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Do Environmental Disclosure Regulations Encourage Chinese Company to Act on Sustainability

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Abstract

This study examines whether China's environmental disclosure regulations effectively incentivize sustainable development actions of enterprises, with a focus on three high impact industries: energy, manufacturing, and high technology. Against the backdrop of China's continuously upgrading environmental governance efforts, this study adopts a hybrid approach that combines secondary data analysis with case studies of three representative companies - China Huadian Corporation (Energy), Great Wall Motors (Manufacturing), and Tencent (High Tech). The survey results show that there are differences in the regulatory impact across different industries: energy companies exhibit stronger sustainability consistency due to environmental disclosure regulations under strict government and public supervision, while manufacturing companies have weaker compliance despite higher pollution levels. High tech clusters benefit from policy driven innovation ecosystems, making regulatory implementation smoother. This study identified systemic challenges that hinder the effectiveness of environmental information disclosure regulations, including insufficient funding, inadequate punishment mechanisms, and limited public oversight. To address these issues, this article proposes policy improvements such as clearer green innovation subsidy standards, strengthened enforcement agreements, and an integrated digital platform for real-time environmental monitoring. By linking the dynamics of specific industries with regulatory outcomes, this study emphasizes the necessity of tailored approaches in China's sustainability governance, providing insights for emerging economies to balance industrial growth and ecological protection.

Keywords

Environmental Disclosure Regulation; Sustainability; Chinese Company.

1. Introduction

The issue of environmental protection is a topic of global concern. China, as a country with a large population, a wide area and developed industry, has also made a lot of efforts for environmental protection. There are several environmental problems that need to be paid attention to. For example, global warming causes glaciers to melt and sea levels to rise. Also, the plastic pollution leads to damage to marine ecology. Excessive deforestation, the reduction of biodiversity, affecting the ecological balance of the earth is also a problem. In a landmark move for China's mainland, three of the country's leading stock exchanges in Beijing, Shanghai and Shenzhen have introduced their first guidelines for Environmental, Social and Governance (ESG) disclosure by businesses. The study will investigate the implementation effect of environmental information disclosure in different industries, and on different regions with different economic levels. It will also discuss how the design and implementation of China's environmental protection policies can improve in the future. China's environmental laws, such as the Environmental Protection Law, provide for the prevention and control of environmental

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pollution; The Water Pollution Prevention and Control Law aims at protecting water bodies and prohibits excessive discharge; The Air Pollution Prevention and Control Law requires emissions to meet standards and reduce air pollution. These laws work together to protect and improve the environment and prevent pollution.

This study is mainly a second-hand research and it will collect pollutant emission data released by representative companies in the energy industry, manufacturing industry, and high-tech industry. This study combines second-hand information to evaluate the impact of Environmental Disclosure Regulation on Chinese enterprises and the trend of implementing environmental protection behaviors in different industries, and summarize the challenges encountered in the implementation of environmental information policies and possible solutions.

2. Literature Review

2.1. Previous Research on Environmental Hazards in Different Industries

In the field of environmental management, the impact of corporate behavior on ecosystem has become an important direction of academic research. A large number of literatures discuss the environmental hazard behaviors of different industries, and analyze the pollutant emission and energy consumption of enterprises in the production process. These studies not only provide a scientific basis for assessing the environmental impact of the industry, but also lay a foundation for the formulation of environmental protection policies and the improvement of the environmental management level of enterprises.

The energy industry is one of the important sources of pollution. From a global average point of view, 55% of greenhouse gases such as carbon dioxide come from energy production and consumption, while China accounts for more than 60%, and carbon dioxide and other greenhouse gases emitted by coal and electricity account for more than 40%. (Liu, 2011) Wang (2022) conducted a survey on pollution emissions from the energy industry in Shaanxi Province. Shaanxi is a major energy province in China, with abundant energy types and large reserves. The expansion of energy development scale will lead to environmental pollution and the withering of vegetation in some areas due to the production and consumption of energy. The Guanzhong region in Shanxi is a concentrated area of power plants, which emit a large amount of air pollutants such as smoke, dust, and sulfur dioxide; The ecological environment in northern Shaanxi is relatively fragile, with large-scale mining of coal, oil, natural gas, etc. causing ground subsidence and a decrease in groundwater levels. The energy structure dominated by coal has a significant impact on pollution and carbon emissions.

