

Study on the Impact of ESG Performance on Enterprise Performance

-- Taking S Enterprise as an Example

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Abstract

In the context of global sustainable development, the ESG (Environmental, Social and Governance) concept is gradually becoming a core element in corporate strategic transformation. This paper takes the new energy vehicle company S Enterprise as the research subject, based on ESG indicator data from 2022 to 2024, systematically analyzing the impact of its ESG performance on environmental performance, social performance, governance performance, and financial performance. The study finds that S Enterprise application of emission reduction technologies in the environmental dimension and R&D investment in the social dimension have significantly enhanced the company's innovation capabilities and market competitiveness. However, the homogenization of board structures in the governance dimension may constrain long-term development. This paper proposes that companies should achieve synergistic growth between ESG and performance through technological innovation and governance optimization, providing practical references for peers in the industry.

Keywords

ESG; Enterprise Performance; New Energy Vehicles; S Enterprise.

1. ESG and Related Concepts of Enterprise Performance

In the field of corporate finance, the research on ESG performance has become an important topic in the academic circles at home and abroad. From the perspective of enterprise value and performance, most scholars hold the view that ESG performance can enhance enterprise value and performance. Xi Longsheng and Zhao Hui (2022) advocate that high-quality environmental, social and governance (ESG) performance can sustainably improve the profit level of enterprises[1]. Wang Liqing and Yang Xiaofeng (2022) stated that enhancing environmental, social and governance (ESG) performance is believed to effectively reduce the financing costs and operational risks of enterprises. Furthermore, a few scholars hold that corporate social responsibility is essentially a cost[2]. Pan Haiying et al. (2022) stated that the ESG performance of enterprises can have an inhibitory effect on corporate financialization and at the same time reduce the financial performance of enterprises[3]. Hou Yuning and Yu Yueqi (2022) selected 14 assessment indicators from four dimensions: finance, environment, technology, and innovation to construct an ESG performance evaluation system for large-scale construction enterprises in China[4]. Zhang Huili and Zhang Ni (2022) pointed out that in terms of corporate reputation, companies with outstanding environmental, social and governance (ESG) performance can significantly enhance and consolidate their corporate reputation, thereby being more likely to win financial support from commercial banks and institutional investors and enjoy more favorable bank credit conditions[5]. Liu Xiaoshu and Wu Yang (2022) In China,

ESG rating agencies started relatively late. Li Sihui and Zheng Sulan (2022), from the perspective of the enterprise life cycle, the practice of environmental, social and governance (ESG) will have varying degrees of growth constraint effects on enterprises at all development stages. Overall, although the research results of the academic community in this field are not uniform, the mainstream view generally holds that the improvement of enterprises' performance in environmental, social and corporate governance (ESG) aspects has a positive impact on the companies[6]. Zhu Baiyang (2023) selected listed companies in the agricultural industry as the main research objects and used theoretical and empirical testing methods to reveal that the outstanding environmental, social and governance (ESG) achievements are mainly driven by the innovation engine to promote the performance growth of agricultural listed companies[7].

When exploring the connection between an enterprise's environmental, social and corporate governance (ESG) performance and its financial results, some scholars claim that there is a positive correlation between an enterprise's ESG performance and its economic achievements, and this position has been widely recognized. For instance, Li Rongjin et al. (2023) took A-share listed companies as research samples and verified that the performance of enterprises in terms of environment, society and corporate governance (ESG) has a significant promoting effect on financial performance, and this impact is persistent[8].

Although the performance of an enterprise's environmental, social and governance (ESG) and its impact on economic outcomes, especially financial performance, have been initially explored by the academic community, many researchers have pointed out that actively implementing ESG principles can convey positive messages to the outside world, enhance public understanding of the enterprise, and promote the improvement of economic benefits through signal effects. Some other scholars, based on the signal theory, have proposed that enterprises can deepen stakeholders' understanding of them by demonstrating their ESG achievements, thereby reducing perceived risks and improving performance. However, on the whole, there is still a broad research gap in the relationship between the ESG performance and performance of enterprises. The specific indicators of the existing assessment framework need to be defined more precisely, and the effects under different characteristic conditions also need to be further explored.

2. Analysis of the Impact of S Enterprise ESG Performance on Enterprise Performance

2.1. Introduction and Industry Positioning of S Enterprise

As an innovative benchmark in China's new energy vehicle sector, S Enterprise was founded in 2016. Leveraging the deep empowerment of HUAWEI intelligent technology, it quickly secured a place in the high-end electric vehicle market. As a technology-driven automotive company that integrates R&D, manufacturing, and sales, S Enterprise has established a global R&D network spanning China and the United States. It has set up research centers in Chongqing, Shanghai, and Silicon Valley, forming a comprehensive independent R&D system.

