



The Impact of Environmental Assessment of Green Innovation on Corporate Performance and an Empirical Study

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Abstract

Green innovation is an important part of environmental evaluation, which will promote low-carbon economy and directly or indirectly impact enterprises' development performance. The research on environmental evaluation of green innovation mainly focuses on the theoretical aspect, elaborates on waste recycling, social responsibility, etc., lacks practical research methods, and ignores the impact of green innovation. In order to further study the actual impact of green innovation on environmental assessment and the promotion of enterprise performance, this paper proposes a factor regression analysis method. First of all, as well as related literature, the content and indicators of green innovation are extracted, the indicators are standardized, and the invalid indicators are eliminated. Then, a regression analysis of enterprise performance is carried out according to the indicators to find out the main influencing aspects. Finally, the problematic indicators were analyzed, the causes of the indicators were explored, and relevant countermeasures were proposed based on the regression results. The results of the study show that social supervision (X32), government supervision (X31), environmental report disclosure (X11), profit evaluation system (X23), production competitiveness (X21), Environmental technology (X13) and investment (C) are the main influencing indicators, and the degree of enterprise performance has a significant impact. Therefore, enterprises should start from the aspects of environmental report disclosure, social supervision, and profit evaluation system, and formulate measures and countermeasures to improve the role of environmental assessment in green innovation in promoting enterprise performance.

Keywords:

Green innovation, environmental assessment, corporate performance, empirical evidence.

Article history:

Received: 14/05/2024, Revised: 11/07/2024, Accepted: 12/08/2024, Available online: 30/09/2024

Introduction

At the two sessions of the National People's Congress in 2021, "carbon peak" and "carbon neutrality" were written into the government work report for the first time, becoming hot words discussed by all sectors of society. The so-called "carbon peak" means that China promises that by 2030, carbon dioxide emissions will no longer increase, and then slowly reduce after reaching the peak. By 2060, carbon neutrality will be achieved by offsetting all carbon dioxide emissions by planting trees, saving energy and reducing emissions. In September 2020, China announced the goals of "carbon peak" and "carbon neutrality" to the world for the first time. At the end of 2020, China pledged to the world to achieve carbon peak by 2030 and carbon neutrality by 2060. The government work report submitted for consideration on March 5, 2003 proposed that this year it is necessary to do a solid job in "carbon peaking" and carbon neutrality, and formulate an action plan for carbon emission peaking before 2030. This means that the pace of China's energy structure adjustment, promotion of industrial structure transformation, improvement of energy efficiency, research and development and promotion of low-carbon technologies, improvement of low-carbon development systems and mechanisms, and increase of "ecological carbon sinks" will be greatly accelerated. An environmental assessment of green innovation with the goal of carbon neutrality and the development of China in the next 40 years has been slowly launched (Shao & Yi, 2023). China has actively implemented the national strategy to address climate change, and has taken a series of measures, such as adjusting the industrial structure, optimizing the energy structure, conserving energy and improving energy efficiency, promoting the construction of a carbon market, and increasing the "ecological carbon sink" (Sino). During the 13th Five-Year Plan period, China has achieved remarkable results in tackling climate change (Jiang, 2023). Greenhouse gas emissions are effectively controlled. According to data released by the Ministry of Ecology and Environment, carbon dioxide emissions per unit of GDP continued to decline, basically reversing the rapid growth of total carbon dioxide emissions, and by the end of 2019, carbon emission intensity was 18.2% lower than that in 2015, completing the binding target of the 13th Five-Year Plan ahead of schedule (Lv, 2023). Carbon intensity has been reduced by 48.1% compared with 2005, and the proportion of non-fossil energy in energy consumption has reached 15.3%, achieving the 2020 monthly target of China's commitment to the international community ahead of schedule. The promulgation of the "14th Five-Year Plan for Industrial Green Development" in December 2021 once again emphasized the importance of environmental assessment of green innovation, which has become the only way for China's manufacturing industry to achieve the "dual carbon" goal, and is also the key for Chinese manufacturing enterprises to cope with future international competition and achieve green development (Xu, 2023; Xu, 2022).