The most common pollutants in the manufacturing industry are oil, organic and hydrocarbon fuels, and heavy metals. (Liu, 2011)which can affect people's health through the food chain(Chen, 2019)In 2010, the industrial wastewater discharge in the Yangtze River Delta urban agglomeration was 4847.89 million tons, which has decreased to 289.622 million tons in 2019.(Yang, 2022)

In high-tech industry,due to the agglomeration of enterprises in industrial parks, there are many Volatile Organic Compounds (VOC) emission links. Some species in VOCs exist "three causes" effect, long-term exposure to which will directly threaten human health.(Mo, Zhang, 2014) In 2014, the smoke and dust emissions in Alxa High tech Zone were 5364.31 tons per year, and in 2019, the total smoke and dust emissions were 4240.36 tons per year. (Wang, 2021)[1-12]

2.2. Government Policy Tools

Howlett (2006) put forward the concept of policy tools in Public Policy Research: Policy Cycle and Policy Subsystem, and believed that "policy tools are the means that the government relies

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on to implement policies, which can also be called policy means. They are the actual methods and means that the government has when deploying and implementing policies. In the process of policy implementation, the government should choose the appropriate means among them.

Domestic and foreign scholars have explained the definition of environmental policy from the perspectives of policy subject, policy scope, goal - tool and so on: "As a component of public policy science, environmental policy is the goal of national organs, political groups and environmental decision-making bodies to achieve environmental management and environmental protection. A set of norms and grounds developed over a period of time to regulate the behavior and attitudes of the public, enterprises, and groups ".(Liu, 2011)

Since 1983, China has regarded environmental protection as a fundamental national policy. In order to address and solve the increasingly serious pollution problem, China has been implementing environmental protection policies. In recent years, research hotspots in the field of environmental management have also focused on 'quantitative evaluation tools for environmental policies',' public participation ', and' global cooperation '. The implementation of these policies cannot be separated from the joint efforts of the government, enterprises, and the public.(Shi, 2024)

2.3. The Environmental Disclosure Policy in China

Environmental information generally includes the quality and condition of basic elements of the environment (such as air, water, soil, etc.), biological diversity and other activities that have an impact on the environment (e.g. environment?a l pVT Furvey, EIA report, enterprise pollution control and discharge, public complaints, etc.).

Local environmental information disclosure is defined as: On the premise of not violating the law, local governments and enterprises will make public the environmental information recorded or obtained in the performance of environmental protection responsibilities through official portals, annual reports, Weibo, wechat and other channels to meet the needs of the public for environmental information, and mobilize the extensive participation and supervision of social organizations and the public. (He,2021)

With the establishment and implementation of the Environmental Information Disclosure Measures (Trial) in 2008, the relevant policy and regulatory system began to be gradually established. The new Environmental Protection Law, implemented in 2015, has made special provisions on the subject and content of environmental information disclosure, as well as public participation and supervision. The "Determination and Treatment Measures for Falsification of Environmental Monitoring Data" implemented in 2016 further clarified the relevant treatment of illegal acts of environmental information. After that, a five-year cycle of regular central environmental inspection was established to promote the responsibility of local governments in pollution control. (He, 2011)

However, in the actual process of operation, the implementation of environmental regulation policies is not completely effective. At this stage, there are falsification of data and even condoning pollution, and the implementation is not strong enough and the implementation effect is not good. Some companies are reluctant to disclose environmental information or selective disclosure, believing that disclosure will increase additional costs and reduce economic benefits; In view of the fact that environmental information disclosure will help reduce regulatory pressure and obtain related resources and support, some enterprises will choose to take the initiative to disclose. However, at present, China's overall public environmental protection level is low. At the same time, the popularization and application of the emerging "Internet +" participation platform represented by wechat and Weibo is promoting the convenience of all kinds of environmental data in China. However, on the whole, it is difficult for China's environmental information disclosure to be jointly managed by multiple subjects, and the situation of collaborative governance has not yet formed.

