

Green Technology Model Based On Environmental Protection

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ABSTRACT

Serious societal issues are the primary cause of pollution, environmental deterioration and depletion of resources. Integration of green technological innovation is necessary only in tightly linked technological innovation and environmental security to ensure sustainable social economic development. Green technology advancement is an environmental economic endeavor that has a major effect on the accomplishment of self-sustaining scientific, financial, social and natural development. Green technological advancement with external impact features, complexity, specialization and commercial failure implies the appropriate system structure of green technology innovation. A secondary function, which removes uncertainties, internalizes economic externality and reduces transaction costs, is employed primarily to promote the limiting and guiding feature of development in the device. This paper presents a fundamental framework for the improvement of the environment systems, from the perspective of the green technology innovation model, including improvements in environmental legislation and law, comparison studies of innovation in green technology and traditional technological innovation.

Keywords

Decentralization, Economic, Environmental System, Green Technology, Technology Innovation.

1. INTRODUCTION

The various researchers have investigated how system development promotes green technological innovation in academic research, as well as how green technological innovation ability is created and nurtured in the academic environment. In the opinion of scientists, the most important strength in promoting technological development is not rigorous technology in and of itself, but a framework structure that encourages technological innovation. Technological innovation is a multi-stage process that starts with the invention of ideas and ends with the invention of new devices. System innovation, on the other hand, contributes to technical innovation by lowering transaction costs, establishing an incentive mechanism, and lowering the risks associated with a certain behaviour pattern. There is an examination of the structural obstacles to green technology innovation, and it is proposed that system innovation may be the key to green technology innovation success. Both of them, on the other hand, are still in their infancy. Sustainable growth, the need for green technological development systems, and the shared connection of encouragement, limitation, and direction between sophisticated analytical tools and green technology innovation are all important topics that require more investigation[1].

1.1 Progress in Green Technical Development

The advancement of economic theory has put an end to the habit of disregarding systems and relying only on technical expertise. Economists have increasingly focused their attention in recent decades on the function of system variables in the economic system. However, Marx also highlighted the importance of the interplay between technology and system, as well as the degree to which efficiency was increasing and the continuity and transformation of the decision-making system. Enoch said in his comprehensive description of the theories of long-term change that the Marxist analysis paradigm is the best because it includes all of the factors that are neglected by New Classic analysis, such as system, land, countries, and ideology, and that this makes it the most accurate. Karl Marx emphasized the significance of property rights in a successful economic organization while also pointing out the shortcomings of the current property system and the potential of more efficient technologies. Functional changes are governed by the system and the system of change, according to new structural economics. An effective system and a successful system of change define technological progress, whereas an ineffective system and a failing system restrict it. 'The structure and change of economic history,' he says, has prepared the path for technological development and global transition. North makes this argument in works such as 'the resurrection of the West' and 'the structure and change of economic history.' One of the most important ways in which traditional industries can be transformed, according to growth experts Lewis, is by new departments affecting traditional departments, which have the effect of upgrading traditional departments to their concepts and systems, in order to encourage them to move forward with technology[2]. Technology innovation in the green sector varies from overall technological innovation in that green technological innovation cannot be assessed simply based on the supply of companies within the terms of a market-based incentive system. The promotion of green technical innovation, as well as the establishment of constraints and guiding mechanisms, are all necessitated by the existence of a framework.

1.2 External Effects of Green Technological Innovation

External repercussions of economic activities vary in severity in the real world, and as a result, unpaid positive or negative impacts are produced by economic activity that do not involve the exchange of goods and services. Green technological development, on the other hand, has an external impact since it is linked with a non-exclusive public good, while external effects provide "free-rider" benefits to others. Other businesses or organizations often "free-ride" on the rights to

technical progress that their own companies have acquired. The lack of excitement for business investment on innovation will almost definitely result as a result of this. Environmentally friendly technological innovation is fundamentally a method of producing technical knowledge. All results contain fresh information, whether it's about new products, new technology, or new organizations, since new information is always being added. Furthermore, as these technological firms join the area of consumer development and distribution, there will be spillover effects, resulting in a scenario in which the total communal revenue exceeds the total private income. In certain instances, private expenses for technological development are insufficiently paid, resulting in a lack of motivation to pursue such endeavors[3].