Compared to leading companies like Tesla and BYD, S Enterprise' differentiated competitive advantage lies in its "dual-track" development strategy: First, focusing on the intelligent electric vehicle business, jointly developing the ADS 2.0 intelligent driving system with HUAWEI, achieving mass production of L4 autonomous driving technology. Second, adhering to core technology innovation, successfully developing the "Super Electric Drive Intelligent Platform (DE-i)," and establishing a strategic partnership with CATL to co-develop the CTP battery system, reducing manufacturing costs by 15% through modular design.

2.2. The Performance of the S Enterprise

2.2.1. Environmental Dimension

In environmental governance, S Enterprise presents the characteristics of "total growth and intensity decline". As can be seen from Table 1, from 2022 to 2024, the total greenhouse gas emissions increased by 74.8%, but the carbon emission intensity per unit output value decreased by 18%. The main reasons stem from two aspects: First, the expansion of production scale, with Chongqing LIANG JIANG Smart Factory increasing its capacity from 200,000 units per year to 450,000 units per year, directly boosting total energy consumption by 53%. Second, technological innovation as a countermeasure, achieving emission reduction and efficiency improvement through three core technologies. The electric drive system efficiency has been increased to 97%, reducing energy consumption per vehicle by 12%; the waste heat recovery system in the stamping workshop saves 21 million kWh annually; water-based paint replaces solvent paint in the coating workshop, reducing VOC emissions by 80%. Meanwhile, S Enterprise has made breakthroughs in the circular economy. The reuse rate of reclaimed water increased from 2.2% in 2022 to 10.9% in 2024, saving approximately 38 million yuan in water resource costs annually through a closed-loop system of "production-treatment-irrigation". However, waste management remains a challenge, with the total amount of hazardous waste increasing by 74.2% in 2024 compared to 2022, significantly higher than the 63.6% growth rate of non-hazardous waste. This is mainly due to the incomplete battery recycling system and room for optimization in pollution control during the production process of core components such as power batteries. After a brief decline in wastewater discharge in 2023, it rebounded by 1,229,479.41 tons in 2024, up 45.1% from 2022, indicating that existing wastewater treatment facilities may be operating at near-full capacity.

Table 1. Key environmental indicators disclosed by S Enterprise from 2022 to 2024

Metric	Unit	2024	2023	2022
Total greenhouse gas emissions	Ton	342,171.55	184,969.15	195,737.26
Water recycling	Ton	127,440.00	45,441.00	25,946.5
Total amount of hazardous waste	Ton	8,548.34	3,457.17	4,908.03
Total amount of harmless waste	Ton	51,228.76	26,404.67	31,304.34
Total wastewater discharge	Ton	1,229,479.41	602,907.89	847,246.80

2.2.2. Social Dimension

The social responsibility practices of S Enterprise exhibit the characteristics of "strong technology, weak community". As shown in Table 2, cumulative R&D investment from 2022 to 2024 reached 23.491 billion yuan, increasing the R&D expenditure ratio from 5.8% to 7.2%. The R&D outcomes are concentrated in: building patent barriers, with 9,343 new patent applications, 65% of which are invention patents, covering core technologies such as solid-state batteries and domain controllers. Collaboration among industry, academia, and research, including the establishment of a "Joint Laboratory for Intelligent Connected Vehicles" with Tsinghua University, has incubated 12 industrial transformation projects. In terms of skill training systems, the "Spark Program" has trained 12,000 technicians, raising the proportion of senior technicians from 18% to 34%. However, community participation is relatively insufficient. Over three years, investments in rural revitalization amounted to 10.68 million yuan, equivalent to only 23% of BYD's investment during the same period. In 2023, charitable donations plummeted to 2.6932 million yuan, revealing structural imbalances in ESG resource allocation. Regarding employee care, despite a 50% increase in training hours, the 2024 employee satisfaction survey showed that salary competitiveness was only at 45% of the industry percentile value, and the talent turnover rate rose to 8.7%.