Research Methodology

- *Green Innovation and Firm Performance*

Social aspects: The environmental assessment of green innovation originated from the green economy. Since the beginning of the 21st century, with the acceleration of economic globalization, issues related to energy, the

economy and the environment have become increasingly complex (He, 2022). The development of the times requires new economic theories, and the theory of environmental assessment of green innovation comes into being, and forms a green and environmentally friendly social environment (Zhou et al., 2021). The so-called environmental assessment of green innovation is a sustainable social and economic model, which closely combines economic development with environmental improvement to form a mutually reinforcing relationship. It has given full play to the guiding role of the state, raised the enthusiasm of the whole people to participate, changed the original three-high development model, and realized the leapfrog development of society. The environmental assessment of green innovation in manufacturing breaks the previous development path. It no longer sacrifices the environment in exchange for economic development benefits, which is a solution to how to deal with the relationship between social and economic development and environmental protection (Li & Zhang, 2017).

Policy aspects: The environmental assessment of green innovation not only interprets the country's social development model from the macro level but also puts forward higher-level requirements for enterprises at the micro level (Luo & Xiong, 2021). The transformation of low-carbon economy in the new era has become an inevitable choice for the transformation and development of industrial enterprises. What can the transition to a low-carbon economy bring to enterprises, is it an opportunity or a challenge for the survival and development of enterprises, or the coexistence of opportunities and challenges? These are the key issues discussed and studied by academic and theoretical circles since implementing the "dual carbon" strategy. Some scholars have conducted research from the perspective of the impact of green economic development policies on enterprises. Some scholars believe that state-owned enterprises, as the leading force of the national economy, must actively implement the national initiative on green economic development and take the lead in developing green economy (Wang et al., 2013). At the same time, he pointed out that in state-owned enterprises, the realization of "green policies" is the only way to promote the sustainable development of state-owned enterprises, which will have a decisive impact on the survival and development of enterprises. Based on the analysis and research of the data of listed companies, by analyzing the impact of enterprises fulfilling green responsibilities, developing green economy and the later value of enterprises, it is believed that the fulfillment of green responsibilities and the development of green economy are conducive to improving the future value of enterprises, and the value of green economy to enterprises is undeniable among private enterprises (Cai, 2021).

Economic aspects: Taking the data of Anshan Iron and Steel Co., Ltd. from 2014 to 2018 as a sample, the value creation ability brought by the green economy to Anshan Iron and Steel Co., Ltd. was studied. It is concluded that the green economy is conducive to enhancing the ability of enterprise development performance creation, especially the ability of enterprises to create sustainable value. the impact of the environmental assessment of green innovation on the quality of enterprise economic development is studied, and it is concluded that the environmental assessment of green innovation of enterprises has a positive impact on the high-quality development of enterprises (Thomas, 2010). Other scholars have conducted theoretical studies on

the impact of low-carbon economy on enterprise development performance: from the perspective of the impact of corporate carbon information disclosure on enterprise development performance, they have concluded that there is a positive correlation between the two (Ma & Liu, 2023). This paper studies the critical role of digital technology, a form of low-carbon economic transformation, in the development of the sports industry and finds that the digital low-carbon economic transformation can help realize the value appreciation of the sports industry and improve the overall development level of the sports industry (Wang & Shen, 2022). This paper reviews the development of Northwest China in the past 70 years, reveals the impact of low-carbon economic transformation on the development performance of industrial enterprises, and puts forward suggestions for the low-carbon economic transformation of industrial enterprises, that is, starting from three aspects: energy structure, technological innovation, and industrial structure (Fred, 2010; Susel, 2021).

