Corporate Social Responsibility Practices in China's Petroleum Industry: A Comparative Analysis of PetroChina and Sinopec

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Abstract. Against the backdrop of global energy transition, Chinese petroleum enterprises are facing both opportunities and challenges. This study employs a literature review approach and a comparative case analysis method to thoroughly examine the corporate social responsibility (CSR) practices of PetroChina and Sinopec in the domains of environmental protection, social responsibility, and employee welfare. The research reveals disparities between the two companies concerning preventive environmental management, prioritized philanthropic efforts, and employee rights safeguarding. Consequently, the study proposes three recommendations encompassing strategic integration, participation in international standards, and internal organizational significance construction, aiming to enhance CSR implementation. By offering practical insights, this research serves as a reference for Chinese petroleum enterprises, contributing to their improved international competitiveness and reputation. In the ever-evolving landscape of sustainability and business ethics, such insights can aid these enterprises in navigating their roles as responsible global corporate citizens, ensuring a harmonious balance between economic growth and social welfare.

Keywords: corporate social responsibility, literature review, comparative analysis, PetroChina, Sinopec.

1. Introduction

Corporate social responsibility practices (CSR), as a crucial component of sustainable business development, have become a focal point for global enterprises. The Chinese petroleum industry is currently situated within a landscape of opportunities and challenges. The global trend of energy transition has paved new paths for this sector, enabling it to achieve sustainable green development through investments in renewable energy projects and technological innovations. Simultaneously, there is a rising demand for corporate social responsibility from society, providing the oil industry an opportunity to enhance its brand image and reputation by giving back through CSR initiatives. The government's strong push for rural revitalization strategies offers petroleum companies a chance to engage in rural infrastructure development, education support, and poverty alleviation projects, thereby fulfilling their social responsibilities.

However, the Chinese petroleum industry also faces a range of potential threats. Continuous changes in policies and regulations may introduce uncertainties to the energy sector, necessitating flexible strategic adjustments to adapt to the new environment. Intense industry competition poses challenges to CSR practices, requiring a delicate balance to be maintained amid this competition. Additionally, fluctuations in global energy prices could impact a company's economic performance and consequently affect the stability of its CSR initiatives. In this ever-changing context, the Chinese petroleum industry not only needs to seize opportunities and drive green development and CSR practices but also remain vigilant about threats and adeptly address challenges to ensure both industry sustainability and corporate social responsibility fulfilment.

In the Chinese petroleum industry, PetroChina and Sinopec, as two representative enterprises, have accumulated rich experiences and achievements in terms of social responsibility practices. By conducting a comparative analysis of the CSR practices of these two companies, a deeper understanding can be gained regarding the specific approaches and outcomes of the Chinese petroleum industry in areas such as environmental protection and resource management, social responsibility and philanthropy, employee care and safety assurance.

The aim of this research is to utilize the methodology of literature review and comparative analysis to thoroughly compare and study the CSR practices of PetroChina and Sinopec. Based on this analysis, practical recommendations for CSR practices in the Chinese petroleum industry are provided, with the goal of fostering continuous improvement and advancement in social responsibility practices throughout the entire industry.

2. Literature Review and Analytical Framework

As societal values evolve, CSR has gradually become an indispensable part of businesses. Davis asserts that enterprises must integrate social values into decision-making processes, transcending legal requirements and assuming greater social responsibilities while pursuing economic interests [1]. Subsequently, Carroll proposed the three-dimensional corporate social performance model, comprising social responsibility, social issues, and social responsiveness. This framework integrates the definition, identification, and response aspects, providing a useful analytical framework for academic research and management practice in CSR [2]. Building on this, Strand developed a systemic model describing the organizational adaptation process within the social environment, emphasizing the significance of organizational social responsibility, responsiveness, and responses [3]. Zheng Ruojuan reviewed the development trajectory of CSR theory, indicating that CSR research is shifting from discussing the concept itself to focusing on its implementation, thereby constructing a more systematic and actionable theoretical framework to support global CSR practices. Shen Qitai's survey of related literature reveals that over half a century of development, the academic understanding of corporate social responsibility has grown increasingly comprehensive and multidimensional [4].

Clarkson advocates for analysis at the institutional, organizational, and individual levels, with a focus on issues relevant to stakeholders, to assess a company's social performance [5]. Dey conducted a review of literature on corporate social responsibility practices among Indian companies from 2008 to 2015, noting the need for improvement in local companies' CSR practices concerning information disclosure and expenditures. Dey also highlighted that current research primarily centres on conceptual frameworks, leaving various aspects of CSR's impact on financial performance underexplored. It was suggested that future research should address this gap [6]. Kavitha elucidated that corporate social responsibility disclosure is a process through which companies communicate their social and environmental impacts to society. Categories of disclosure encompass the environment, fair business practices, equal opportunity, human resources, and community engagement, among others [7].