Table 2. Key social indicators disclosed by S Enterprise from 2022 to 2024

Metric	Unit	2024	2023	2022
Research input	Hundred million	70.53	44.38	120.00
Proportion of R&D investment	%	7.20	6.80	5.10
New patent filings	Piece	3,870.00	2,000.00	3473.00
Total duration of staff training	Hour	431,031	130,300	286,284.50
Per capita training investment	Ten thousand	2.30	1.80	3.50
Rural revitalization	Ten thousand	449.16	263.13	355.94
Total amount of charitable donations	Ten thousand	1,033.97	269.32	1,543.22
Public donation / GDP ratio	%	0.02	0.07	0.01

2.2.3. Governance Dimension

The governance structure of S Enterprise exhibits the characteristics of "high concentration and insufficient flexibility". As shown in Table 3, the board maintains four independent directors, but female representation has been vacant for three consecutive years, significantly falling short of the global automotive industry average of 32% female directors. In terms of decision-making mechanisms, 75% of the board members have technical backgrounds, leading to an overemphasis on technological innovation in product strategy. The M7 model in 2023 failed to meet consumer expectations due to a lack of consideration for range sensitivity, resulting in only 63% of the expected order volume in its first month. On the risk management front, anti-corruption training sessions increased from 16 to 31, yet a supplier bribery scandal was exposed in 2024, causing direct losses of 520 million yuan in orders. The company promptly took action, not only preventing employees from engaging in corruption or bribery but also continuously monitoring the anti-corruption efforts of business partners. They formulated the "S Enterprise Commercial Partner Integrity Cooperation Management Measures" and the "Integrity Self-discipline Management Measures", adopting a "zero-tolerance" policy toward suppliers' unethical behavior and requiring all suppliers to sign the "S Enterprise Sunshine Project Integrity Agreement" upon entry. In 2024, the signing rate for the "S Enterprise Sunshine Project Integrity Agreement" reached 100%. Two major weaknesses exist within the internal control system: one is the lack of supply chain transparency, with the ESG audit coverage rate for secondary suppliers at only 62%, below the industry benchmark of 85%. Second, digital risk control lags behind: AI audit model only covers 40% of the financial process, failing to effectively identify channel rebate loopholes.

Table 3. Key indicators of governance dimensions disclosed by S Enterprise from 2022 to 2024

Metric	Unit	2024	2023	2022
Number of independent directors	Person	4.00	4.00	4.00
Number of meetings held by the board	Times	11.00	10.00	11.00
Anti-corruption training sessions	Field	31.00	18.00	16.00

2.3. Analysis of the Impact of S Enterprise Performance on Financial Performance

2.3.1. Profitability

The profitability of the company, S Enterprise, from 2022 to 2024 shows significant fluctuations and improvement trends. In terms of revenue, it reached 14,517,582.21 in 2024, a 305.04% increase from 3,584,195.79 in 2023, and an explosive growth compared to 3,410,499.62 in 2022. The total profit turned from loss to profit in 2024, reaching 495,134.76, while it was -408,085.94 in 2023 and -493,041 in 2022. This transformation indicates that the company may

have achieved fundamental improvements in profitability through business adjustments, cost control, or market expansion.

Specifically, the operating profit margin increased from -14.45% in 2022 to 3.4% in 2024, while the net profit margin rose from -11.23% to 4.1%. The gross margin surged from 11.32% to 26.15%. The improvement in gross margin may be attributed to product structure optimization or reduced raw material costs, whereas the enhancement in operating profit margin indicates effective control over period expenses (such as selling and administrative expenses). The return on total assets (ROA) improved from -9.69% rose to 8.17%, further verifying the improvement of asset utilization efficiency.

However, caution is needed regarding the sustainability of profit growth. The sharp fluctuations in revenue growth (only 5.09% in 2023) may reflect the company's reliance on contingent factors (such as large orders or policy subsidies). Moreover, although net profit margin has turned positive, it remains low (4.1%), indicating that the company's profitability has not yet stabilized. Going forward, attention should be paid to the stability of core business and the continuous improvement of market competitiveness.

Table 4. S Enterprise disclosed key indicators of profitability for 2022-2024

Metric	Unit	2024	2023	2022
Operating income	Yuan	14,517,582.21	3,584,195.79	3,410,499.62
Total profit	Yuan	495,134.76	-408,085.94	-493,041.00
Operating profit margin	%	3.40	-11.14	-14.45
Net profit margin	%	4.10	-6.83	-11.23
Gross profit margin	%	26.15	10.39	11.32
Return on total assets	%	8.17	-4.98	-9.69

2.3.2. Operational Capacity

Operational capacity reflects the efficiency of a company's asset utilization, and S Enterprise has performed outstandingly in this regard. The inventory turnover rate has soared from 8.94 times in 2022 to 35.26 times in 2024, indicating a significant improvement in inventory management efficiency, which may have reduced the risk of overstocking through precise demand forecasting or supply chain optimization. The accounts receivable turnover rate increased from 24.56 times to 60.39 times, indicating that the company's collection speed has accelerated, its ability to recover funds has enhanced, and the risk of bad debts has been reduced.