Research methods for green innovation: At present, the academic estimation of the green and low-carbon development level of the manufacturing industry is mainly based on the perspectives of green technology innovation, ecological environment, social life, economic development, energy consumption and emissions, and environmental regulation (Gloria, 2010). The measurement system of low-carbon development level of the manufacturing industry was constructed from the three dimensions of economy, policy and environment, and the low-carbon economic development level of the manufacturing industry in 30 provinces and cities in China was evaluated by the entropy weight method, principal component analysis, and grey correlation projection method, and on this basis, the combined evaluation model was used to study the low-carbon economic development level of the manufacturing industry in each region. From the three perspectives of green development, economic performance and social responsibility, a combination of green growth, green product market share, green technology, an Evaluation system for green governance and other indicators of manufacturing green development (Wang, 2008; Hu, 2012).

- ***Influencing Indicators of Enterprises' Green Development Performance***

There is no clear definition of the concept of green development, but the impact indicators of green development performance are proposed.

Governance capacity indicators: The concept of green development was first expounded in the article "Research on China's Green Development in the 21st Century", the continuity of natural capital, such as water resources, forests and minerals is the basis of green development, and the capital created by humans is used to replace natural and environmental capital to the greatest extent, optimize the use of natural resources, and achieve economic growth with the lowest material consumption and energy consumption, so the environmental governance capacity index (X) is proposed. Green development is to realize the harmonious coexistence of man and nature, the rise of the value of green assets, and the improvement of green development welfare, and to achieve the harmonious unity of economic, social and ecological environment development through green ecological practices within a reasonable range of the ecological environment and natural resources. It is believed that localized manufacturing, supply and operation, fair allocation of resources and protection of the

ecological environment are the core criteria for green development and that the governance capability indicators (X1) should include environmental report disclosure (X11), social responsibility (X12), and environmental protection technology (X13).

Corporate profits: At the beginning of the 19th century, enterprises had the characteristics of small production scale, single production product structure, conservative management mode, etc (Feng, 2021). Enterprises are mainly through cost saving, reducing resource consumption, improving labor productivity, and other ways to achieve profits to ensure that the production and operation activities of enterprises can be carried out usually, and the performance evaluation of managers for enterprise development is to calculate the profitability of enterprises, so it is necessary to consider corporate profits (X2). At the end of the 20th century, the flow of capital, manpower, technology, and other resources brought about by economic globalization on a global scale required that the performance evaluation of enterprises should not only reflect financial benefits. Non-financial content, such as innovative technology, human resources, and green and low-carbon economic transformation strategies, requires enterprises to transform the traditional performance evaluation model, overcome the internal problems caused by traditional performance evaluation, and enhance the core competitiveness of enterprises, especially multinational enterprises, so it is necessary to consider the production competitiveness of enterprises (X21). In the pyramid, enterprise performance evaluation is guided by corporate strategy, subdivides strategic objectives from top to bottom and combines the financial indicators of enterprises with non-financial indicators, considering the achievement rate of corporate goals (X22). Performance evaluation provides a new theoretical basis for providing comprehensive performance evaluation of enterprises. In 1992, Robert and David proposed the balanced scorecard, which made up for the lag of traditional financial performance evaluation, which easily conveyed wrong information about the innovation and development of enterprises, and adapted to the needs of sustainable development of enterprises. This performance evaluation method is a relatively complete performance evaluation method from the four dimensions of finance, consumer, innovation and learning, and internal business, so it is necessary to build a profit evaluation system (X23). In order to address the deficiencies in the management structure, model, and approach of enterprise performance evaluation, Anderson Consulting Management created the Performance Prism. Through the performance prism, companies can clearly understand the needs of stakeholders, manage these needs, and take corresponding measures, so it is necessary to build profit guarantee measures (X23).