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Therefore, this study focuses on the implementation effects of environmental information disclosure policies in China, especially the differences in effects among different types of enterprises. This study aims to compare and explore the existence and reasons for these differences, and to explore the future development prospects of environmental information disclosure policies in China[13-15].

3. Methodology

The research is a secondary research. The study explored the implementation effect of the environmental information disclosure system by reading literature and looking up the emission data of environment-related pollutants and environmental quality data. The researcher will also conduct case studies to measure the performance of environmental protection actions through the performance of several representative companies and try to find out the factors that affect the implementation effect of the environmental information disclosure system.

3.1. Literature Research

The researcher read a series of dissertations online and searched for keywords such as energy, manufacturing and high-tech industries to find pollution in their sectors. The researcher searched for literature on the CNKI website; After searching for literature, the researcher first determine the relevance between the literature and this study through the title and abstract of the paper. If the relevance is strong, the researcher will use the CRAAP rule to evaluate the authority of the paper by assessing its source and author institution, etc; The researcher found the main pollutants of these industries, and then searched for the hazards of these pollutants. In many dissertations, the researcher choose the more downloaded and authoritative literature to cite. In addition, the researcher found information about specific companies on the company's official website.

3.2. Case Study

The researcher selected the energy, manufacturing and the high-tech industries. The energy industry is very polluting, manufacturing and high-tech industries are also very polluting. Then, a specific company in each industry is selected, and the selection criteria are listed companies or state-owned enterprises, because such large companies can more easily obtain data and information, and the larger scale, its impact on the environment is greater, so it is more representative. The final screening results are China Huadian Corporation, Great Wall Motor and Tencent.

The researcher searched for the disclosed 'annual reports',' ESG reports', and 'environmental reports' on the official websites of these three companies and evaluated the environmental performance by examining the trend of typical pollutant emissions disclosed in the report in recent years. This study selected the pollutants disclosed by these three companies and explained their environmental performance through the environmental behaviors described in the report and significant changes in the companies.

The aim of the research is to showcase the performance of the entire industry by observing the performance of a company from a small perspective

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4. Results & Discussion

4.1. The Effect of Implementing Environmental Disclosure Policies in Different Industries

4.1.1. Energy Industry

China Huadian Corporation (referred to as Huadian group) is a power generation enterprise established in 2002 during the national power system reform. Its main business includes four major industrial sectors: power generation, coal, science and technology, and finance.