The interaction between internal meaning-making processes within organizations and external institutional factors jointly drives the evolution of corporate social responsibility. Qi Liyun's case study illustrates this point [8]. Lamberti suggests that companies can selectively choose appropriate combinations of CSR practices in alignment with specific goals and situations to enhance trust among key stakeholders, ultimately achieving strategic objectives of improved performance and reputation [9]. Some have pointed out more specific directions for the transformation of CSR practices. Chen Honghui argues that the CSR perspective has shifted from passive attitudes to actively assuming social responsibilities, closely aligning corporate social responsibilities with stakeholders' demands and interests [10].

Corporate social responsibility practices have garnered continuous attention globally and undergone in-depth research within academia. In light of this context, Xu Shangkun distilled nine dimensions of Chinese corporate social responsibility, including environmental protection, philanthropy, social stability and progress, employment promotion, employee development and rights, legal responsibility, economic responsibility, customer orientation, and business ethics [11]. Drawing upon considerations of comprehensiveness, comprehensiveness, comparability, and others, this study selects the dimensions of "environmental protection and resource management," "social responsibility and philanthropy," and "employee care and safety assurance" as the framework. This

framework is used to analyse and compare the CSR practices of PetroChina and Sinopec, with relevant recommendations proposed. Specifically, "environmental protection and resource management" pertains to a company's environmental preservation and rational resource utilization. "Social responsibility and philanthropy" focus on a company's involvement in societal development, charitable activities, and so forth. Lastly, "employee care and safety assurance" centre around a company's concern for and safeguarding of employee rights and safety.

3. Corporate Social Responsibility Practices of PetroChina

3.1. Environmental Protection and Resource Management

Environmental Risk Management and Preventive Measures: PetroChina has established a 'three-tier prevention and control' system for environmental risks, including risk identification and assessment. It monitors the 'six major environmental risks' to prevent environmental pollution incidents and ensure the achievement of environmental protection goals [12].

Water Resource Management and Conservation Measures: PetroChina has employed water-saving technologies and other measures, leading to a 2.38% year-on-year reduction in freshwater usage in 2021. This demonstrates effective management and utilization of water resources [12].

Solid Waste Management and Pollution Control Measures: PetroChina actively manages solid waste, especially hazardous waste. It successfully achieved the goal of 'zero' historical oily sludge, making a significant contribution to environmental protection [12].

3.2. Social Responsibility and Philanthropy

Rural Revitalization and Poverty Alleviation Measures: PetroChina invested nearly 300 million yuan and implemented nearly 600 assistance projects, covering industries, consumption, education, culture, and more. These efforts have contributed positively to rural revitalization and poverty alleviation [12].

Education Support and Scholarship Measures: PetroChina established the China Petroleum Scholarship, covering 17 universities, with a total donation of 4.47 million yuan to support 685 students. Collaborating with public welfare organizations, it provided support to nearly 3,400 students from impoverished areas [12].

Volunteer Services and Community Care Measures: PetroChina organized nearly 9,000 volunteer service activities, engaging 140,000 volunteers in community service, environmental initiatives, and more. This reflects the employees' care and commitment to society [12].

3.3. Employee Care and Safety Assurance

Employee Rights and Protection Measures: PetroChina ensures that all employees sign labour contracts, achieving a 100% coverage rate of labour contracts and social insurance, thereby fully safeguarding employee rights [12].

Training and Development Support Measures: The company offers high-quality training, conducting in-person training for 318,000 participants and online training for 14.36 million participants, with an investment of 1.52 billion yuan. Moreover, it establishes employee growth channels and optimizes career development mechanisms, supporting individual growth and professional development [12].

Employee Health and Safety Measures: Comprehensive health check-ups are conducted for all employees, and over 1,200 hours of psychological counselling are provided. Stringent epidemic prevention policies are implemented to ensure employee health and safety, leading to a 22.2% decrease in accident-related fatalities [12].

4. Corporate Social Responsibility Practices of Sinopec

4.1. Environmental Protection and Resource Management

Environmental Management and Risk Prevention Measures: Sinopec has established environmental management systems to identify and assess environmental risks. It implements environmental risk control measures to prevent ecological damage and pollution incidents at the corporate level [13].

Clean Production and Pollution Reduction Measures: Sinopec promotes clean production through various measures such as source pollution prevention and cleaner production processes. It has successfully reduced pollutant emissions, and in 2021, 104 enterprises achieved the status of 'Green Enterprise' [13].