Supervision of enterprise performance: The research on the green development of enterprises is mainly carried out from three aspects: the construction of performance evaluation system, the external environment and internal governance, but there is a lack of supervision. Conducted a performance evaluation study on 13 cities and prefectures in Hunan Province from the five levels of economic structure, scientific and technological innovation, resource conservation, environmental friendliness and social harmony, and found that in the absence of supervision, the deviation of enterprise performance is large, so they proposed enterprise performance supervision (X3). A multi-criteria decision analysis method is used to quantify enterprises' economic, social and environmental performance measures, and to include evaluation indicators related to

environmental protection and social responsibility when using comprehensive evaluation and supervision of enterprise performance. So that enterprises take sustainable development as their business goal, so government supervision is proposed (X31). an evaluation system for enterprise green development is constructed. In view of the impact of the external policy environment on the green development of enterprises, government supervision needs to be refined and integrated with social supervision (X32). It was found that the combined effect of media attention and environmental regulation led to an improvement in corporate behavior in environmental protection. There are still many scholars who have studied the impact of environmental regulation on the green development of enterprises, but more social supervision needs to be introduced. Based on the data of listed coal companies, it is found that the command-and-control regulation in China's environmental regulation positively impacts the investment of coal enterprises in ecological protection. The impact of the internal governance mechanism on the green development of enterprises mainly includes the characteristics of the company, the type of CEO, and the characteristics of the senior management team.

The following indicators are summarized in Table 1 based on the above analysis.

Table 1. Summary of environmental evaluation indicators for green innovation

variable	Level 1 indicators	Secondary indicators	remark
argument	Environmental Governance Capability (X)	Environmental Report Disclosure (X11)	Whether or not to disclose
		Social Responsibility (X12)	Whether to play social responsibility
		Environmental Technology (X13)	Whether or not environmentally friendly technologies are used
	Corporate Profit (X2)	Production Competitiveness (X21)	Ranking in the same period and in the same industry
		Goal Achievement Rate (X22)	The ratio of the target to the actual outcome
		Profit Evaluation System (X23)	The ratio of capital input to output
	Enterprise Performance Monitoring (X3)	Government Oversight (X31)	Whether or not there is government supervision
		Social Supervision (X32)	Whether it is social supervision
Dependent variable	Business Performance (Y)		The rate at which the indicator meets the criteria for evaluating the performance of the enterprise
Control variables	Environmental Strategy (B)		Whether the environmental strategy is implemented
	Inputs (C)		Whether to invest in green innovation

Empirical Analysis of Firm Performance

Data Sources

Taking the new A-share listed companies in 2020~2023 as the research object, after excluding the companies mentioned above in ST and PT, 1524 samples were obtained, and 72 samples were taken as an example for regression analysis. The data comes from the Guotaian database and the company's annual report. The software used is Excel version 2023, and SPSS version 20.0.

- **Reliability and Validity Analysis of Indicators**

The validity and reliability of the performance indicators were tested, and the results are shown in Table 2

Table 2. Reliability and validity analysis of indicators

Direction of analysis	Variable	Quantity	Check the content	
Reliability	argument	8	Cranach's Alpha	0.855
	Control variables	2		0.726
Validity	Bartlett's Test of Sphericity	df	0.73	
		Say.	0.023	
	Approx.Chi-Square		23.522	
	Kaiser-Meyer-Olk in Measure of Sampling Adequacy		0.85	

From the contents of Table 2, it can be seen that $Sg.<0.05$ indicates that the indicators are independent of each other. Chi-Square is 23.522, indicating low similarity, Bartlett's Test of Sphericity is 0.73, and Kaiser-Meyer-Olk in Measure of Sampling Adequacy is 0.85, indicating good validity. The Cranach's alpha of the independent variable was 0.855 and the control variable was 0.726, both of which were more significant than 0.7, indicating good reliability. On the whole, the reliability and validity of the indicators were greater than 0.7, and the credibility and validity of the indicators met the requirements.

- **Explanatory Analysis of Indicators**

In order to perform a better analysis, it is necessary to calculate the explanatory nature of the indicators, and the results are shown in Table 3.

Table 3. Explanatory analysis of the indicators

Variable	Index	Load value	Eigenvalue	Ability to interpret	
argument	Environmental Report Disclosure (X11)	0.422	0.524	42.5%	
	Social Responsibility (X12)	0.725			
	Environmental Technology (X13)	0.625			
	Control variables	Production Competitiveness (X21)	0.452	0.424	45.6%
		Goal Achievement Rate (X22)	0.622		
		Profit Evaluation System (X23)	0.524		
		Government Oversight (X31)	0.722		
Control variables	Social Supervision (X32)	0.635	0.436	52.3%	
	Environmental Strategy (B)	0.452			
Control variables	Input (C)	0.536	0.462	65.3%	

From the explanatory results of the indicators in Table 2, it can be seen that the explanatory value of the independent variables is more than 50%, and the eigenvalues are more than 40%, which meets the explanatory requirements as a whole.