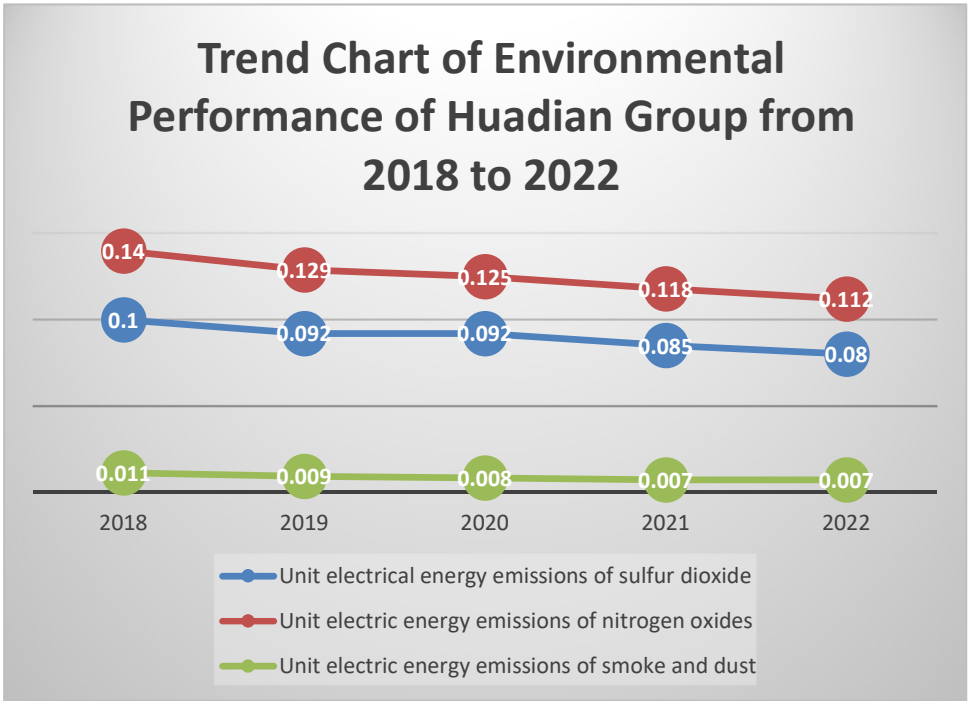

Figure 1. Trend Chart of Environmental Performance of Huadian Group from 2018 to 2022

According to figure1, the unit electricity emissions of sulfur dioxide and nitrogen oxides of Huadian Group from 2018 to 2022 have shown an overall decreasing trend, which is more significant than that of particulate matter.

For power companies, with the increasing demand for electricity from China's growing population, Huadian can still have a significant decrease in pollutant emissions. We can find some reasons from the ESG report released by Huadian. The company has carried out a special action on ecological and environmental protection governance, promoted the "Three Year Implementation Plan for Fighting Pollution Prevention and Control"(Huadian Group ESG Report， 2020), completed 118% of the national designated task for ultra-low emission capacity, achieved a 100% completion rate of coal yard closure in the three key areas of Beijing Tianjin Hebei and its surrounding areas, Yangtze River Delta, and Fenwei Plain, and successfully completed the task of deep governance of unorganized emissions in the blue sky defense aim. In 2022, the completion status of the group company's "Three Year Implementation Plan for Fighting Pollution Prevention and Control (2018-2020)" was reviewed, and 54 pollution prevention and control projects were transferred to the "14th Five Year Plan" for ecological and environmental protection to continue to be promoted and implemented; Issuing the "2022 Ecological and Environmental Protection Annual Plan" and the "2022 Major Pollutant Emission Targets for Directly Affiliated Units", revising the "Pollutant Discharge Permit Management Manual", strengthening process supervision, the emission level of major pollutants continues

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to improve, the desulfurization equipment rate of thermal power units is 100%, the denitrification equipment rate of thermal power units is 100%, the wastewater discharge is 18629952.13 tons, and the emission reduction is 3410050 tons; Organize the investigation of wastewater discharge outlets, "one waste two fields", and water and electricity ecological flow discharge, and all 140 problems identified will be included in the "one ledger" for ecological and environmental protection to promote rectification. Encourage enterprises to maximize the comprehensive utilization of solid waste such as furnace ash, slag, fly ash, and desulfurization gypsum while meeting the requirements of pollutant discharge permit management and local development needs; Successfully completed the air quality assurance work during major events such as the Winter Olympics, Paralympics, and the 20th National Congress of the Communist Party of China.(Huadian Group ESG Report 2020)

The energy industry is a sector with high pollution emissions, as many power generation activities, oil exploration, mining, and transportation involve the use of large amounts of fossil fuels. There is also a risk of pollutants leaking into soil and water bodies in this industry. At the same time, in China, the majority of the energy industry is state-owned enterprises, which are the foundation of people's livelihoods. Therefore, the implementation of national policies by this type of industry is significantly higher than other industries dominated by private enterprises. Represented by Huadian, researchers have observed a significant and sustained decline in atmospheric pollutants over the past few years. This also indicates that the policy will have a more significant impact on the energy industry[16-18].

4.1.2. Manufacturing Industry

Great Wall Motors is a global intelligent technology company that specializes in the design, research and development, production, sales, and service of automobiles and their components.

