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Analysis of Corporate Sustainable Development Strategy and Social Responsibility Practice Effectiveness Based on ESG Principles

-- A Case Study of Sinopec

Yueyao Chen[1,a,*]

[1]School of Economics and Management Research, Southwestern University of Finance and Economics, Liulin Campus, 555 Liutai Avenue East Section, Chengdu, China
a. 18884276401@163.com
**corresponding author*

Abstract: As global attention to environmental protection, social equity, and sound corporate governance continues to grow, ESG presents both challenges and opportunities. This study aims to explore how integrating ESG (Environmental, Social, and Governance) principles can enhance corporate sustainable development strategies and analyze the effectiveness of social responsibility practices. The study conducts a theoretical analysis of corporate social responsibility practice effectiveness and uses a case study approach to examine Sinopec's sustainable development strategy and social responsibility practices in depth, evaluating the role of ESG principles in promoting corporate sustainable development strategies and improving the effectiveness of social responsibility practices. The research reveals that integrating ESG principles into corporate sustainable development strategies can significantly enhance a company's long-term competitiveness and market adaptability.

Keywords: ESG, sustainable development, social responsibility, effectiveness evaluation.

1. Introduction

1.1. Research Background

With the development of human society, issues such as climate change, environmental pollution, resource shortages, and social inequality have intensified, leading to increasing global attention to environmental protection, social justice, and sound corporate governance. ESG (Environmental, Social, and Governance) principles have gradually become a key focus of global and regional policy initiatives. In 2004, the United Nations Global Compact released the report Who Cares Wins, which first introduced the concept of ESG, emphasizing corporate responsibility in environmental protection, social responsibility, and governance. China's State Administration for Market Regulation, in collaboration with the Cyberspace Administration of China, the National Development and Reform Commission, and 18 other departments, jointly issued the Action Plan for Implementing the National Standardization Development Outline (2024–2025), clearly outlining the enhancement of standards related to ESG topics such as green development and environmental protection.

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Against this backdrop, companies face unprecedented ESG challenges and opportunities. Balancing economic benefits with environmental protection and social responsibility, as well as adapting to the evolving ESG standards and investor demands in the context of globalization and digitalization, has become a major challenge for corporate development. Meanwhile, by adhering to ESG principles, companies can enhance their brand image and market competitiveness, attract more investors and consumers focused on sustainable development, and benefit from policy support and preferential treatment.

1.2. Research Objectives and Significance

This study aims to deeply explore the application and impact of ESG principles in corporate social responsibility practices, providing practical recommendations for corporate sustainable development. It seeks to help companies better understand and improve their ESG performance and further address global climate change while promoting social fairness and justice.

This research is significant for understanding and enhancing corporate social responsibility practices. First, it helps companies identify shortcomings and opportunities within ESG practices, enabling them to develop more effective ESG strategies and plans, and guiding the establishment of a more comprehensive and scientific evaluation system. Second, it assists investors and consumers in more accurately assessing corporate ESG performance and risks, leading to more informed investment and consumption decisions, and directing capital toward responsible and sustainable investment projects. Finally, it aids policymakers in better understanding the current state and needs of corporate ESG practices, improving related laws and regulations, and providing theoretical support and practical guidance for building a green, low-carbon, and circular economy.

1.3. Literature Review

In academic circles, research on ESG principles has gradually deepened. Scholars have explored the ESG system from various perspectives, including the construction of ESG evaluation systems, the relationship between ESG and corporate performance, and the effectiveness of ESG investment strategies. It is widely recognized that adhering to ESG principles has a positive impact on corporate sustainable development. Wang Xi's research shows a positive correlation between a company's ESG performance and its financial performance, indicating that companies focusing on ESG management may achieve better long-term returns [1]. Yan Ruosen and Jiang Xiao believe that a customer company's ESG rating can significantly and positively impact supplier companies' green innovation [2]. These findings provide theoretical support for companies to incorporate ESG into their strategic planning and daily operations. However, there are still some gaps and limitations in the existing research. For example, there is a lack of in-depth discussion on the practical application of ESG principles across different industries and regions. Compared to environmental (E) topics, research on corporate social responsibility (S) mainly focuses on stakeholders, corporate reputation, supply chain management, and business ethics [3], with less diversity in research topics.

Building on previous studies, this research will further expand and deepen the study of ESG principles and corporate social responsibility. Combining theory with practice, this paper will conduct an in-depth analysis of Sinopec's ESG practice effectiveness and its underlying causes and influencing factors, providing more targeted ESG practice recommendations. Additionally, this study will adopt a multi-dimensional analysis, involving corporate sustainable development strategies, social responsibility practices, and effectiveness evaluations, aiming to comprehensively analyze the impact and role of ESG principles on companies.

