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Sustainable Board Governance, Corporate Social Responsibility Fulfillment, and Differences in ESG Information Disclosure: A Comparative Case Study of Conch Cement and Qingsong Jianhua Co., Ltd.

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Abstract

Under the background of the deepening concept of sustainable development, the ESG framework has put forward important requirements for the green governance of high-emission and heavily polluting industries. Based on the governance practice of two cement-listed enterprises with the same state-owned holdings and the same regulatory environment, this study explores the transmission path from sustainable board governance to corporate ESG performance. By analyzing the practical differences of enterprises in the three levels of governance structure setting, responsibility implementation results and information disclosure quality under the ESG framework, we clarify the core role of the green decision-making mechanism of the board of directors in environmental responsibility and the fulfillment of social responsibility, and deeply analyze the real problems such as structural deficiencies, insufficient incentives, and non-standardized disclosure practices in the current ESG development of heavily polluting state-owned enterprises. Subsequently, targeted countermeasures were put forward, such as improving the internal governance system, developing innovative green decision-making mechanisms, adjusting the assessment incentive mechanism, strengthening mandatory requirements for ESG disclosure, and improving the professional ability of directors, so as to promote the green and sustainable development of heavily polluting enterprises. Finally, summarize the research conclusions and emphasize that the achievement of ESG goals by heavily polluting enterprises requires the coordination of internal governance and external supervision.

Keywords

sustainable board governance, ESG information disclosure, cement industry, green governance

1. Introduction

At a time when advocating the concept of deepening sustainable development in heavily polluting industries, ESG information disclosure has become the core reference for the regulatory level and the capital market to measure the long-term business compliance and value creation ability of enterprises. As the core link of the upstream of the construction industry chain, the cement industry with high energy consumption and high emissions is facing stricter ESG review and disclosure requirements than that of general manufacturing. Since the implementation of the new Environmental Protection Law and the integration of green development into national planning, the domestic environmental information disclosure system has been continuously improved. However, it is difficult to promote heavily polluting enterprises to take the initiative to fully disclose environmental data by external supervision alone. There are widespread problems such as selective disclosure and lack of quantitative information. The degree of improvement of internal governance is the core factor that determines the quality of disclosure [1]. External environmental regulations can only form basic compliance pressure, and governance elements such as the structure of the board and the internal supervision mechanism of the enterprise will regulate the implementation effect of the policy and decide whether the enterprise should make substantial disclosure or simple text response [2]. This study takes the cement industry, a typical high-energy-consuming, high-emission and heavily polluting industry, as the research background. Taking the state-owned listed enterprises Conch Cement and Qingsong Jianhua Co., Ltd. as a comparative sample, it explores the differences between the sustainable governance structure and green decision-making mechanism of the board, analyzes how the differences affect the social and environmental responsibilities of enterprises, and finally transmits them to the information disclosure link, resulting in a significant gap in the quality of enterprise ESG information disclosure, and clarifying the intrinsic impact path between the three. Most of the existing research on the board and ESG information disclosure focuses on the quantitative empirical evidence of the whole industry panel, and most of them take all A-share heavily polluting enterprises as samples to carry out regression analysis. The results of qualitative comparative case study method of state-owned listed enterprises on the cement subdivision track are relatively scarce, and there is still obvious research gaps from the perspective of subdivision industry cases [3].

This study chooses Conch Cement and Qingsong Jianhua as the core research objects. The two enterprises have a high degree of comparison basis such as the same industry, the same ownership characteristics, and the same supervision environment. The qualitative comparative case study approach is used to carry out analysis. Relying on the annual report of the enterprise, the social responsibility report, the report of the board meeting, the ESG report and other materials, the research focuses on the systematic comparative analysis of the sustainable governance structure of the board, the performance of social responsibility implementation and the quality of ESG information disclosure, and sorts out the chain reaction brought about by the differentiated governance mechanism. The core goal is to clarify the complete transmission logic of “difference in governance structure - differentiation of responsibility fulfillment - disclosure quality gap” and explain the deep reasons for the differentiation of ESG performance of state-owned heavily polluting enterprises of the same attribute.