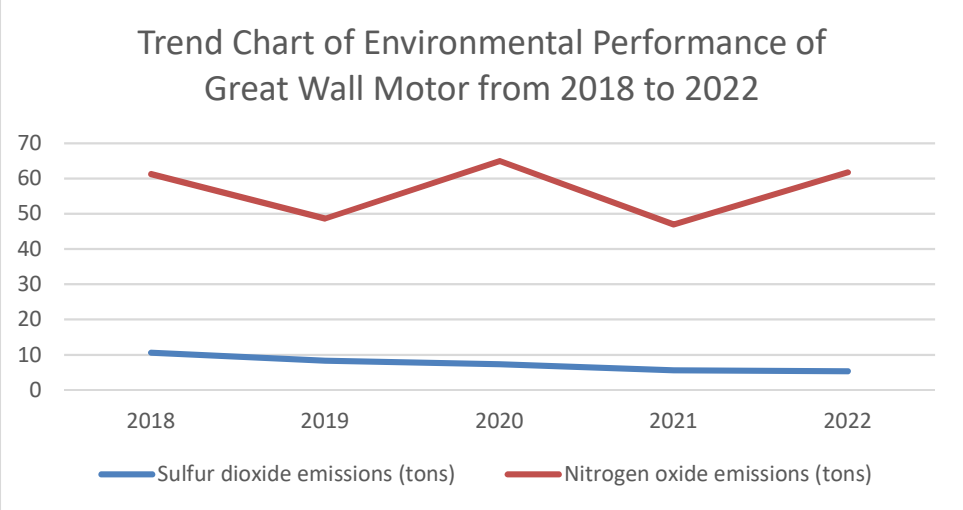

Figure 2. Trend Chart of Environmental Performance of Great Wall Motor from 2018 to 2022

As figure2 shown, from 2018 to 2022, the overall sulfur dioxide emissions of Great Wall Motors showed a downward trend, while nitrogen oxide emissions showed a fluctuating trend. As shown in the figure, in the environmental performance indicators of Great Wall Motors from 2018 to 2022, only the emission of sulfur dioxide has been decreasing year by year, and the emission of nitrogen oxides is unstable.

It indicates that the company's energy-saving and emission reduction measures have played a certain role. Since 2018, the company has strictly controlled the discharge of various pollutants. While ensuring compliance with emission standards, the company has implemented systematic management measures and equipment for sewage treatment. (Jiang, 2024) Great Wall Motor

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company have enforced environmental policies effectively and promoted green technology innovation in the manufacturing industry. The implementation of positive market incentive environmental policies represented by government subsidies, negative market incentive environmental policies represented by environmental taxes and fees, and command and control environmental policies represented by environmental regulations all have a significant promoting effect on green technology innovation in enterprises.

However, in order to continue promoting environmental protection work, Great Wall Motors still needs to increase investment and regulatory efforts in pollution control and emission reduction technologies to ensure the continuous improvement of environmental performance.(Shen,2024)

The manufacturing industry represented by the Great Wall, like the energy industry, is a company with high emissions of pollutants. Manufacturing industry often emits a large amount of oil, organic and hydrocarbon fuels, and heavy metals pollutants during the production process. In China, large manufacturing industries are dominated by state-owned enterprises, such as Hangzhou Iron and Steel Group Company and Hikvision, while the small manufacturing companies are almost entirely privately owned. Unlike the energy industry, the manufacturing sector, which has a mix of public and private ownership, has not responded as strongly to Environmental Disclosure Regulations;. The Great Wall Company selected in the case study is a private enterprise, and we can see from Figure 2 that its trend in pollutant emissions is not entirely optimistic. Therefore, for the manufacturing industry, due to its large amount of pollutant emissions, if it could comply with the Environmental Disclosure Regulations, significant environmental benefits could have been seen. However, due to the limited government and public supervision of this industry, there is still room for improvement in its environmental performance.

4.1.3. High-tech Industry

Tencent is a world leading Internet technology company, providing a series of enterprise services such as cloud computing, advertising, financial technology, etc.