Energy Efficiency and Carbon Trading Measures: Sinopec has undertaken the 'Energy Efficiency Enhancement' project, achieving energy savings of 967,000 tons of standard coal and reducing CO2 emissions by 2.38 million tons in 2021. The company actively participates in carbon trading to address climate change [13].

4.2. Social Responsibility and Philanthropy

Epidemic Prevention and Employee Care Measures: Sinopec ensures the supply of epidemic prevention materials, supports local epidemic prevention efforts, safeguards employee safety, actively participates in pandemic response, and cares for employee health and well-being [13].

Support for Winter Olympics and Sports Initiatives: Sinopec provides comprehensive support for the 2022 Beijing Winter Olympics by offering energy services, developing new materials, and promoting the Winter Olympics culture. This contributes to the advancement of sports and the national image [13].

Rural Revitalization and Medical Poverty Alleviation Measures: Sinopec invests in assistance projects, supports rural revitalization through consumption-based assistance, and conducts ongoing medical poverty alleviation projects such as the 'Sinopec Brightness Project' for cataract treatment, contributing to health-related poverty alleviation [13].

4.3. Employee Care and Safety Assurance

Employee Rights Protection and Compensation Benefits Measures: Sinopec safeguards employees' basic rights, achieving a 100% coverage rate of labour contracts, providing comprehensive compensation benefits, and social insurance coverage to ensure employees' economic rights [13].

Democratic Management and Employee Participation Measures: The company leverages the Workers' Congress to involve employees in decision-making. With over 7,700 proposals from employee representatives and a 99.7% implementation rate, this showcases the vital role of employees in the decision-making process [13].

Health Management and Career Development Measures: Sinopec emphasizes employees' psychological well-being, providing comprehensive health support, with a 99.9% coverage rate of employee health check-ups and health records. The company also focuses on employee career development, offering training opportunities to support employees' professional growth [13].

5. Comparative Analysis of Corporate Social Responsibility Practices between PetroChina and Sinopec

By comparing the practices of PetroChina and Sinopec, similarities, distinct emphases, and differences are apparent across dimensions such as environmental protection and resource management, social responsibility and philanthropy, and employee care and safety.

In the context of environmental protection, PetroChina emphasizes preventing environmental pollution, while Sinopec places greater emphasis on cleaner development and production [12,13]. In

terms of philanthropy, PetroChina focuses on rural revitalization, education poverty alleviation, and diverse societal sectors, whereas Sinopec is more inclined towards targeted areas such as medical poverty alleviation, disaster relief, and employee well-being [12,13]. In employee care, PetroChina highlights training, development, mental health, and epidemic prevention, whereas Sinopec's focus is on employee health management and retired employee care [12,13].

Regarding environmental protection and resource management, both PetroChina and Sinopec implement measures to mitigate environmental risks. PetroChina establishes a 'Three-Tier Control' system to prevent environmental pollution incidents, while Sinopec's environmental management system successfully controls environmental risks and avoids significant environmental incidents [12,13]. Sinopec additionally prioritizes clean production through source pollution prevention and cleaner processes, reducing pollutant emissions [13].

In the realm of social responsibility, PetroChina's emphasis is on rural revitalization and education support, while Sinopec highlights epidemic prevention and support for the Winter Olympics [12,13]. PetroChina contributes to rural revitalization and education through financial support and assistance projects, whereas Sinopec's focus lies in epidemic prevention, Winter Olympics support, and energy supply services [12,13]. Both companies have made positive societal impacts in different domains, reflecting their corporate social responsibilities.

Concerning employee care and safety assurance, both companies prioritize employee rights. However, they differ in the emphasis on training, development, mental health, and health management. PetroChina and Sinopec both ensure comprehensive protection of employee rights through labour contracts [12]. PetroChina particularly emphasizes employee training and mental health, offering training opportunities and psychological support services, whereas Sinopec focuses on health management through health check-ups and psychological support [12,13].

Distinct approaches yield diverse outcomes and impacts. In terms of societal influence, PetroChina's social responsibility practice is more pioneering and extensive, while Sinopec's practice demonstrates more direct effectiveness and public acclaim. Employee satisfaction-wise, PetroChina employees gain more development opportunities through training, while Sinopec employees enjoy comprehensive health and welfare care. Concerning sustainable development, PetroChina's approach leans towards strategic sustainability, whereas Sinopec's approach is more pragmatic.