This study believes that the sustainable governance of the board is a subdivision mechanism of the traditional governance of the board. The board of the enterprise integrates ESG matters into the top-level strategy, builds a full-time institution to coordinate environmental protection investment and social responsibility implementation, and relies on the setting of the ESG committee, the green professional background of directors, low-carbon strategic planning, executive ESG assessment and other quantifiable indicators to implement the top-level control of the sustainable operation of the enterprise. Enterprises publicize the details of their performance in the three aspects of the environment, social responsibility and corporate governance according to the norms. The completeness and quantitative degree of disclosure represent the quality of disclosure, which is an important way for the compliance operation of heavily polluting enterprises and the performance of their responsibilities to the outside world.

This research relies on classical theories to build analytical logic. The stakeholder theory believes that enterprises need to take into account the demands of multiple subjects [4], which provides a basic basis for the implementation of environmental protection and social responsibility of heavily polluting state-owned enterprises. Legitimacy theory proposes that enterprises rely on substantive performance to obtain social and regulatory recognition. The two state-owned enterprises adopt different strategies of active response and passive compliance to environmental protection policies, which directly causes a gap in the degree of social responsibility performance and further affects the level of ESG disclosure. The theory of corporate governance points out that the internal governance structure will constrain the business decision-making of enterprises. The establishment of a full-time sustainable governance institution can continuously promote environmental protection investment. The lack of corresponding departments makes it difficult to systematically implement environmental responsibilities, which constitutes the internal cause of the differentiation of behavior of the two enterprises. The modern corporate governance system needs to adapt to ESG development needs. The core transformation path is to set up a sustainable or ESG special committee on the board to build a top-down green decision-making chain. Whether there is a full-time governance agency directly determines the implementation effect of enterprise environmental responsibility [5]. The Upper Echelons Theory shows that there are differences in the professional configuration of the board team. The presence or absence of independent environmental protection directors will cause obvious differentiation between the two enterprises at the level of sustainable governance construction, responsibility implementation and ESG disclosure [6]. The double case analysis based on the above theory can not only enrich the application of classical governance theory in the ESG research scenarios of heavily polluting state-owned enterprises, but also provide a reference practical direction for enterprises of the same type to improve the green governance structure and improve the quality of ESG information disclosure.

2. Case Description and Comparative Analysis

2.1 Conch Cement: An AAA-Rated ESG Benchmark

Conch Cement is a leading enterprise in the domestic cement industry and a benchmark sample of the green governance of state-owned enterprises in heavily polluting industries. In terms of ESG rating, the comprehensive ESG rating of the enterprise in 2026 is AAA, with a comprehensive score of 89.2 points, and the sub-scores of environment, society and governance are 83.5 points, 75.9 points and 88.0 points respectively, ranking first in the industry; Relying on the professional internal control system, enterprises realize quantitative and reliable disclosure of core environmental indicators such as energy consumption and pollution discharge, and the data coverage and verifiability of detailed ESG reports are at the leading level in the industry. In terms of governance structure, the enterprise has built a professional green governance system directly led by the board, and set up an independent sustainable development committee at the board as a full-time ESG decision-making body to coordinate the formulation of dual-carbon strategies, the approval of environmental protection investments, and the implementation of social responsibility projects, forming a vertical ESG management chain from the board to the management level. In terms of the composition and structure of the board, the board forms a diversified governance structure with the participation of internal executive directors, professional independent directors and employee directors. The proportion of independent directors accounts for more than one-third, and an independent director with a professional background in the environmental field is specially assigned, and has the right to independently review and vote on major environmental investment and ESG-related matters; Domestic head manufacturing enterprises generally build a sustainable governance hierarchy led by the board, and integrate environmental investment and social responsibility projects into the deliberation process of the special committee, so as to realize ESG management from formal institutional arrangements to daily business decision-making [7], The board has special committees on strategy, auditing, sustainable development, etc., with clear boundaries of authority and responsibility, and ESG matters are included in the fixed agenda of the board. In terms of social responsibility, the complete governance system promotes enterprises to take the initiative to fulfill their responsibilities and systematically carry out substantive social responsibility projects such as low-carbon technology transformation of production lines, full-cycle ecological restoration of mines, and rural assistance around the factory area, forming the logic of fulfilling responsibilities of actively responding to policies and laying out green investment in advance.