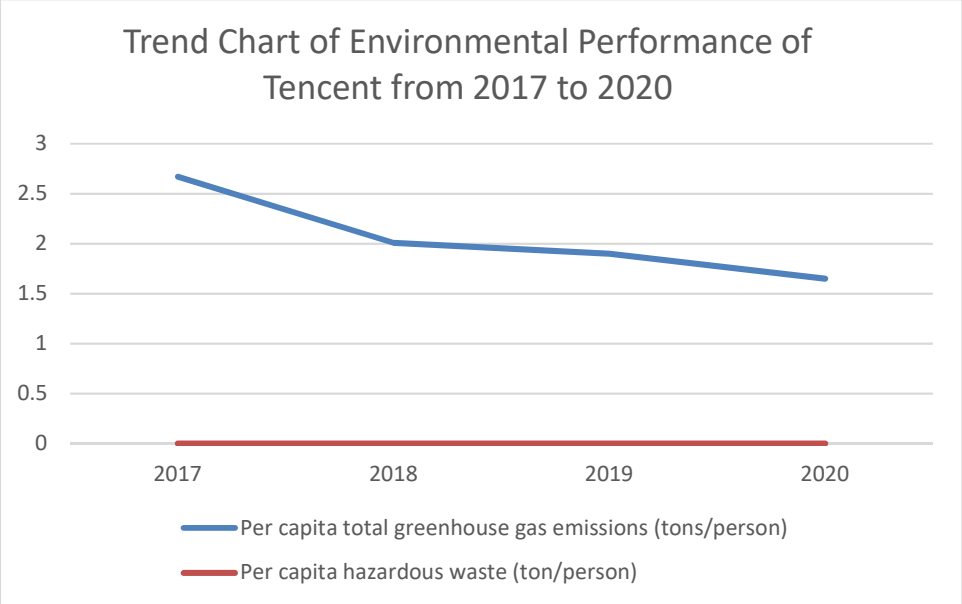

Figure 3. Trend Chart of Environmental Performance of Tencent from 2017 to 2020

As can be seen from Figure 3, the annual average greenhouse gas emissions per person have been decreasing year by year from 2017 to 2020, and the amount of hazardous waste has been decreasing year by year from 2018 to 2020.

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Since 2017, Tencent has advocated the use of the Internet to promote intelligent environmental protection, explore a new model of "Internet plus+environmental protection", and deepen green operations. In order to achieve energy conservation and emission reduction, it has adopted four "black technologies" in the data center, namely, cold heat and power cogeneration system, TMDC modularization, high water temperature data center, and photovoltaic power generation. The data shows that Tencent is continuously improving its environmental performance and fulfilling its corporate social responsibility effectively. Tencent attaches great importance to corporate social responsibility.(Yu,2024)

Unlike traditional energy and manufacturing industries, the pollution caused by high-tech industries is relatively small, generally including chemical pollution, electronic waste, biological pollution, and other issues. However, in China, this industry often has the characteristic of centralized management - there are specialized high-tech company clusters in many cities. This means that they often receive more effective legal and regulatory supervision. So it can be that high-tech industries represented by Tencent have a relatively optimistic trend in pollutant emissions. In addition, the widespread penetration of high-tech enterprises increases their influence on social responsibility. (Li, 2011) Firstly, due to its comprehensive and highly interdisciplinary nature, it can widely penetrate into various traditional industrial sectors, and cause these traditional industries to undergo technological transformation, save energy and raw materials, and increase environmental protection measures. Secondly, high-tech industries drive the development of a series of related industries such as education and services, achieving optimization and upgrading of industrial structure. High tech affects various industries, and its impact on market size and economic society is much greater than that of the high-tech industry itself. (Xiao, 2009) So we also look forward to the high-tech industry driving environmental behavior in other fields at the cultural and awareness levels.