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1.4. Research Scope and Methodology Overview

This study will clearly define the time frame, geographical scope, and specific types of research subjects. The time frame will cover the key stages and trends in the development of ESG principles and corporate social responsibility in recent years. The geographical scope will focus on representative countries and regions. The research subjects will include companies of various industries and sizes.

In terms of methodology, this study will adopt a mixed-method approach (combining quantitative and qualitative methods) for in-depth research. Statistical analysis and content analysis methods will be used to process and analyze data. The case study method will be employed, selecting representative company cases for in-depth analysis to reveal the internal logic, mechanisms, and influencing factors. Finally, the study will combine practical circumstances and theoretical frameworks to propose research findings and recommendations.

2. Definitions of Core Concepts

2.1. Overview of ESG Principles

ESG principles represent an investment philosophy and evaluation standard that measures a company's ability to achieve sustainable development. ESG stands for Environmental, Social, and Governance. These principles emphasize that while pursuing economic benefits, a company must also focus on its performance in environmental, social, and governance aspects to achieve comprehensive and sustainable growth.

2.1.1. Environmental Dimension

In terms of the environmental dimension, ESG principles reflect the impact of a company's operations on the natural environment. This includes resource utilization efficiency during production, pollution control, the use of renewable energy, and measures to address climate change. Companies are expected to minimize their negative environmental impact by improving production processes, adopting environmentally friendly technologies, and enhancing waste management, ultimately achieving green production and sustainable development.

2.1.2. Social Dimension

The social dimension focuses on a company's relationship with its stakeholders and its social responsibility. Companies are required to strengthen interactions and cooperation with employees, customers, suppliers, communities, and the government. This includes ensuring the protection of employee rights, adhering to business ethics and legal regulations, and actively participating in social welfare activities to contribute to society. Additionally, companies must ensure the safety and quality of their products, safeguarding the rights of consumers.

2.1.3. Governance Dimension

The governance dimension mainly addresses the internal management and decision-making mechanisms of a company, covering aspects such as governance structure, risk management, information disclosure, anti-corruption efforts, and transparency. Companies need to establish robust governance systems to ensure fairness, transparency, and efficiency in decision-making processes. At the same time, they must enhance internal control and risk management to prevent potential risks and crises.

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2.2. Corporate Sustainable Development Strategy

This study defines the concept of corporate sustainable development strategy from a macro perspective. In 1987, Our Common Future described sustainable development as "development that meets the needs of the present without compromising the ability of future generations to meet their own needs" [4]. Corporate sustainable development considers intergenerational equity and requires harmonious integration of resource exploitation, investment direction, technological advancement, and institutional change. Its essence includes fairness, sustainability, and commonality. The triple bottom line theory, which asserts that companies must simultaneously satisfy economic, environmental, and social requirements while pursuing economic benefits, is a key theoretical foundation for corporate sustainable development strategies.

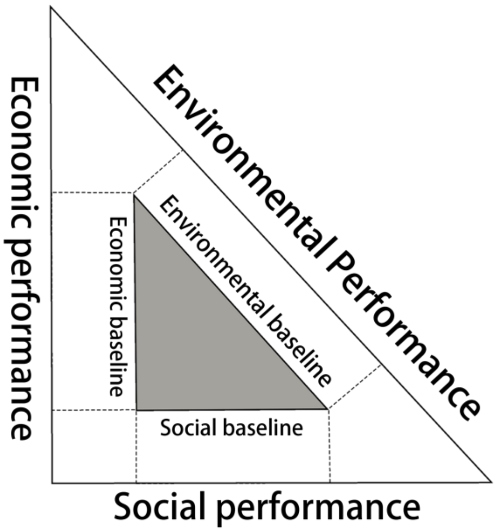

Figure 1: Triple Bottom Line Principle and Sustainable Supply Chain Performance

Note: The outermost indicators in the diagram, starting from the left in a clockwise direction, are economic performance, environmental performance, and social performance. The innermost indicators, starting from the left in a clockwise direction, are the economic baseline, environmental baseline, and social baseline.

2.3. Corporate Social Responsibility Practices

Corporate social responsibility (CSR) practices are the specific actions and measures companies take to fulfill their social responsibilities. In practice, companies need to integrate ESG principles into CSR initiatives to promote sustainable development through concrete actions. For example, by enhancing employee training, improving employee welfare, and adhering to business ethics, companies can safeguard employee rights and fulfill their social responsibilities. Implementing green production, energy conservation, emissions reduction, and environmental technology innovations can help reduce environmental harm. These practices not only improve a company's profitability but also enhance its social image and brand value.