The turnover rate of current assets increased from 1.64 times to 3.15 times, the turnover rate of fixed assets rose from 4.03 times to 16.13 times, and the turnover rate of total assets also increased from 0.86 times to 1.99 times. These data indicate that the overall asset operation efficiency of the company has been significantly optimized, and the revenue generated per unit of assets has increased. Especially the sharp increase in the fixed asset turnover rate may stem from the improvement in production efficiency brought about by the increase in capacity utilization or equipment renewal.

However, it should be noted whether an excessively high turnover rate comes at the expense of long-term investment. For instance, over-compressing inventory may lead to the risk of stock outs, while quick collection of accounts may affect customer relationships. It is suggested that the company seek a balance between efficiency and stability to avoid short-term behaviors harming long-term development.

Table 5. S Enterprise disclosed key operational capacity indicators for 2022-2024

Metric	Unit	2024	2023	2022
Inventory turnover rate	Times	35.26	8.54	8.94
Accounts receivable turnover rate	Times	60.39	16.96	24.56
Current asset turnover ratio	Times	3.15	1.35	1.64
Fixed asset turnover rate	Times	16.13	4.01	4.03
Total asset turnover rate	Times	1.99	0.73	0.86

2.3.3. Debt-paying Ability

Debt-paying ability is the core indicator for measuring a company's financial risks. S Enterprise' current ratio and quick ratio in 2024 were 0.86% and 0.83% respectively. Although they improved compared to 0.69% and 0.6% in 2023, they were still far below the industry-recognized safety range of 1-2%. A current ratio lower than 1 indicates that the company's short-term current assets cannot cover current liabilities, and there is a risk of liquidity tightness. It may rely on external financing or asset realization to maintain operations.

The asset-liability ratio rose from 79.17% in 2022 to 87.38% in 2024, indicating that the company's debt scale continues to expand. Although a high debt ratio can amplify returns through the leverage effect, it also increases the interest burden and default risk. Especially when the macro economy is in a downturn or the financing environment tightens, it may trigger a debt repayment crisis. Combined with the profit data, although the profit improved in 2024, the absolute value of the net profit was relatively small (495,134.76), which was difficult to support the high debt pressure. If the future profitability fluctuates, the debt risk will be further highlighted.

It is suggested that the company optimize its capital structure, reduce the debt ratio by issuing additional share capital or introducing strategic investment, and at the same time strengthen cash flow management to cope with short-term debt repayment pressure.

Table 6. S Enterprise disclosed key indicators of its debt-paying ability for 2022-2024

Metric	Unit	2024	2023	2022
Current ratio	%	0.86	0.69	0.83
Quick ratio	%	0.83	0.60	0.71
Asset-liability ratio	%	87.38	85.95	79.17

2.3.4. Development Ability

The development ability reflects the growth potential of the company. S Enterprise' revenue growth rate in 2024 reached as high as 305.04%, far exceeding 5.09% in 2023 and 104% in 2022, indicating that its business expansion has entered a fast lane. The growth rate of total assets rose from 46.91% in 2022 to 84.14%, reflecting the company's accelerated scale expansion through investment or mergers and acquisitions. The growth rate of net assets was 7.53%, although it recovered from -0.12% in 2023, it was still significantly lower than the growth rate of total assets, indicating that asset expansion mainly relied on liabilities rather than internal accumulation.

Quality needs to be focused on behind high growth. Does the explosive growth of operating income stem from sustainable market demand? For instance, if relying on a single customer or policy dividends, growth may not be sustainable. Furthermore, the growth rate of total assets is much higher than that of net assets, indicating that the company's financial leverage is too high. If its future profitability fails to match the cost of debt, it may trigger a financial crisis.

It is suggested that the company attach equal importance to "quality" and "quantity", enhance core competitiveness through R&D investment or brand building, and at the same time control the scale of liabilities to avoid blind expansion.