Therefore, we will find that in China, different enterprises have different performance in environmental protection actions because of their nature of public or private, and the amount of pollution they emit. This also means that environmental disclosure policies play a different role in different industries. This means that if we want to promote environmental disclosure policies to play a more effective role, we should not only seize the commonality of different industries, so that environmental disclosure policies are more universal, but also launch more targeted measures according to the differences of different industries.

4.2. Challenges Faced in the Implementation of Environmental Information Disclosure Policies

Firstly, the first obstacle to the smooth implementation of environmental information disclosure policies is the issue of funding. This is the most important reason that hinders many enterprises, especially small businesses, from actively cooperating. Green innovation aims to emphasize the win-win situation between economic growth and environmental protection through technological innovation, management change, and business model optimization. It is one of the concepts promoted by the government to enterprises to assist in the implementation of environmental information disclosure policies. And now we have found that the biggest obstacle to the implementation of green innovation is funding. Green innovation has benefits but requires a lot of money and unpredictable returns making it difficult for companies to invest in green innovation activities. In this case, government environmental subsidies can provide certain financial support for green innovation in enterprises, reduce the cost of green innovation for enterprises, guide enterprises to build environmental protection projects, and enhance environmental protection technologies.

Next is the issue of punishment intensity. The implementation of the New Environmental Protection Law represents the government's determination to use law as a mandatory means to punish and warn enterprises that cause serious environmental pollution. However, the

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punishment measures stipulated in the New Environmental Protection Law still need to be continuously improved. Due to the pursuit of profit maximization, some enterprises may ignore policy regulations and continue to expand their emissions, polluting the environment, when the total profit brought by the expansion of emissions exceeds the cost incurred by related penalties.(Xie, 2022)

The development of the public participation system for environmental impact assessment in China lags behind other countries. In recent years, there have been frequent environmental incidents caused by economic construction. The reason behind this is that construction projects have not followed legal procedures and have not been effective. At present, China conducts public participation in environmental impact assessments through forms such as questionnaire surveys, hearings, and media releases. The general public cannot actually engage in sufficient information exchange. For example, some hearings are organized by the organizers to ensure public participation, and more seriously, some environmental impact assessment reports are falsified, causing serious safety hazards. Some organizers, on the other hand, ignore the opinions of the public and ignore them due to a lack of professional competence(Chen, 2023)

4.3. The Possible Improvement can be Achieved by Environmental Information Disclosure Policy Implementation

Firstly, in response to the first difficulty of insufficient fund mentioned above, the government should clarify the criteria for innovation classification. The government encourages businesses to engage in green innovation by providing subsidies to help them overcome financial constraints. Due to the information asymmetry between the government and enterprises in identifying green innovation achievements, it is easy for enterprises to obtain innovation subsidies through "strategic" innovation, resulting in low innovation value and insufficient utilization of resources on the correct path. Therefore, the government should clearly classify innovation and encourage innovative behaviors that truly contribute to solving environmental problems and upgrading industrial structure.

Secondly, the government needs to continuously adjust the content of relevant regulations and strengthen the punishment of enterprises that seriously pollute the environment. The government need to further strengthen the implementation of environmental information disclosure, promote cooperation between environmental protection departments and local governments, and ensure the effective implementation of relevant policies and regulations on environmental information disclosure. In addition, environmental information disclosure can be included in the performance evaluation system of local governments, and the content of administrative accountability can be further clarified, with strict accountability for relevant departments that refuse to implement environmental information disclosure or perfunctory implementation. (Liu, 2023)

The third question is about public engagement. Further expand channels and methods for environmental information disclosure. Overall, on the one hand, local governments should continuously improve the platform for environmental information monitoring and analysis, fully utilize modern scientific technologies such as artificial intelligence to implement real-time monitoring and information collection of environmental conditions, and proactively disclose corresponding environmental information to the society in a timely manner. On the other hand, government departments should also establish information integration and sharing mechanisms, and further consolidate fragmented environmental information by establishing an environmental information sharing resource library. In the channels of environmental information disclosure, it is necessary to ensure both online and offline dual disclosure. Especially in the online public domain, it should not be limited to government websites, but should make full use of public social media such as Weibo and WeChat for environmental