The final regression model is constructed based on the above analysis, as shown in Equation (1).

$$\begin{cases} Y = \beta_0 + \beta_1 X_{11} + \beta_2 X_{12} + \dots + \beta_3 X_{32} + B \\ Y = \beta_0 + \beta_1 X_{11} + \beta_2 X_{12} + \dots + \beta_3 X_{32} + C \end{cases} \quad (1)$$

Empirical Analysis Results

- **Analysis of Variance of Environmental Indicators and Enterprise Performance Indicators of Green Innovation**

The data were descriptively analyzed for 72 samples, and the results are shown in Table 4.

Table 4. Description of the sample data

index	Number of samples	average value	minimum	maximum	standard deviation
Environmental Report Disclosure (X11)	72	84.77	80.32	89.21	4.44
Social Responsibility (X12)	72	74.32	70.32	78.32	4.00
Environmental Technology (X13)	72	54.64	50.32	58.95	4.32
Production Competitiveness (X21)	72	73.32	70.32	76.32	3.00
Goal Achievement Rate (X22)	72	63.82	60.32	67.32	3.50
Profit Evaluation System (X23)	72	75.36	70.36	80.36	5.00
Government Oversight (X31)	72	54.49	50.36	58.62	4.13
Social Supervision (X32)	72	71.33	68.33	74.32	2.99
Environmental Strategy (B)	72	61.34	58.32	64.36	3.02
Input (C)	72	76.34	72.32	80.36	4.02

From the data analysis results in Table 2, it can be seen that the disclosure rate of environmental report is 84.77, the social responsibility rate is 74.32, the profit system is 75.36, the input rate is 76.34, and the production competitiveness is 73.32%, all of which are higher than 70%, while the international requirement is 80%. The values for government supervision, environmental protection technology, and environmental strategy were 54.49, 54.64, and 58.32, all below 60 percent, while the international requirement was 80 percent. Therefore, the implementation effect of environmental assessment of green innovation is poor, and the performance of enterprises is also at a low level.

• *Correlation between Green Innovation Indicators and Firm Performance*

Based on the above indicators, the correlation between green innovation indicators and enterprise performance is analyzed, and the specific results are shown in Table 5.

Table 5. Correlation analysis between green innovation indicators and firm performance

	X11	X12	X13	X21	X22	X23	X31	X32	B	C
X11	1	-	-	-	-	-	-	-	-	-
X12	0.523	1	-	-	-	-	-	-	-	-
X13	0.725**	0.531	1	-	-	-	-	-	-	-
X21	0.582	0.521	0.623	1	-	-	-	-	-	-
X22	0.822	0.362	0.252	0.869	1	-	-	-	-	-
X23	0.752	0.362	0.821**	0.752	0.721	1	-	-	-	-
X31	0.852	0.425	0.523	0.652	0.365	0.752*	1	-	-	-
X32	0.853*	0.639**	0.631	0.754**	0.852	0.465	0.852	1	-	-
B	0.632	0.852	0.852	0.632	0.524	0.725	0.752*	0.952*	1	-
C	0.852	0.725	0.575	0.521	0.985**	0.632	0.369	0.852	0.752	1
R2 adjust=0.235, R2=0.125, 误差=0.024										

Note: ** represents significant differences, and * represents differences.