Table 1: Construction of the Sustainable Board Governance Mechanism at Conch Cement

Governance Dimension	Implementation Status	Specific Content
Establishment of governance institutions	Implemented	A three-level governance structure of the “Board of Directors–ESG Management Committee–ESG Working Group” has been established to manage and oversee sustainability-related impacts, risks, and opportunities.
Internal communication mechanism	Established	An internal reporting mechanism for sustainability information has been established, and the ESG Management Committee holds meetings at least twice a year.
Supervision and assessment mechanism	Established	An incentive and constraint mechanism linked to ESG performance has been established for senior management. Key ESG indicators have been incorporated into the performance evaluation system, with assessment results linked to performance-based compensation and tenure incentives.

Source: 2025 ESG Report of Anhui Conch Cement Co., Ltd. released by the Shanghai Stock Exchange.

Table 1 shows that Conch Cement has established a complete three-level sustainable development governance framework of “Board of Directors-ESG Management Committee-ESG Working Group”, and clarifies the management responsibilities of sustainable development-related impacts, risks and opportunities. In terms of internal management, the company has established an information reporting mechanism to hold ESG management committee meetings at least twice a year to ensure that ESG matters are regularly tracked and decided. It is worth noting that Conch Cement deeply embeds ESG key indicators in the performance appraisal system of senior managers, and the appraisal results are directly linked to performance remuneration and tenure incentive remuneration, realizing the effective transmission and implementation of ESG responsibilities from top to bottom. Specifically, the assessment of the general manager and the deputy general manager in charge of safety and environmental protection is linked to the safety and environmental protection indicators, the assessment of the general manager and secretary of the board in charge of corporate governance and compliance management is linked to the corporate governance indicators, and the assessment of executives in charge of digitalization and intelligence is linked to the innovative research and development indicators. This institutional arrangement reflects the substantial measure of Conch Cement to push ESG governance from the “institutional level” to the “executive level”.

2.2 Qingsong Jianhua: An A-Rated ESG Governance Challenger

Qingsong Jianhua is a regional state-owned cement enterprise, which is a catch-up case of gradually addressing ESG governance deficiencies on the basis of meeting compliance in the field of heavily polluting. In terms of ESG rating, the comprehensive ESG rating of the enterprise in 2026 is A, with a comprehensive score of 68.1 points, and the sub-scores of environment, society and governance are 62.3 points, 73.4 points and 76.9 points respectively, which has met the basic compliance requirements of ESG information disclosure and is at the middle level in the industry; Limited by governance capacity, enterprise ESG disclosure is mainly qualitative text description, quantitative data on key environmental indicators is generally missing, and the disclosure is not detailed enough. In terms of governance structure, the enterprise has not set up an independent sustainable development or ESG full-time governance department. Decisions related to environmental protection and social responsibility are attached to the regular board meeting process. No special ESG management team has been established. Most of the relevant work is undertaken part-time by production and administrative departments, and a systematic ESG governance mechanism has not been formed. In terms of social responsibility, limited by the single governance structure, the investment of corporate social responsibility is based on the bottom line requirements of regulations. It only passively completes mandatory tasks such as environmental protection rectification and pollution discharge standards required by supervision. It does not actively lay out non-mandatory social responsibility projects such as forward-looking low-carbon technical reform, systematic ecological restoration, and long-term rural assistance, and lacks active planning for the performance of responsibilities.

