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Green Development: Balancing Corporate Economic Interests and Ecological Environmental Protection Responsibilities

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Abstract

Due to the stricter resource and environmental limitations, it is crucial for enterprises to undertake effective ecological environmental protection duties at the same time as seeking economic benefits. This topic has become an important issue in the study of sustainable business. By applying the theories of natural capital, corporate social responsibility (CSR) and green innovation strategy as the theoretical basis, this paper comprehensively reviews the research achievements in the field of corporate environmental responsibility and constructs a three-dimensional integrated analytical framework of "motivation-capability-context". The results are as follows: (1) The theory of natural capital modifies the traditional idea that ecological environment is an external factor of economic development, offering a scientific basis for corporate environmental strategies; (2) There is a significant positive interactive effect between ESG performance and green technological innovation, where R&D investment and information disclosure play a key role as the transmission channels; (3) The interaction between regulatory pressures, stakeholder's expectations from the market and internal corporate abilities jointly influences the environmental responsibility behaviour and decisions of enterprises. According to the above analytical framework, some policy suggestions such as improving environmental information disclosure regulations, strengthening green financial incentive systems and promoting the cooperative management of green supply chains have been put forward. These proposals provide theoretical basis and practical references for helping enterprises to achieve their green transformation.

Keywords

Green Development; Corporate Economic Interests; Ecological Environmental Protection Responsibilities; Sustainable Development.

1. Introduction

1.1. Research Background and Significance

1.1.1. Research Background

Due to the rapid industrialization and the increasing world population, problems like resource shortage, environmental contamination and ecological destruction have become more and more serious. The present pattern of economic development which is mainly characterized by large-scale consumption of resources and environmental deterioration is insufficient to meet the requirements of sustainable development. Therefore, green development, as a new approach of development, has received considerable concern from the international society. Green development means a kind of growth way which takes into account both the environmental protection and the rational use of renewable resources together with the economic progress, so as to achieve a harmonious development in economic, social and environmental fields. The promotion of this idea not only indicates a thorough reconsideration and surpassing of the traditional economic development method, but also shows a positive reaction to the global environmental issues. In the present situation where climate changes and limited resources are becoming more evident, enterprises, as the main promoters of economic growth, are facing a growing difficulty in balancing their economic benefits with their environmental and resource protection duties. On the one hand, enterprises need to gain economic returns to guarantee their existence and development; on the other hand, they are expected to shoulder the responsibility of protecting the environment to reduce the adverse effects on the environment and reach a sustainable development.

1.1.2. Research Significance

1.1.2.1 Theoretical Significance

This research enhances the knowledge of the green development idea and defines the main position and duties of enterprises in green development. Through a thorough investigation into the relationship between corporate economic benefits and ecological environmental protection obligations, it can offer theoretical assistance for enterprises to establish green development policies and broaden the theoretical basis of sustainable development.

1.1.2.2 Practical Significance

(1) Promoting corporate sustainable growth: This investigation will offer feasible methods for companies to reconcile economic benefits with their ecological responsibility, enabling them to accomplish green conversion, improve competitiveness and achieve sustainable development.

(2) Investing in green technological advancement: Study of technological innovation in conjunction with green development can encourage enterprise innovative potential, facilitate the R&D and implementation of green technologies, enhance the utilization of resources and decrease environmental pollution.

(3) By investigating the effect of green consumption on enterprise development, this research can help consumers to adopt green consumption ideas, promote the establishment and growth of green consumption markets, and supply market demands for green development.

(4) Facilitating policy formulation and adjustment: This research will offer a scientific foundation for governments to formulate and improve green development policies, encourage governments to enhance support for corporate green development, and foster a policy environment conducive to green development.