From the data in Table 5, it can be seen that social supervision (X32), government supervision (X31), environmental report disclosure (X11), profit evaluation system (X23), production competitiveness (X21), Environmental technology (X13) and investment (C) are the main influencing indicators, and the degree of enterprise performance has a significant impact. Profit evaluation system (X23), environmental protection technology (X13) and input (C) are the main influencing indicators, and the reason is that enterprises try their best to achieve the maximum effect of investment return under the condition of environmental protection constraints. For each type, the way of internal management is also different. Production competitiveness (X21) greatly impacts enterprises' market share and helps enterprises pursue the maximum effect of profits. At present, the evaluation of innovation efficiency carried out by a single or market, the competitive strategy formulated between various enterprises will directly affect the development position of enterprises in the market, so the competitiveness of enterprises in profitability and social responsibility will also become a favorable competitive advantage of enterprises. The disclosure of environmental reports (X11) will directly affect the content of many aspects such as business output value, cost control, quality requirements, etc., and even affect the degree of completion of the company's business objectives. After the green environmental protection standards of the enterprise are determined, there must be certain environmental report disclosures to ensure the achievement of strategic goals.

Suggestions and Countermeasures on the Impact of Environmental Assessment of Green Innovation on Enterprise Performance

Improve the Corporate Social Responsibility and Environmental Information Disclosure System

The social responsibility and environmental information published by enterprises is an information source for evaluating the green development performance of enterprises, and its authenticity and reliability are directly related to the evaluation results. Currently, most of the social responsibility reports of domestic enterprises serve to promote enterprises, and efforts are made to publicize positive phenomena. Little negative news is disclosed, and its authenticity is difficult to supervise. Therefore, the disclosure procedures, content, and methods of corporate social responsibility and environmental information should be strictly regulated, the audit supervision of corporate social responsibility reports should be strengthened, and the audit unit should issue an audit opinion on the corporate social responsibility report. At the same time, it is necessary to improve the institutional system of enterprise environmental audit, strengthen the audit of key and important information such as pollutant emissions, and ensure that the source of information on the evaluation of green development performance of enterprises is true and reliable. At present, the evaluation of enterprise economic performance has matured and even derived various evaluation methods. However, compared with economic performance, the evaluation of social performance and ecological environmental performance is much inferior, and there are still deficiencies in many aspects. For example, the evaluation is too subjective, there is no specific evaluation standard, and the workforce must be spent to collect specific data. However, there is still a large gap between reality and data. The author believes that, to a large extent, the disclosure of corporate social responsibility and environmental responsibility information is too broad and has not been systematically confirmed, recorded, measured, and reported to form a specific and accurate report, resulting in incomplete, non-standard and even complex implementation of social responsibility and environmental responsibility assessment and evaluation. Therefore, it is necessary to establish a social responsibility accounting system and an environmental accounting system to confirm and report the expenses and income generated by enterprises due to social responsibility, the expenses and income generated by enterprises due to the protection of natural resources, corporate social responsibility investment and natural resource assets, etc., and form a complete set of "confirmation → records → measurement → reporting → assessment and evaluation" system, to provide reliable data support and information sources for the social performance and ecological environment performance of enterprises, and strengthen the supervision and evaluation of corporate social responsibility and environmental responsibility.

Establish Environmental Assessment Standards for Green Innovation

China has only established cleaner production standards for industries with serious pollution problems such as steel and cement, and has more detailed evaluation standards. However, the evaluation standards of the whole industry have not yet been fully established, which has caused certain difficulties in the implementation of enterprises' green development performance evaluation system. At the same time, various industries' social