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information disclosure, and ensure the wider public's right to know environmental information as much as possible.(Liu, 2023)

In this situation, protecting the public's right to know about environmental impact assessment information in accordance with the law and improving the information disclosure system are conducive to truly achieving the goal of public participation in environmental impact assessments. The rapid development of the economy and society has caused serious damage to the natural environment. In order to protect our environmental rights and interests as much as possible, it is necessary to collect relevant environmental projects, plans, and other related information, and based on the collected information, provide corresponding scientific opinions and make scientific decisions. The ways for the public to obtain environmental information should be diversified, and should no longer be limited to traditional ways of informing citizens of environmental information. Instead, modern network convenience can be utilized as a communication advantage to publicly disclose environmental information. Administrative authorities should also actively open legal channels for inquiries to help the public timely access environmental impact assessment information.(Chen, 2023)

To sum up, comprehensive measures are needed to promote better environmental information disclosure policies. To balance regulation with cycling and promote financial incentives and public engagement. Although there are still problems with funding constraints, policy enforcement and access to information. However, by optimizing the classification of green innovations, strengthening accountability mechanisms, and expanding information disclosure channels, the impact of the policy is expected to be increased. As environmental problems become more serious, a policy that can actually bring about significant sustainable development will play a key role in guiding companies to fulfill their environmental responsibilities.

5. Evaluation

5.1. Highlights

Firstly, these studies were conducted according to a clear structure. In addition, this article also conducted extensive research, the literature research and reading were comprehensive with a clear structure, and the basis for literature evaluation was reasonable. During the project, I searched for literature through CNKI. I chose more reliable sources through literature review. The CRAAP rule was used to determine authority.

In addition, this study conducted a case study on the effect of implementing environmental disclosure regulations in different industries, selecting three representative companies for pollution data analysis.This allows researchers to reason about industry-wide environmental actions with limited quantitative data. To judge the difference between different industries in terms of environmental action.

5.2. Limitation

Firstly, the collected data may not be comprehensive or representative enough, which limits the generalizability of the conclusions. The information obtained in the case study is only from the most recent years, and data before 2017 is not recorded in it. This may lead to limitations in the research. If data before 2017 can be found, the trend of pollutant emissions may become more obvious.

Secondly, due to time and resource constraints, this study only focused on three important industries--energy, manufacturing, and high-tech industries for research, so it cannot cover all relevant aspects.

Finally, the information provided by this study is mostly qualitative, and quantitative results cannot directly prove or evaluate the effectiveness of environmental information disclosure

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policies. This is limited by the objective complexity of such topics themselves, and one of the main reasons why knowledge of environmental information disclosure policies affects these enterprises is difficult to completely separate for discussion. Therefore, for further studies, the collection of more data and the invention of quantitative evaluation methods will provide greater possibilities for in-depth exploration of this topic.

6. Conclusion

The dissertation sets out to discuss whether environmental disclosure regulations encourage Chinese company to act on sustainability.

Results of this investigation show that the energy industry, subjected to government and public supervision, is heavily polluted, hence it is encouraged by environmental disclosure regulations to promote sustainable development. The manufacturing industry is heavily polluted, so it is not as strongly supervised by the government and the public, is encouraged by the regulations but with relatively smaller impact. High tech industrial clusters make regulations easier to implement, so they are encouraged to go on the way toward sustainable development influenced by policies. Based on the patterns of the three industries mentioned above, we have found that the implementation of environmental information disclosure policies currently faces three challenges-- insufficient funding, inappropriate punishment intensity, and lack of public supervision. There are three measures that can be taken in this regard---clarifying the classification criteria for innovation eligible for subsidies, further strengthening the implementation of environmental information disclosure, and improve the platform for environmental information monitoring and analysis.

The author hopes this study can provide information to help Chinese enterprises achieve more efficient and sustainable development. It is believed that Chinese enterprises will generate more innovative ways on the path of sustainable development, and the environmental issues faced by China will gradually be resolved.

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