1.1.3. Social Significance

Green development not only affects the economic benefits of enterprises and their environmental and ecological protection responsibilities, but also influences the overall interests of society and the future development. By promoting green development, the pollution of the environment and the degradation of ecology can be decreased, the living conditions of the public can be enhanced, and social harmony and peace can be encouraged. Furthermore, green development is beneficial to the global environmental management and assists in dealing with climate changes and resource crises. Therefore, the research on "Green Development: Coordinating Corporate Economic Benefits and Environmental and Ecological Protection Responsibilities" has great theoretical, practical and social significance. Through a thorough investigation of this problem, the study can offer strong assistance to enterprises to achieve green development and promote sustainable economic and social advancement.

1.2. Research Objectives and Questions Proposed

1.2.1. Research Objectives

In the background of global climate change and rising resource limitations, green development has become an important approach for corporate sustainability. This investigation intends to examine how companies, based on the idea of green development, can successfully perform

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their ecological and environmental protection duties while seeking economic benefits, thereby reaching a coordination between them.

(1) Theoretical investigation: By carrying out a comprehensive review and analysis of green development theory, corporate social responsibility theory and related theoretical structures, we can define the main roles and responsibilities of enterprises in green development, thus offering theoretical basis for the subsequent empirical study.

(2) Analysis of present situation: By conducting on-site surveys and case analyses, investigate the current business approaches towards green development, such as green technological progress, green supply chain administration and green advertising, and also the problems and obstacles that companies encounter in achieving a compromise between economic benefits and environmental protection duties.

(3) Strategy formulation: According to theoretical study and current situation investigation, establish a strategic structure for enterprises to promote green progress and coordinate economic benefits with ecological and environmental protection duties, providing specific practical advice for enterprises.

(4) Based on research results, suggest policy recommendations to encourage corporate green advancement and the coordination of economic benefits with environmental conservation duties, as a guide for governments to make and enhance corresponding policies.

(5) Social impact assessment: Investigate the social, economic and environmental effects of corporate green development and investigate the possible impacts of green development on corporate competitiveness, consumer actions and market organization, thereby providing empirical support for the social implications of green development.

1.2.2. Questions Proposed

With the worsening of global environmental issues, green development has become a topic attracting attention from the international society. But when enterprises aim at economic benefits, they usually cannot reconcile their interests with the duties of protecting the ecology and environment. This situation is particularly evident in the following points:

First, the contradiction between economic benefits and environmental protection. Enterprises often encounter environmental problems like resource exhaustion and pollution in their economic activities. It is the main problem to coordinate economic benefits with environmental protection for corporate green development.

Furthermore, the conflict between green technological progress and cost reduction. Green technological progress is one of the ways to promote the green development of the company, but it usually involves high research and development as well as production expenses. It is now a new problem for the green development of the company to carry out green technological progress and utilization while maintaining the quality of the products and economic advantages.

Furthermore, the problems in green supply chain management. Enterprises need to take into account the environmental factors at each stage, from purchasing to manufacturing and selling, which make greater demands on supply chain management. Now, how to accomplish the green supply chain management objectives while maintaining the stability and efficiency of the supply chain, is also a new challenge for the corporate green development.

Furthermore, the difficulties in green marketing and consumer consciousness. Green marketing is an important means for companies to sell green products and establish a green reputation, but the awareness and acceptance of green products differ among consumers. It is a considerable problem to increase the consumer's awareness of green consumption and to market green products effectively, leading to sales growth, during the company's green development.

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This research is intended to investigate, based on the idea of green development, how enterprises can carry out their ecological and environmental protection duties effectively while seeking economic benefits, in order to reach a coordination between them. By means of theoretical study and practical investigation, this research aims to present a clear strategic approach and policy suggestions for corporate green development, give guidance for the formulation and improvement of government policies, and supply empirical evidence for the social effects of green development.