responsibility performance evaluation standards have not yet been established. Without evaluation standards, performance evaluation can only be based on experts' subjective judgment, which reduces the fairness and credibility of the evaluation effect. Relevant departments shall, following the severity of industry pollution and the lack of social responsibility of each industry, combined with the principle of cost-effectiveness, formulate and enforce all kinds of green, low-carbon, energy-saving, emission reduction, environmental protection technical standards and labeling systems, improve the cleaner production standards of each industry, and establish the evaluation standards for the ecological environment performance and social performance of each industry in turn, so as to provide a basis for the evaluation of the green development performance of enterprises in various industries. However, when enterprises, governments, and societies protect the environment, their respective functions are inherently limited due to their different ideologies, actions, and functions. For example, enterprises may deceive when protecting the environment because of the selfishness and profit-seeking nature of enterprises. Although the government has more extraordinary powers, due to the conflict between ecological civilization construction and economic construction, it may "turn a blind eye" to some environmental pollution problems or even sit idly by based on its interests. The public may struggle with environmental pollution for their benefit, but their struggle is often defeated because of their lack of strength and the imperfection of the democratic system. Therefore, the green development of enterprises cannot only rely on the supervision of the enterprises themselves, the government, or any social party but requires the cooperation of enterprises, society, and the government. That is, in addition to strengthening the application of the enterprise green development performance evaluation system within the enterprise, it is also necessary to fully mobilize the external government and social forces of the enterprise and give full play to the advantages of the government, citizens and social organizations in terms of ideology and function. Through the concerted efforts of enterprises, society, and the government, the ideological awareness, action ability, and functional positioning of each are coordinated and unified to achieve the highest efficiency and maximum benefit of green development and finally realize the synergistic improvement of economic, social, and ecological environmental benefits.

Construct a Rational Competition Strategy for the Green Development of Enterprises

Currently, China's state-owned enterprises are mainly divided into competitive enterprises and public welfare enterprises, and there are significant differences between these two types of enterprises in terms of corporate goals, social responsibilities, and organizational strategies. Performance indicators play the role of the strategic baton of the organization, and the essential criterion for judging whether the performance indicators are reasonable is to measure whether they reflect the strategic intent and orientation of the organization. Therefore, when setting green development performance evaluation indicators for enterprises with different natures and different strategic orientations, they should set them differently according to the strategic intentions of each enterprise. Otherwise, the conclusion of the performance evaluation may deviate from the enterprise goals. Public welfare enterprises (such as water conservancy, power generation, and other industries) take protecting people's livelihood and assuming social responsibility as their primary mission. The importance of profit goals is less than the importance of their goal of ensuring people's livelihood. However, competitive enterprises

mainly aim at profit, taking corporate profitability, asset preservation, and appreciation as their primary mission, so they should pay more attention to business performance when evaluating their green development performance. It can be seen that the two types of enterprises should fully consider the characteristics of the industry when selecting indicators and assigning index weights and establish their own index evaluation systems to ensure that the green development performance evaluation systems of different types of enterprises can serve enterprise development, social progress and environmental protection. Scientifically formulate strategic planning for core competitiveness. Core competitiveness is the basic condition to ensure the long-term sustainable development of enterprises, so in the formulation of long-term strategies in enterprises, core competitiveness is an indispensable factor to be considered. Therefore, when formulating long-term strategic planning, enterprises should analyze the opportunities and challenges that enterprises will face in future market development in combination with their act advantages and disadvantages at the same time, they should flexibly adjust the strategic planning according to the actual situation in the development.

Increase Technical Investment in Environmental Protection

In integrating and managing citizen satisfaction information, the level of enterprise environmental evaluation needs to be maintained at the forefront level, and if it cannot provide skilled and advanced professional analysis technology, its comprehensive competitiveness will lag far behind other economic enterprises. Theoretical research and practice are carried out from the perspective of visual practicality, psychology, ecology, sociology and aesthetics, and the development and planning of the ecological environment in enterprise development are mainly discussed around the health of residents. The protection of the environment, the provision of cultural, educational and recreational places, and the practical functions of the environment have become the focus. Therefore, this process also accompanies environmental development, and it is slowly developing into an industry. From an environmental point of view, environmental construction is the same as the construction industry, and both belong to one of the material operating sectors of the national economy. Suppose the environment is combined with other industries. In that case, it can further exert its advantages, which is more conducive to the diversified development of the enterprise, create greater economic benefits for the enterprise, and increase the added value of its products. Because environmental development has the characteristics of not being replaced by other industries, environmental development is also one of the important parts of the national economy, thus forming an "environmental effect". Environmental value and environmental accounting is a new topic of environmental science. China is currently researching "assessment and measurement of environmental development benefits", and has evaluated environmental benefits and the measurement of development value in some areas. In the green development performance evaluation system, the introduction of information technology can also make the green development performance evaluation of enterprises more efficient: for economic performance indicators, the existing accounting information system of enterprises can be used to calculate and evaluate economic performance indicators in real time; For social performance indicators, real-time evaluations of different stakeholders are accepted through online response channels, and the evaluation values of social performance evaluation indicators are calculated. For the ecological environment performance

