explaining how it acts as an endogenous micro-motivation to trigger management's adoption of symbolic environmental management behaviour. This compensates for the over-reliance on external theories in existing research, reveals the endogenous micro-motivation of ESG information distortion, and promotes the transformation of greenwashing research from an external pressure response paradigm to an internal pressure inducement paradigm.

Second, it reveals the temporal dynamics of the performance-aspiration gap's influence on ESG behaviour, adding a persistence dimension consideration to behavioural theory of the firm. Traditional behavioural theory of the firm assumes that organisational responses to performance gaps are immediate and short-term [9], while this study, by introducing the concept of performance-aspiration gap persistence, finds that performance gaps have both a short-term triggering effect and a long-term cumulative amplification effect on symbolic strategies. This finding not only expands the temporal dimension of behavioural theory of the firm but also reveals the possible path for symbolic environmental management behaviour to evolve into an institutionalised strategic pattern under long-term pressure, providing a new theoretical perspective for understanding strategic evolution under sustained pressure.

Third, it deepens the understanding of greenwashing driving mechanisms, identifying that the performance-aspiration gap influences symbolic environmental management behaviour through two complementary pathways: financing constraints and managerial myopia. The financing constraint mechanism embodies how resource scarcity changes the

enterprise's trade-off between substantive environmental investment and symbolic information disclosure [42]. The managerial myopia mechanism reveals how performance pressure, by affecting management's time preferences, prompts them to prioritise strategic disclosure with short-term effects over long-term substantive improvement. This dual-mechanism framework echoes agency theory's assertions about resource allocation [61], providing a micro-foundation for understanding how performance pressure reshapes enterprise ESG strategies from the outside in.

Fourth, it reveals the moderating role of institutional environment and enterprise resource endowment in shaping ESG behaviour, providing contextualised evidence for understanding ESG governance in emerging markets. The heterogeneity analysis of this study finds that the effect of the performance-aspiration gap shows significant differences under different institutional environments and enterprise foundations. In contexts with weaker institutional environments or poorer enterprise foundations, performance pressure is more easily converted into opportunistic behaviour. This finding supports institutional theory's assertion about institutional voids inducing opportunism [27] and echoes the resource-based view's hypothesis about legitimacy deficit [28]. This study provides empirical evidence for understanding how institutional environment and enterprise resources jointly shape ESG behaviour, and also provides a theoretical basis for optimising ESG governance paths in the emerging market context.

Practical implications

Based on the above research findings, this study provides important practical implications for different market participants to address symbolic environmental management behaviour and improve ESG information quality.

First, regarding enterprise-level governance optimisation. Regarding performance-aspiration gap and managerial myopia issues, textile enterprises should abandon assessment models oriented toward short-term financial indicators and extend executive performance evaluation cycles to match the recovery cycle of green technology investment. More importantly, it is essential to establish a direct linkage mechanism between executive compensation and quantifiable, substantive ESG performance indicators, rather than focusing only on disclosure ratings or report quality. Specifically, enterprises can incorporate substantive environmental performance indicators such as carbon emission intensity, energy consumption efficiency, and wastewater treatment compliance rate into the executive performance assessment system, and assign sufficient weight to these indicators. Through institutional design, guide management to shift resource allocation toward long-term, substantive green innovation and operational improvement, fundamentally suppressing opportunistic behaviour. In addition, enterprises should establish independent ESG supervisory committees to conduct internal

review of the authenticity of ESG information disclosure, ensuring that disclosure content matches actual actions.

Second, regarding the path to institutional environment improvement. Given that contexts with low marketisation degree and weak environmental regulation amplify greenwashing effects, regulatory agencies should formulate mandatory, differentiated environmental information disclosure and audit standards for the high-pollution characteristics of the textile industry. First, establish a unified environmental information disclosure framework, clarifying disclosure content, format, and verification requirements, reducing the space for strategic disclosure by enterprises. Second, strengthen third-party audit mechanisms, requiring textile enterprises to hire independent agencies to conduct substantive audits of ESG reports, especially on-site verification of key indicators such as energy consumption and pollution emissions. Third, increase the punishment for false disclosure, imposing multiple sanctions such as economic penalties, credit downgrading, and financing restrictions on enterprises verified to have symbolic environmental management behaviour. At the same time, financial institutions should use actual improvement data of enterprise environmental performance as the core approval basis when providing green credit and bond support, rather than relying on symbolic information. Through a mechanism of rewarding the excellent and punishing the poor, provide preferential financing for enterprises conducting clean production technology transformation and possessing genuine emission reduction results, effectively alleviating their financing constraints during the transition period, and increasing the cost of false disclosure for enterprises.

Third, regarding coping strategies for long-term pressure. To solve the cumulative effect caused by long-term pressure and the transformation difficulties of enterprises with poor actual performance, governments and industry associations should concentrate resources to support the research and development and promotion of key green technologies, prompting enterprises to fundamentally solve pollution problems. First, establish special funds to support clean production technology, circular economy models, and green supply chain management innovation in the textile industry, reducing the technological threshold and financial pressure of enterprise green transformation. Second, promote industry-university-research cooperation, facilitating universities, research institutions, and enterprises to jointly tackle key technologies such as energy conservation and emission reduction, wastewater treatment, and recycling, accelerating the transformation of technological

achievements. Third, establish a transparent supply chain ESG information sharing platform, and promote independent third-party agencies to verify and certify enterprise environmental performance data. This comprehensive transparency and external supervision can effectively identify and constrain those enterprises that have long relied on symbolic information management, transforming sustainable development requirements into norms jointly observed by the industry. In addition, industry associations should formulate ESG best practice guidelines for the textile industry, promoting overall industry ESG level improvement through benchmark enterprise demonstrations, experience sharing, and peer pressure.

Research limitations and prospects

Although this study has achieved certain theoretical and practical contributions, it still has the following limitations, providing directions for future research.

First, regarding the limitations of sample selection. The sample of this study is concentrated on textile supply chain enterprises, which is beneficial for in-depth analysis of industry characteristics and control of industry heterogeneity, but may have certain limitations in the universality of conclusions. As a typical high-pollution, high-energy-consumption industry, the textile industry's ESG pressure and disclosure motivation may differ from other industries. Future research can extend to other industries, especially those with different ESG pressures, to test the external validity of this study's core mechanisms. Cross-industry comparative research will help identify industry boundary conditions for the influence of the performance-aspiration gap on ESG behaviour, deepening the understanding of greenwashing motivations in different industry contexts.

Second, regarding the expansion of the research context. This study focuses on the Chinese context, and China's unique institutional environment may influence research results, thereby limiting the direct universality of conclusions. It is crucial to test the findings of this study in different institutional and organisational contexts. Future research should conduct cross-country comparative research in countries with differences in institutional pressure intensity, marketisation degree, etc., to test the validity and universality of this study's core mechanisms in different contexts. This will help deeply explore the possible substitution or complementary relationships between performance-aspiration gap and formal environmental regulation and market mechanisms in different countries, thereby more comprehensively understanding the impact of performance pressure on ESG behaviour in a global context.

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