2. Theoretical Foundations of Corporate Economic Interests and Ecological Environmental Protection

2.1. The Connotation of Sustainable Development Theory

The connotation of sustainable development theory is multidimensional and interdisciplinary, encompassing three core domains—economic, social, and environmental—with the aim of achieving long-term prosperity for both humanity and the planet. The main connotations of sustainable development theory are as follows:

2.2. Corporate Social Responsibility (CSR) Theory

Corporate Social Responsibility (CSR) theory encompasses a broad range of issues, requiring enterprises to focus on and assume responsibilities toward employees, consumers, communities, the environment, and wider societal stakeholders while pursuing economic interests. The following is a detailed elaboration of CSR theory.

2.2.1. Definition and Connotation

Corporate Social Responsibility refers to the obligation of enterprises, beyond pursuing economic interests, to actively assume responsibilities toward employees, consumers, communities, and the environment in their business operations. This theory stresses that enterprises need to incorporate social responsibility into their business plans and everyday activities for achieving sustainable development in economic, social and environmental aspects.

2.2.2. Evolution and Development

The concept of corporate social responsibility was originally put forward by developed Western countries and has been developed continuously. In the present sense, the theory of CSR started to appear in the middle to late 18th century after the first Industrial Revolution in Britain; but at that period, the idea of social responsibility was limited to the personal morality of the business managers. With the progress of globalisation and the market economy, CSR has gradually become an important matter which enterprises should pay attention to. Recently, more and more enterprises have realized and carried out CSR, considering it as a significant way to improve their competitiveness and reputation in society.

2.2.3. Main Components

Corporate social responsibility theory includes various aspects, as follows:

(1) Economic responsibility: As basic components of the socio-economic system, enterprises mainly have the duty to generate economic value and wealth. This involves enhancing production efficiency, lowering costs, increasing profits by means of innovation and effective operation, and supplying high-quality products and services to the public.

(2) Enterprises should carry out their commercial operations according to the legal requirements, observe the relevant laws and regulations and maintain fair competition in the market. Besides, enterprises are required to pay their taxes and participate in the social and economic development.

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Table 1. Sustainable Development Theory

Connotation	Description
Common Development	Sustainable development pursues holistic and coordinated development, i.e., common development. The Earth is a complex mega-system, in which every country or region is an indivisible subsystem that is interconnected with and exerts influence on others.
Coordinated Development	Coordinated development includes the overall coordination among the three major systems—economy, society, and environment—as well as coordination across the three spatial levels of the world, the nation, and the locality, and also coordination among the economy, population, resources, environment, society, and various social strata within a country or region.
Equitable Development	Equity in sustainable development encompasses two dimensions: first, intergenerational equity—the development of the present generation must not come at the expense of the development capacity of future generations; second, spatial equity—the development of one country or region must not undermine the development capacity of other countries or regions.
Efficient Development	Equity and efficiency are the two wheels of sustainable development. The efficiency of sustainable development includes not only economic efficiency but also the gains and losses of natural resources and the environment.
Multidimensional Development	Human social development exhibits a trend toward globalization; however, different countries and regions are at different levels of development and possess heterogeneous backgrounds in terms of culture, institutions, geographical conditions, and the international environment. Therefore, sustainable development inherently encompasses the choice of diversity and multi-patterned multidimensional pathways.
Principle of Sustainability	Human economic and social development must not exceed the carrying capacity of resources and the environment. The most fundamental limiting factor is the material foundation upon which human survival depends—natural resources and the environment.
Principle of Commonality	Although the models of sustainable development vary across countries, the principles of equity and sustainability are shared. The integrality and interdependence of the Earth determine that the global community must unite and recognize our common home.
Highlighting the Theme of Development	Development is fundamentally distinct from economic growth. Development is an integrated phenomenon encompassing multiple factors including society, science and technology, culture, and the environment; it is a common and universal right of all humanity.
Sustainability of Development	Human economic and social development must not exceed the carrying capacity of resources and the environment.
Equity in Human Relations	The present generation, in its development and consumption, should strive to ensure that future generations have equal opportunities for development. The development of one segment of the same generation should not harm the interests of another.
Harmonious Coexistence Between Humanity and Nature	Humanity must establish new moral concepts and value standards, learning to respect, follow, and protect nature, and to coexist harmoniously with it.