indicators, the modern automatic monitoring equipment is used to automatically generate pollution source data and energy consumption data and input them into the computer, and the membership degree of the evaluation grade is calculated through the pre-input evaluation standard value and the membership function of the pre-set evaluation index. This can avoid the lag of the current enterprise performance evaluation, which is significant for the timeliness and effectiveness of evaluation and supervision. It can also avoid over-reliance on expert evaluation and the subjectivity brought about by expert evaluation, reduce the consumption of human and financial resources, and make the results more fair. Of course, this all depends on establishing evaluation criteria and informatization.

Enhance the Supervision of the Government and Society

The purpose of evaluating the green development performance of enterprises is to improve the economic, social and ecological environment performance of enterprises, and performance evaluation is of great significance for determining the development direction of enterprises and achieving enterprise goals. Therefore, the green development performance evaluation system of enterprises should be applied to the internal supervision, government supervision and social supervision of enterprises at the same time: first, as the main body of the market, enterprises need to pay attention to environmental protection and social responsibility in order to obtain benefits and maintain reputation; By observing the value of the green development performance indicators of enterprises, enterprises can find out the deficiencies in their operation and management, so as to adjust their management methods and operation strategies and achieve internal supervision of enterprises. Second, by focusing on whether the production and operation of enterprises comply with policies, laws, regulations and standards, the government can strengthen the supervision of enterprises according to the values of the green development performance indicators of enterprises, require rectification of the deficiencies of enterprises, and strengthen the performance of government responsibilities. Finally, citizens and social organizations will pay attention to enterprises' environmental protection and social responsibility out of their own interests. Citizens and social organizations supervise the performance indicators of green development of enterprises, which is conducive to enhancing the enthusiasm and initiative of the public and supervising the performance of social and environmental responsibilities of enterprises. It can be seen that the evaluation results of the green development performance of enterprises should be disclosed to the management of enterprises, relevant government departments, citizens and social organizations, and accept the supervision of the three. The three should give full play to their respective advantages, jointly supervise the green development performance of enterprises, and ultimately achieve the improvement of green development performance of enterprises. To sum up, the green development performance evaluation system of enterprises can only actively play the role of green development and green governance of enterprises by establishing a green development performance evaluation system for competitive and public welfare enterprises under the protection of a sound social responsibility accounting system, environmental accounting system, relevant audit system and evaluation standards.

Conclusion

In this paper, 1524 samples were obtained after excluding ST and PT companies, and 72 samples were taken as an example for regression analysis. The results showed that social supervision (X32), government supervision (X31), environmental report disclosure (X11), profit evaluation system (X23), production competitiveness (X21), Environmental Technology (X13) and input (C) are the main influencing indicators and have a significant impact on firm performance. This is mainly due to poor environmental technology, low upfront investment, and insufficient disclosure of environmental reports. To this end, it is necessary to improve the evaluation system and standards of the green innovation environment, enhance the competitiveness of enterprises, encourage the participation of the government and society, increase investment in technology, and tap the development potential of enterprise performance. Enterprises, governments, and the public should take active action to establish relevant systems from the main to the secondary gradually, the first easy and then the difficult, and from the point to the surface, and apply relevant technologies and methods to the practice of green performance evaluation, so as to promote the effectiveness of the green development performance evaluation system of enterprises. There are some shortcomings in this study, which are mainly reflected in the difficulty of processing research data and the access to environmental report disclosure, and the collection of relevant data will be focused on in the future to improve the accuracy of the analysis of the results.

Author Contributions

All Authors contributed equally.

Conflict of Interest

The authors declared that no conflict of interest.

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