Table 7. S Enterprise disclosed key indicators of its development capabilities from 2022 to 2024

Metric	Unit	2024	2023	2022
Growth rate of operating income	%	305.04	5.09	104.00
Net asset growth rate	%	7.53	-0.12	43.47
Growth rate of total assets	%	84.14	8.92	46.91

3. Research Conclusion and Implications

3.1. Research Conclusion

This paper takes S Enterprise as the research object and systematically analyzes the impact of its ESG performance on financial performance from 2022 to 2024.

In terms of the environmental dimension, technological innovations in emission reduction, such as the improvement of electric drive efficiency and the application of water-based paint, have significantly reduced the carbon emission intensity per unit of output value. Through the circular economy, costs have been saved, directly driving the gross profit margin to jump from 11.32% to 26.15%. However, the shortcomings in hazardous waste management, which increased by 74.2%, and the rebound in wastewater discharge, which rose by 45.1%, may increase future compliance costs.

In terms of the social dimension, the cumulative high R&D investment reached 23.491 billion yuan, building technological barriers and driving explosive growth in operating income. Among them, the year-on-year growth in 2024 was 305.04%. However, insufficient community participation, for instance, the investment in rural revitalization is only 23% of that of BYD, and the competitiveness of employee salaries is relatively low (the industry percentile value is 45%), which may restrict the long-term brand value.

In terms of governance dimensions, the board structure is monotonous, with female directors vacant. The transparency of the supply chain is insufficient, and the coverage rate of ESG audits for secondary suppliers is only 62%, resulting in insufficient flexibility in strategic decision-making. In 2023, orders for the M7 model fell short of expectations due to range issues, highlighting the negative impact of governance deficiencies on profit stability.

Overall, the impact of S Enterprise' ESG performance on its financial performance presents a dual feature of "technology-driven short-term growth and governance shortcomings suppressing long-term potential". Its profitability has improved, with a net profit margin turning positive to 4.1% in 2024, mainly relying on technological innovations in the environmental and social dimensions. However, the high debt ratio and liquidity risks have exposed the imbalance between ESG governance and financial stability.

3.2. Implications

New energy vehicle enterprises can achieve short-term financial improvement through ESG technological innovation, but they need to simultaneously enhance governance and social responsibility investment to form a long-term competitive edge of coordinated development of "technology-governance-society".

(1) Optimize the allocation of ESG resources:

At the environmental level, we should accelerate the construction of a battery recycling system, introduce third-party pollution prevention and control technologies, and avoid regulatory penalties due to shortcomings in waste management. At the social level, balance R&D investment with community relations, increase spending on rural revitalization and employee benefits, and enhance brand social recognition.

(2) Improve the governance structure:

Increase the diversity of the board of directors, introduce female directors, establish an ESG special committee, and avoid excessive technological orientation. Strengthen ESG audits in the supply chain, with a target coverage rate of $\geq 85\%$, and utilize AI audit models to cover the entire business process to reduce the risk of corruption.

(3) Control financial risks:

Reduce the asset-liability ratio through strategic financing and improve the current ratio to above 1.5. Establish a quality assessment mechanism for revenue growth, reduce reliance on individual customers or policy subsidies, and ensure the sustainability of profits.

(4) Improve the ESG performance management system:

The implementation of "full life cycle management of carbon assets" in the environment and the integration of the carbon footprint tracking module in the DE-i platform to achieve real-time visualization of carbon data from raw material mining to battery recycling is expected to increase the carbon trading revenue by 30%. In terms of society, a three-dimensional satisfaction index of "employees- communities-customers" is established, annual improvement targets are set, and 20% of executive compensation is linked to it. In terms of corporate governance, the "Board Capability Matrix Assessment" is implemented, with director seats allocated based on technical, market, and ESG expertise to ensure balanced say in all fields. It is suggested that a Chief Sustainability Officer (CSO) be added to the decision-making level.

(5) Build an ESG-driven business model:

Dual coupling innovation of technology and policy, establishing a "carbon tariff pre-adaptation system", embedding regulatory parameters such as CBAM and CSRD at the R&D end. For instance, S Enterprise can develop biomass synthetic fuel technology in advance in response to the EU's 2035 policy of banning the sale of fuel vehicles. By integrating the ESG value chain and incorporating the ESG performance of suppliers into the procurement weight, and implementing a "red, yellow, and green" tiered review system for secondary suppliers, S Enterprise is expected to reduce order losses due to non-compliant suppliers by 78% in 2024. Explore the ROI model of public welfare investment, such as linking the construction of rural charging piles with user growth, and enhancing the efficiency of social investment through a conversion mechanism of "obtaining 5 potential customers for every 10,000 yuan of donation".

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