(3) Ethical Responsibility: While pursuing economic interests, enterprises must adhere to business ethics and moral standards, respecting human rights, ensuring equal employment opportunities, protecting consumer rights, and opposing unfair competition. Furthermore, companies need to consider public welfare issues, take an active part in social beneficial activities and contribute to society.

(4) During production, enterprises should give priority to environmental protection and sustainable development. This involves energy saving and reducing emissions, decreasing pollution outputs, encouraging the circular economy, and advancing green technologies and products. Moreover, they should actively participate in the global climate action to help achieve the global goal of carbon neutrality.

3. Natural Capital Theory and Corporate Environmental Responsibility: Theoretical Foundations and Research Progress

3.1. The Connotation and Practical Application of Natural Capital Theory

The concept of natural capital was firstly presented by environmental economists Pearce and Turner (1990) and then further established as a thorough theoretical system by Costanza and Daly (1992). This idea considers natural ecosystems as renewable resources which can provide steady flows of goods and services, completely changing the traditional concept of the ecological environment as an economic growth externality. Daily (1997) introduced the notion of ecosystem services, dividing them into four main categories: provisioning, regulating, supporting and cultural services. In the report entitled "The Economics of Biodiversity" issued by the UK Treasury, Dasgupta (2021) systematically explained the approaches to include natural capital in economic decisions. On the practical side, the TEEB project conducted by UNEP and the TNFD (2023) framework has encouraged the implementation of natural capital accounting in corporate decisions. The World Economic Forum (2020) pointed out that about half of the world's GDP is influenced to some extent or directly by natural capital, and the natural risks faced by enterprises have become a crucial factor in financial risks at the system level. The natural capital theory serves as a theoretical basis for enterprises to regard environmental responsibility not only as an external mandatory rule but also as an essential strategic aspect.

3.2. Corporate Environmental Responsibility and Financial Performance: Empirical Research Progress

In recent years, the connection between corporate environmental accountability and economic efficiency has become an important subject in sustainable business studies. Casciello et al. (2024) reported, based on panel data of 526 EU enterprises from 2012 to 2022, that green innovation is negatively correlated with accounting-based financial performance but positively correlated with market-based financial performance, with R&D investment and ESG disclosure respectively serving as mediating mechanisms. Long et al. (2023), using quantile regression methods, confirmed that ESG performance significantly promotes green technological innovation in enterprises. Zhao et al. (2024) revealed the dual transmission mechanism through which ESG ratings promote green innovation by alleviating financing constraints and improving internal governance. Abdullah et al. (2024), from a moderated mediation perspective, confirmed that green innovation and ESG performance positively affect stock market performance through corporate reputation. In the field of green supply chains, Choudhary and Sangwan (2022) systematically reviewed the relationships among pressure sources, practice models, and performance outcomes in green supply chain management, while Zekhnini et al. (2022) proposed an integrated lean-green-digital model. However, there is a shortage of research which combines natural capital theory, CSR theory and green innovation strategy in a unified analytical framework, providing an opportunity for the theoretical development of this paper.

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3.3. Limitations of Existing Research and the Theoretical Positioning of This Study

Based on the previous theoretical basis, this paper establishes an "intrinsic-extrinsic-environment" integrated analysis framework for corporate environmental protection. The intrinsic part includes both economic and ethical motives: the former is confirmed by Porter and Linde's (1995) "Porter Hypothesis" and Hart's (1995) resource-based theory of the firm, while the latter is based on Dasgupta's (2021) systematic description of the intergenerational value of natural resources. The extrinsic part consists of technological innovation ability and organisational management ability, and the lean-green integration model put forward by Zekhnini et al. (2022) provides an operational method for this part. The environment part covers policy regulatory impacts and market stakeholder influences, and the empirical research by Casciello et al. (2024) shows that ESG disclosure has a crucial mediating effect between green innovation and market performance. The interactional effects among the three parts are manifested as follows: policy influences stimulate the intrinsic motive by changing the cost-benefit system; the intrinsic motive induces the investment in the extrinsic ability; and the improved ability further strengthens the position of the enterprise to adapt to the policy requirements and satisfy the market demands. The theoretical contribution of this framework is to reveal the dynamic interactive process of corporate environmental protection decisions — the intrinsic motive, extrinsic ability and environment do not work alone but jointly determine the direction of corporate green behaviour through mutual promotion or mutual restriction, which is different from the current single-factor approach that studies these three elements separately.