2.3 A Structural Analysis of ESG Differences

Although the two enterprises are registered in different places and there are slight differences in the details of local supervision implementation, the national unified cement industry environmental protection policy and ESG disclosure rules have formed a consistent compliance baseline, and there is no essential gap in external constraints. The hierarchical core of the two ESG performance comes from the structural differences in internal governance. First, there are essential differences in the governance structure: Conch Cement has established a professional green governance structure of “special committee + professional independent director”, which provides a stable organizational carrier for ESG matters; Qingsong Jianhua has not set up a full-time ESG governance institution, and green decision-making lacks fixed mechanism support. Second, the logic of responsibility performance is obviously differentiated: the perfect governance structure promotes Conch Cement to form a long-term logic of active performance of responsibility, and layout in advance in the fields of environmental protection investment and social responsibility; Qingsong Jianhua is limited by governance capacity and has always been in a passive compliance state and only meets the minimum regulatory requirements. Third, the gap in the quality of disclosure is significant: Hailuo relies on a mature internal control system to realize the whole process statistics of ESG data, and the disclosure content is quantitative and detailed. From the perspective of ESG information quality characteristics, Qingsong Jianhua's disclosure mode of “heavy text expression and light substantive data” presents the characteristics of greenwashing disclosure under passive compliance: In the dimension of “true reflection”, the core environment performance data is not fully presented, and in the dimension of “verifiability” and “comparability”, it does not meet the quantitative disclosure standards of the industry benchmark [8]. On the whole, the industry in which the two enterprises are located and the external supervision environment of unified environmental protection are basically the same. In the end, the root cause of the ESG disclosure layering lies in the difference in the perfection of the internal governance structure. The governance efficiency directly determines the initiative and detail of the enterprise's environmental information disclosure [9], The difference in the internal control structure of the board is the core dominant reason for the gap between the two enterprises from duty performance to ESG disclosure hierarchy, and also confirms the transmission logic of “governance structure - responsibility fulfillment - information disclosure”.

Table 2: Description of the Nine-Level ESG Rating System of Huazheng ESG Ratings

Rating	Level Classification	Specific Description
AAA	Leading	The overall ESG performance ranks within the top 2% of the industry, with comprehensive leadership across all indicators and extremely strong risk management capabilities.
AA	Leading	The overall ESG performance ranks within the top 5% of the industry, with most indicators demonstrating leading performance and strong risk response capabilities.
A	Leading	The overall ESG performance ranks within the top 10% of the industry, with excellent overall performance and strong sustainability.
BBB	Average	The overall ESG performance ranks within the top 30% of the industry, with generally good performance and controllable risks.
BB	Average	The overall ESG performance ranks within the top 50% of the industry, with balanced performance across indicators and no significant major risks.
B	Average	The overall ESG performance ranks within the top 70% of the industry, with room for improvement in certain dimensions.
CCC	Lagging	The overall ESG performance ranks within the bottom 30% of the industry, with significant deficiencies in multiple dimensions.
CC	Lagging	The overall ESG performance ranks within the bottom 10% of the industry, with substantial risk exposure across all dimensions.
C	Lagging	The overall ESG performance is at the bottom of the industry, with extremely poor overall performance and very high risks.

Source: Huazheng Index. ESG Rating Data of A-Share Listed Companies [EB/OL].

As shown in Table 2, the Huazheng ESG Rating is updated quarterly and consists of nine rating levels from highest to lowest. Among them, AAA, AA, and A are classified as the “Leading” tier; BBB, BB, and B are classified as the “Average” tier; and CCC, CC, and C are classified as the “Lagging” tier.

Table 3: Comparison of ESG Ratings and Dimension-Specific Scores between Conch Cement and Qingsong Jianhua

Comparison Dimension	Conch Cement (600585.SH)	Qingsong Jianhua (600425.SH)
Huazheng ESG Rating	A (the 3rd level among nine ratings)	CCC (the 7th level among nine ratings)
Overall Score (Weighted)	83.2	68.1
Environmental (E) Score	83.5	62.3
Weight of Environmental Dimension	40.7%	40.7%
Industry Ranking in Environmental Dimension	2 / 49	36 / 49
Social (S) Score	75.9	73.4
Weight of Social Dimension	24.2%	24.2%
Industry Ranking in Social Dimension	40 / 49	44 / 49
Governance (G) Score	88.0	76.9
Weight of Governance Dimension	35.0%	35.0%
Industry Ranking in Governance Dimension	3 / 49	31 / 49

Source: Huazheng Index. ESG Rating Data of A-Share Listed Companies [EB/OL], April 30, 2026.