6. Practical Recommendations

By actively integrating with corporate strategies and culture, engaging proactively in the formulation of international responsibility standards, and internally constructing organizational meanings, Chinese petroleum enterprises can more comprehensively and profoundly practice corporate social responsibility. In doing so, they can provide a solid foundation and support for sustainable development. These recommendations not only guide companies to better implement social responsibilities at different levels but also contribute to enhancing their reputation, sustainability, and international competitiveness.

6.1. Actively Integrating with Corporate Strategy and Culture

In the context of the increasing prominence of social responsibility, Chinese petroleum enterprises need to deeply understand that social responsibility practice has evolved from being merely an obligation to a crucial component of corporate sustainable development. This implies that social responsibility should permeate various aspects of the company, including operational decisions, corporate culture, and supply chain management, to achieve long-term sustainability. Davis explicitly states that companies should not only integrate social values into their pursuit of economic interests but also take on more social responsibilities proactively to ensure sustainable business success [1]. Additionally, Carroll's three-dimensional model of corporate social performance also underscores the importance of integrating social responsibility into corporate culture, operational decisions, and

supply chain management, contributing to the development of long-term corporate strategies and enhancing competitiveness [2].

6.2. Actively Participating in the Formulation of International Responsibility Standards

Faced with the challenges of the era of global responsibility competition, Chinese petroleum enterprises need to actively engage in the formulation and adherence to international responsibility standards to enhance their competitiveness on the international stage. There is still room for improvement for Chinese petroleum enterprises in adhering to international best practices, and embracing international responsibility standards will help meet the expectations of global stakeholders for corporate social responsibility, further establishing a positive responsible image for the company on the international stage. Kavitha points out that corporate social responsibility disclosure is the process of conveying social and environmental impacts to society [7]. Therefore, actively participating in the formulation of international standards is not only an action but also a transparent and open demonstration that contributes to enhancing the company's reputation.

6.3. Internal Organizational Meaning Construction

In the practice of social responsibility, internal organizational meaning construction is crucial. Chinese petroleum enterprises should clarify the goals and positioning of corporate social responsibility internally to reduce ambiguity and uncertainty in responsibility practices. The interaction between internal organizational meaning construction and external institutional factors jointly drives the evolution of corporate social responsibility [8]. For managers, their cognition has a significant impact on corporate social responsibility performance. Therefore, strengthening internal communication and understanding to form a consistent concept and values of social responsibility will help companies develop targeted social responsibility projects in practice, enhancing their actual impact and effectiveness.

7. Conclusion

The Chinese petroleum industry is entering a new phase amidst the global energy transition. This study conducted an in-depth comparative analysis of the corporate social responsibility practices of two representative companies in the Chinese petroleum industry – PetroChina and Sinopec. This research not only provides targeted recommendations for the social responsibility practices of these two companies but also offers valuable experience and guidance for continuous improvement and enhancement of social responsibility practices across the entire Chinese petroleum industry. The study delved into the specific practices and outcomes of these two companies in areas such as environmental protection and resource management, social responsibility and philanthropy, and employee care and safety. PetroChina adopted a "three-tier prevention and control" system to prevent environmental pollution incidents, while Sinopec focused more on clean production by reducing pollutant emissions through source cleaning and process cleaning. In terms of social responsibility, PetroChina had a broader focus on rural revitalization and education support, while Sinopec emphasized pandemic prevention and support for the Winter Olympics. Concerning employee care, PetroChina stressed training and development, along with mental health and pandemic prevention, whereas Sinopec emphasized employee health management and welfare. A comparative analysis of the practices of these two companies reveals that different approaches lead to distinct social impacts, employee satisfaction, and sustainable development outcomes. PetroChina's social responsibility approach is more pioneering, with a broader reach, whereas Sinopec's practices yield more direct and publicly praised effects. In terms of employee satisfaction, PetroChina's employees benefit from more developmental opportunities through training, while Sinopec's employees receive comprehensive health and welfare support. In the realm of sustainable development, PetroChina's approach is more strategic, whereas Sinopec's approach is more practical. Based on the comparative analysis of these two companies' practices, this study proposes three practical recommendations. First, Chinese

petroleum enterprises should actively integrate social responsibility into corporate strategy and culture to achieve sustainable development across all aspects. Second, active participation in the formulation and adherence to international responsibility standards is essential to enhance international competitiveness. Lastly, internal organizational meaning construction is pivotal for successful social responsibility practices; therefore, strengthening internal communication and understanding to establish a unified concept and values of social responsibility is crucial.

This research relies on the case studies of PetroChina and Sinopec, two state-owned enterprises, to analyse the entire Chinese petroleum industry. The generalizability of findings to other types of petroleum companies may be limited. Future research could further explore CSR practices in the Chinese petroleum industry, especially considering the unique nature of different enterprises and their international engagement.

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