4. An Integrative Analytical Framework for Corporate Environmental Responsibility: Motivation–Capability–Context

According to the above analytical framework, this paper puts forward the following policy suggestions. Firstly, enhance the standardization of the corporate environmental information disclosure system, by referring to the TNFD (2023) recommended framework, requiring listed companies and major enterprises to provide regular reports on the nature-related financial risks and environmental performance indexes, so as to make enterprises internalize environmental responsibility as a factor in their business decisions through the promotion of information transparency. Secondly, improve the green financial encouragement mechanisms by integrating Environmental, Social and Governance (ESG) ratings and environmental performances into the evaluation of corporate credits and government procurement criteria, and reduce the financial expenses for green transformation by means of tools such as differential interest rates, tax exemptions and green bonds (Long et al., 2023). Thirdly, promote the collaborative management of green supply chains, encouraging key enterprises to extend environmental standards to their upstream and downstream suppliers and establishing an environmental responsibility sharing mechanism covering the whole lifecycle of the products (Choudhary & Sangwan, 2022). Fourthly, foster and regulate the green consumption market by implementing eco-labelling, government procurement of green goods and consumer education, thus providing a continuous push from the market for corporate green innovations and forming a virtuous circle of "market pull-innovation driving-performance feedback".

5. Policy Implications

Synthesizing the previous studies, the existing research has some shortcomings. Firstly, though the natural capital theory offers a macro-consideration framework for the corporate environmental strategy, the relationship between this framework and the micro-level corporate decision-making processes is not clear enough, without a sufficient logical connection from "theoretical basis → behavioral mechanisms → outcome evaluation." Second, empirical studies on ESG and financial performance mostly focus on single-dimensional correlation tests, with fewer systematically examining the multidimensional driving mechanisms of corporate environmental responsibility from the interactive perspective of motivation, capability, and context. Third, existing research pays insufficient attention to the dynamic interaction effects among policy regulations, market pressures, and internal corporate capabilities, making it difficult to explain why enterprises facing similar external environments exhibit significant differences in environmental responsibility behaviors. In response to these research gaps, this paper aims to construct a "motivation–capability–context" three-dimensional integrative analytical framework, with a view to providing a comprehensive theoretical perspective for the systematic study of corporate environmental responsibility.

6. Conclusion

This paper systematically reviews the research progress in the field of corporate environmental responsibility from three theoretical dimensions—natural capital theory, CSR theory, and green innovation strategy—and constructs a three-dimensional integrative analytical framework of "motivation–capability–context." The main conclusions are as follows: First, natural capital theory fundamentally transforms the traditional view of the ecological environment as an externality of economic growth, and the advancement of international frameworks such as TNFD (2023) marks the transition of natural capital accounting from an academic concept to business practice. Second, the fulfillment of corporate environmental responsibility, through channels such as reputation enhancement, financing cost reduction, and innovation incentives, can achieve a positive synergy between economic and ecological benefits in the long term; however, the financial returns of green innovation are primarily reflected in long-term market valuation rather than short-term accounting profits. Third, contextual factors constituted by policy regulations, market pressures, and community participation exert a critical moderating effect on the motivation and capability dimensions by altering the cost-benefit structure of corporate decision-making, and this interactive mechanism is central to understanding the heterogeneity of corporate environmental behavior. The integrative analytical framework proposed in this paper offers a new analytical perspective for the formulation of corporate environmental strategies and policy design. Future research may further validate and enrich the explanatory power and applicability boundaries of this framework through large-sample quantitative testing and longitudinal multi-case studies.