Table 3 shows the comparison of the ESG rating and scores of each dimension of Conch Cement and Qingsong Jianhua. Judging from the rating results, the ESG comprehensive rating of Conch Cement is A, which is in the “leading” echelon (3rd tier) in the Huazheng's nine-level rating system, while Qingsong Jianhua is CCC-level, in the “lagging” echelon (7th), with a difference of 4 gears. In terms of weighted comprehensive score, Conch Cement (83.2) is significantly higher than Qingsong Jianhua (68.1), with a gap of 15.1 points. The two aspects of environment (E) and corporate governance (G) are the main dimensions of this study.

In terms of environment (E), the score of Conch Cement is 83.5, ranking second in the industry, far higher than the 62.3 (36th in the industry) of Qingsong Jianhua, and the difference between the two is 21.2 points, which is the dimension of the biggest gap. The weight of the environmental dimension is as high as 40.7%, which is the highest among the three dimensions. Therefore, the absolute advantage of Conch Cement in the environmental dimension has become the core driving factor of its ESG rating. Judging from the results of many years of continuous ESG performance measurement, its environmental indicator score has long led similar enterprises in the industry [10].

In terms of corporate governance (G), Conch Cement scored 88.0, ranking 3rd in the industry and performing well; Qingsong Jianhua ranked 31st in the industry with a score of 76.9, and the difference between the two was 11.1 points. The weight of the governance dimension is 35.0%, and Conch Cement also has obvious advantages in this dimension.

In general, Conch Cement has outstanding performance in the highest weighted environmental dimension and corporate governance dimension, while Qingsong Jianhua's weak performance in the environmental dimension is the main reason for its low ESG rating.

3. Conclusion

This study focuses on the cement industry, which is a typical heavily polluting field with high energy consumption and high emissions. It selects two listed enterprises, Conch Cement and Qingsong Jianhua, which are also state-owned and face a unified industry supervision environment, as research samples. Through qualitative double case comparison analysis, it fully verifies that the transmission path of “sustainable governance of the board of directors - social responsibility fulfillment - ESG information disclosure” is established in heavily polluting state-owned cement enterprises. The study confirms that the establishment of a special committee for sustainable development and a professional governance structure equipped with independent directors of environmental protection are the core internal driving factors for enterprises to take the initiative to assume environmental responsibilities and improve the quality of ESG information disclosure; Even if the property rights attributes and the baseline of external supervision are consistent, the differences in the internal governance structure of the enterprise will be differentiated into two completely different business models of actively responding to environmental protection policies and passively meeting the bottom line of compliance, which directly leads to the formation of significant stratification of enterprises in environmental protection investment, social responsibility coverage, and the detail of information disclosure. The relevant conclusions enrich the case application scenarios of Upper Echelons Theory and Legitimacy Theory in the field of heavily polluting state-owned enterprises ESG research.

Based on the research conclusions, heavily polluting state-owned enterprises should take the initiative to build a complete sustainable governance organizational structure of the board, promote the substantive performance of the special committee on sustainable development, introduce environmental protection professionals to enrich the decision-making team, standardize ESG quantitative disclosure standards at the same time, and provide experience reference for the same type of state-owned heavily polluting enterprises to clarify the key approaches to ESG development; The state-owned supervision department can implement classification assessment and incentive according to the level of green governance of enterprises, and promote enterprises to take the initiative to fulfill their environmental and social responsibilities from multiple dimensions of internal governance, information disclosure and external supervision. At the same time, there are certain limitations in this study: only two enterprise cases are used for qualitative analysis, and the small sample size leads to limited the universality of conclusions. Potential influencing variables such as regional regulatory implementation differences and enterprise greenwashing behavior are not included in the analysis framework. In the future, the sample coverage can be further expanded, multi-dimensional influencing factors can be included to carry out empirical testing, distinguish between the substantive green input of enterprises and the formal disclosure of greenwashing behavior to carry out comparative analysis, distill replicable green governance experience, and improve the relevant research on the ESG governance mechanism of heavily polluting enterprises.

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Conflicts of Interest

The authors declare no conflict of interest.

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