2.4. Performance Evaluation Theory

Performance evaluation is the process of quantitatively assessing and monitoring the effectiveness of a company's implementation of ESG principles and CSR practices. The specific process involves defining evaluation goals and indicators, establishing an evaluation system, conducting assessments, analyzing results, and continuously monitoring and providing feedback. The theoretical foundation

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of performance evaluation includes systems theory, control theory, and information theory. It emphasizes the importance of data collection and analysis, selecting appropriate indicators and determining their weights, as well as applying the feedback from evaluation results. Through performance evaluation, companies can promptly identify issues and shortcomings in their sustainable development efforts and take effective measures to improve and enhance their performance.

3. Theoretical Analysis of the Effectiveness of Corporate Social Responsibility Practices

3.1. Evolution of Corporate Social Responsibility Practices

The concept of Corporate Social Responsibility (CSR) can be traced back to the late 19th century in the United States, when some entrepreneurs began to pay attention to employee welfare and community development. However, modern CSR practices originated in the 1950s, with the rise of environmental movements, consumer rights protection, and other social movements. Companies realized that merely pursuing economic profits was not enough; they also needed to take responsibility for society and the environment. In the 21st century, CSR practices have gained broader recognition and attention. Many countries and regions have enacted relevant laws and standards requiring companies to fulfill their social responsibilities. More and more companies are incorporating social responsibility into their strategic planning by implementing green production, caring for employees, and supporting community development, thereby enhancing their corporate image and competitiveness.

3.2. Evaluation Dimensions and Quantitative Assessment Standards for CSR Practice Effectiveness

3.2.1. Economic Dimension

This dimension assesses whether CSR practices positively impact a company’s economic performance, such as cost savings, revenue growth, and enhanced brand value. By evaluating the company’s revenue growth rate, net profit margin, and debt-to-asset ratio, it is possible to analyze the financial performance’s adequacy within CSR practices. Additionally, the company’s total tax contribution and tax growth rate reflect its contribution to tax revenue.

3.2.2. Social Dimension

This dimension refers to a company’s performance in employee welfare, community engagement, and consumer rights protection. Strong performance in the social dimension indicates high employee satisfaction, harmonious community relations, and strong consumer loyalty. Quantitative assessment standards include employee salary growth rates, investment in employee training, employee satisfaction surveys, charitable donation amounts, and volunteer service hours, which can measure the company’s social performance.

3.2.3. Environmental Dimension

This dimension focuses on a company’s contributions to environmental protection and sustainable development, such as energy conservation, emission reduction, resource recycling, and ecological preservation. In terms of CSR practices in the environmental dimension, companies must ensure that their pollution emission indicators, resource utilization efficiency, investment in environmental protection facilities, and environmental technology research and development expenditures meet national standards.

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3.3. Correlation Analysis Between ESG Principles and CSR Effectiveness

3.3.1. Environmental (E) Principles and Environmental Effectiveness

The environmental dimension of ESG principles requires companies to address environmental issues such as climate change, resource utilization efficiency, and pollution emissions. Companies adhering to ESG principles can significantly reduce environmental risks and improve environmental effectiveness by implementing measures such as green production and energy conservation. These efforts not only contribute to ecological protection but also enhance a company's social reputation and market competitiveness.

3.3.2. Social (S) Principles and Social Effectiveness

The social dimension of ESG principles emphasizes the company's contribution to society and its sense of responsibility. By fulfilling social responsibilities, companies can build more harmonious social relationships and strengthen the trust and support of employees, consumers, and communities. This trust and support form the foundation for a company's long-term development, enhancing its social reputation and brand value.

3.3.3. Governance (G) Principles and Governance Effectiveness

Good corporate governance is fundamental to ensuring the effectiveness and sustainability of CSR practices. The governance dimension of ESG principles requires companies to establish transparent and accountable governance structures, strengthen risk management, and improve information disclosure transparency, thereby protecting shareholders' legitimate rights and interests and preventing corruption and internal control failures. Companies that adhere to ESG principles can establish sound governance mechanisms, enhance internal controls, and improve the quality of information disclosure. This helps increase transparency and governance levels, boost investor confidence, and reduce financing costs. At the same time, good governance mechanisms also promote internal innovation and collaboration, improving overall corporate effectiveness.

4. Research and Analysis of Sinopec

4.1. Case Selection Criteria and Description

This paper focuses on the Corporate Social Responsibility (CSR) practices of China Petroleum & Chemical Corporation (hereinafter referred to as "Sinopec") during the period from 2020 to 2021. Sinopec, a leader in China's petrochemical industry and consistently ranked at the top of the Fortune Global 500 list of manufacturing companies, is particularly notable for being awarded the title of "China ESG Model Enterprise" in 2023. Studying its adherence to ESG principles, sustainable development strategies, and the effectiveness of its CSR practices provides a valuable example for the development of the industry.