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References

[1] Porter, M. E., & Van der Linde, C. (1995). Toward a new conception of the environment-competitiveness relationship. *Journal of Economic Perspectives*, 9(4), 97–118.

[2] Hart, S. L. (1995). A natural-resource-based view of the firm. *Academy of Management Review*, 20(4), 986–1014.

[3] Elkington, J. (1997). *Cannibals with forks: The triple bottom line of 21st century business*. Capstone.

[4] Costanza, R., & Daly, H. E. (1992). Natural capital and sustainable development. *Conservation Biology*, 6(1), 37–46.

[5] Daily, G. C. (Ed.). (1997). *Nature's services: Societal dependence on natural ecosystems*. Island Press.

[6] Dasgupta, P. (2021). *The economics of biodiversity: The Dasgupta review*. HM Treasury.

[7] Casciello, R., Santonastaso, R., Prisco, M., & Martino, I. (2024). Green innovation and financial performance: The role of R&D investments and ESG disclosure. *Corporate Social Responsibility and Environmental Management*, 31(6), 5372–5390.

[8] Long, H., Feng, G. F., Gong, Q., & Chang, C. P. (2023). ESG performance and green innovation: An investigation based on quantile regression. *Business Strategy and the Environment*, 32(7), 5102–5118.

[9] Zhao, M., Fu, X., Fang, G., Cui, L., & Nassani, A. A. (2024). Exploring the impact of ESG ratings on enterprises' green technology innovation. *Environment, Development and Sustainability*, 26, 12739–12762.

[10] Abdullah, N., & Hashmi, M. A. (2024). Exploring the influence of green innovation, ESG performance, and corporate reputation on stock market performance. *Environment, Development and Sustainability*, 26, 20567–20592.

[11] Xu, X., Imran, M., Ayaz, M., & Lohana, S. (2022). The mediating role of green technology innovation with CSR, firm financial, and environmental performance. *Sustainability*, 14(24), 16951.

[12] Maji, S. G., & Lohia, P. (2023). ESG performance and firm performance in India. *Society and Business Review*, 18(1), 175–194.

[13] Liu, H., & Lyu, C. (2022). Can ESG ratings stimulate corporate green innovation? Evidence from China. *Sustainability*, 14(19), 12516.

[14] Khan, U., & Liu, W. (2023). The link between green innovations, corporate performance, ESG activities, and sharing economy. *Environmental Science and Pollution Research*, 30(32), 78763–78775.

[15] Choudhary, K., & Sangwan, K. S. (2022). Green supply chain management pressures, practices and performance: A critical literature review. *Benchmarking: An International Journal*, 29(5), 1535–1570.

[16] Zekhnini, K., Cherrafi, A., Bouhaddou, I., Benabdellah, A. C., & Bag, S. (2022). A model integrating lean and green practices for viable, sustainable, and digital supply chain performance. *International Journal of Production Research*, 60(21), 6500–6528.

[17] Amjad, M. S., Rafique, M. Z., & Khan, M. A. (2022). Effects of green supply chain management practices on firm performance and sustainable development. *Environmental Science and Pollution Research*, 29, 49267–49284.

[18] TEEB. (2010). *The economics of ecosystems and biodiversity: Mainstreaming the economics of nature*. UNEP.

[19] TNFD. (2023). *Taskforce on nature-related financial disclosures: Final recommendations*. TNFD.

[20] World Economic Forum. (2020). *Nature risk rising: Why the crisis engulfing nature matters for business and the economy*. WEF.

[21] Millennium Ecosystem Assessment. (2005). *Ecosystems and human well-being: Synthesis*. Island Press.