Research on Green Technology Innovation Model and System Improvement based on Environmental Protection

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Abstract. Through the comparative studies on the green technology innovation and the traditional technological innovation and the difference analysis of environmental system improvement, this paper tries to establish environmental system improvement basic framework from the perspective of the green technology innovation model, concretely including the improvement of environmental laws and regulations system, environmental accounting system, environment technical standard system and environment economic incentive system.

1. Introduction

When environmental pollution and resource depletion become serious social problems, technology is increasingly regarded as the primary cause of pollution and environmental destruction. Only when technological innovation and environmental protection closely integrated, the implementation of green technological innovation is the fundamental way to achieve sustainable development of social economy.

2. The green technology innovation and the traditional technological innovation

2.1. The concept, content and comparison of the two models
Green technology innovation create economic interests at the same time protect the environment, it requires innovation subject to strengthen production chain, improve the process innovation and the production of waste recycling, to avoid the net consumption of resource dependent. The traditional models of technological innovation based on one-way linear basis, in the traditional technology innovation activities, human as unlimited demand, production and consumption, resulting in a depletion of resources, environmental pollution, the development of economy and society appeared unsustainable.

2.2. A comparative study on two kinds of environmental systems
In the traditional technological innovation mode, system improvement focused on the end process of environmental governance, mainly includes: collect taxes on polluters according to the harm caused by pollution, use taxes to make up gap between the private cost and social cost, tradable emission permits can contribute to the internalization of environmental externalities. Environmental system improvement based on green technology innovation, substantially reduce the pressure at the end process of environmental governance through the prevention of the links. Green technological innovation save resources and protecting the ecological environment in various stages of resources input, resource conservation, production process, product output, waste disposal.
3. The content of environmental system of green technological innovation model

3.1. Environmental laws and regulations
The development of green technology innovation can not be separated from strict environmental laws and regulations. The green technological innovation changing from idea to reality behavior should be taken environmental legislation as the guide. So this paper suggests promoting green technological innovation through environmental legislation and there are matching laws and regulations system at all levels. In these laws and regulations, it regulates incentive provisions for the environmental protection industry, the development of environment-friendly products, resource recycling and regulates different responsibilities for different subjects.

3.2. Environmental economic policy
Financial subsidies, tax policies and environmental policies are environmental economic means in the process of the green technology innovation. These measures can motivate the whole society to vigorously develop the pollution control technology, waste utilization technology, clean production technology and other environmentally sound technology and meet people’s increasing awareness of green consumption.

4. Environmental system improvement from the perspective of the green technology innovation model

4.1. Environmental system improvement framework
Through the comparative studies on the green technology innovation and the traditional technological innovation and the difference analysis of environmental system improvement, this paper tries to establish environmental system improvement basic framework from the perspective of the green technology innovation model. As shown in Figure 1.

![Figure 1. Environmental system improvement framework of the green technology innovation model](image-url)

4.2. Environmental laws and regulations system
At present, China's green technology innovation is still in its infancy, perfecting the relevant environmental laws and regulations is the important step of environmental system improvement based on green technology innovation model. This can promote the development of green technology innovation.

In recent years, China has gradually strengthened legislation related to environmental protection and control, such as the establishment of "air pollution prevention law", "solid waste pollution environmental prevention law", "water pollution environmental law", "environmental noise pollution law", etc.
prevention law" and other environmental protection laws, many environmental resource management law and administrative regulations. The environment and resources protection law system and the regulatory framework of social and economic sustainable development preliminary formed, which promote the development of green technology innovation. This paper propose that china can be gradually perfect the necessary regulations of green technology innovation, and establish specific resources and industry law. As shown in Figure 2.

4.3. Environmental accounting system
The improvement of current accounting system is not including the environment and natural resources cost. Environmental accounting system is still in the stage of research and exploration in our country. The value measurement of the environmental costs and benefits has a certain degree of difficulty. This paper suggest: promote the research and practice work on environmental accounting system step by step; unify the improvement of environmental performance and financial performance; guide enterprises to actively concern about the management behavior impacting on the environment, rational develop and utilize of resources, improve resource reuse rate, eliminate the negative impact on the environment. As shown in Figure 3.

4.4. Environment technical standard system improvement
The environmental technical standard is an important support for environment recognition. Whether use the environment harmless technology in the production process consist of an important part of ecological environment standard. Green technological innovation happens from production and sales links turn to technological links. At the same time, strengthen the research work of environmental technical standards, formulate the corresponding development strategy according to the mainstream trend of international environmental technical standards, improve the environmental standards system are the ways of environment technical standard system improvement. As shown in Figure 4.
4.5. Environment economic incentive system

The government can take the policy discount and price subsidies to environmental type enterprises and products and reduce the import tariffs to environmentally friendly equipment. Give priority to develop the environmental industry, recycling industry, environmental protection industry and green food industry to incent and guarantee the green technology innovation behavior. As shown in Figure 5.

5. Conclusion

The green technological innovation is the fundamental way to achieve sustainable development of social economy. This paper compared the green technology innovation and the traditional technological innovation, and tried to establish environmental system improvement basic framework from the perspective of the green technology innovation model, such as the improvement of environmental laws and regulations system, environmental accounting system, environment technical standard system and environment economic incentive system.

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