4.2. Sinopec's ESG Practices and Sustainable Development Strategy

4.2.1. Environmental Protection

In 2020, Sinopec Maoming Petrochemical Company (hereinafter referred to as "Maoming Petrochemical") actively implemented a green, low-carbon strategy, aiming to build an energy-efficient, clean, and environmentally friendly enterprise. The company placed environmental protection on an equal footing with production safety, fully implemented the ISO 14001

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environmental management standard, vigorously promoted clean production, and worked toward building a "leak-free, odor-free, green and clean enterprise." In 2020, Maoming Petrochemical completed 36 green action initiatives, implemented 55 green enterprise construction projects, and had 41 installations pass Sinopec's green installation review. It was recognized as Sinopec's Advanced Energy-Saving and Environmental Protection Unit and as the "Radiation Safety and Protection Demonstration Unit" of Guangdong Province. For the fifth consecutive time, it received the Green Label for Environmental Integrity Enterprises in Guangdong Province [5].

4.2.2. Social Responsibility

a) In response to the COVID-19 pandemic in early 2020, Sinopec acted swiftly, leveraging its strengths to urgently set up melt-blown fabric production lines. It also collaborated with medical device manufacturers to expand mask production capacity, effectively easing the severe mask shortage in the market. Sinopec played a vital role in stabilizing supply, maintaining fair prices, and providing reassurance to the public, showcasing the responsibility and commitment of a central state-owned enterprise.

b) Beginning in 2021, Sinopec launched the "Silk Road Bookshelves – China Bookshelf" cross-cultural integration project. This initiative established bookshelves in several overseas countries, offering books on economic, social, and cultural topics, aiming to spread Chinese culture, promote cultural exchange and mutual learning between China and other countries, and strengthen bonds and friendships with local communities.

4.2.3. Governance

Sinopec places great emphasis on improving and optimizing its corporate governance structure. In 2020 and 2021, the company continued to enhance its governance framework and actively promoted the integration of ESG principles into its corporate governance system. Sinopec established the Sustainable Development Committee as the highest decision-making body for ESG governance, with the Chairman of the Board serving as the committee's chair. This committee is responsible for approving and evaluating the company's ESG strategies, objectives, and annual plans, and reports its findings to the Board of Directors. Additionally, Sinopec values effective communication with investors and stakeholders, actively responding to their concerns and expectations. By voluntarily disclosing information and providing detailed updates on ESG management progress in its reports, Sinopec has continuously improved its transparency and gained greater market recognition.

5. Conclusion and Recommendations

5.1. Research Conclusions

The study finds that integrating ESG (Environmental, Social, and Governance) principles into a company's sustainable development strategy significantly enhances its long-term competitiveness and market adaptability. ESG practices demonstrate outstanding performance in improving corporate social responsibility efficiency. Specifically, in terms of the environment, measures such as energy conservation, emission reduction, and green production not only help protect the environment but also reduce operational costs. In the social domain, initiatives aimed at improving employee welfare and promoting community development can increase employee satisfaction and loyalty, as well as strengthen consumer trust. Regarding governance, establishing a sound governance structure and risk management system ensures the scientific and compliant nature of corporate decision-making, while enhancing transparency in information disclosure. Therefore, companies should actively integrate

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ESG principles into their strategic planning and daily operations to achieve both economic and social benefits.

5.2. Practical Applications

5.2.1. Implementing a High-Quality Development Concept and Formulating an ESG-Oriented Sustainable Development Strategy

Companies should consider ESG principles as an essential factor when formulating their strategic plans, clearly defining ESG goals, metrics, and action plans. When developing strategies, environmental, social, and governance factors should be fully considered to ensure that corporate strategies align with ESG principles, driving the company towards the comprehensive goal of economic profitability, environmental friendliness, social harmony, and improved governance.

At the same time, companies should formulate practical and feasible sustainable development strategies based on their own circumstances. This includes specifying the details of ESG goals, setting quantifiable metrics, and creating detailed action plans. Additionally, companies need to establish a robust ESG performance monitoring and evaluation mechanism, conducting regular inspections and assessments of the implementation progress to ensure the achievement of ESG objectives.

5.2.2. Exploring Innovative Models and Pathways for ESG Practices

a) Focusing on New Trends and Challenges in ESG Practices

As technology and society evolve, ESG practices are continuously advancing and innovating. Companies should closely monitor the exploration and application of new models, technologies, and methods in ESG practices, keeping up with emerging trends and challenges. This helps businesses seize opportunities in ESG practices, improving the level and effectiveness of their ESG efforts.

b) Promoting Innovation and Upgrades in ESG Practices

Companies should actively explore ESG practice models and methods tailored to their unique characteristics, promoting innovation and upgrades in their ESG practices. For instance, advanced technologies such as big data and artificial intelligence can be utilized to enhance the collection, analysis, and use of ESG data. Collaboration and communication with other companies, non-governmental organizations, and government agencies should be strengthened to collectively advance ESG practices. Furthermore, companies can conduct research and educational activities related to ESG, raising society’s awareness and emphasis on ESG principles.

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