1.3 Uncertainty in Green Technical Innovation

Green technological progress has gone through a number of stages, each with a higher level of uncertainty than mature technology. These uncertainties include technical uncertainties such as research and development uncertainty, uncertainty about the prototype and test production process, and uncertainty about the business environment. Because of technical and market instability, green technology innovation is more at risk, and anticipated profits are smaller. As a result, the technological innovation phase is significantly delayed.

1.4 Characteristics of Green Technological Innovation

Technology that is not environmentally friendly has negative externalities such as reducing individual marginal costs relative to societal marginal costs or increasing marginal individual benefits relative to marginal social gains. To a certain degree, the application has the potential to degrade the natural environment. In addition to having a beneficial external effect on non-green technology, green technology helps to preserve or enhance the ecological system, improve the ecological efficiency system, and raise the amount of environmental capital in the environment. Non-green technology, on the other hand, enables customers to pay a greater premium for their purchases. However, the pure market economy lacks the ability to automatically differentiate between these two types of technology and, as a result, is unable to address externalities. Market laws impose restrictions on both green and non-green technology in the business world. Cost disparities between non-green and green technologies place non-green technology at a competitive disadvantage in comparison to green technology. Green technology is characterized by a high degree of uniformity. It must not only satisfy the criteria of technical development, but it must also comply with environmental laws, which has a low likelihood of success. - As a result, the individual cost of green technological innovation in technical innovators is significantly higher than the costs of non-green technological innovation under the same revenue conditions, implying that green technology has lower market competitiveness than non-green technology under the same revenue conditions[4].

1.5 Failure of the Market

The term "market failure" in the context of the business mechanism refers to a collection of events that are unable to distribute financial resources effectively. Corporate hazards and technical risks are particularly vulnerable to a lack of research and development spending, as is an insufficient investment in research as a result of the fact that investment returns are not monopolized. Because green technology innovation has a positive external effect, the market

mechanism cannot arbitrarily resolve the externality of green technology innovation.

1.6 Related Studies

For the Fuzzy Model Quantum Greenhouse, the Evolutionary Ventilation Algorithm for Fuzzy Model Quantum Greenhouse was suggested by researchers (FM-BSQGEVA). This version of the QGEVA has been updated in order to offer a group-focused method for solving the problem's non-linear and multidimensional existence, which has been described before. With the update, the QGEVA now includes a new rotary angle search for a binary differential operator as well as a plethora of new genetic algorithm operators. The likelihood of such operators being utilized for distinct solutions is affected by the membership function's relevance fitness, which is dependent on the fitness of the relevant operators. It is possible to calculate the fitness function by integrating the penalty function, the goal function, and the extra flow function together. Natural ventilation in greenhouse effects may be controlled and regulated with the help of the models that have been developed. In an energy-intensive industrial cluster, these findings demonstrate that the environmental chain of the industry has improved the overall environmental efficiency[5]

A Markov hidden model based on the method of probabilistic detection developed by Eskin is proposed by the researchers in order to identify resource mismanagement and the usage of low-carbon irregular behaviour. It collects data from the user's activity set and utilizes it to create the HMM model parameters as an object of monitoring. It then combines this data with a probability detection algorithm from Eskin to identify resource mismanagement and irregular low-carbon compliance, among other things. The establishment of an atmosphere conducive to green technology innovation offers a fresh point of view.

Green technology innovation is being discussed as a means to decentralize the environment, which is the driving force behind pollution management, according to the researchers. When looking at green technological innovation from the perspective of investment in environmental protection, the article investigates the impact of decentralization on environmental protection. The findings of the research will be helpful in determining acceptable degrees of environmental decentralization at different government levels, as well as in developing distinct environmental decentralization plans. Reform of the environmental management system is required for improved emissions treatment as well as for innovation in green technology development. This study examines the impacts of environmental decentralization and conservation spending on green innovative technologies using panel data from 30 regional administrative areas in China collected between 2008 and 2016[6].

1.7 Environmentally Friendly Technology

The current scenario includes eco-innovation in the design of products and processes that contribute to sustainable development and that are used to generate direct and indirect environmental changes through the commercial application of information technology. This encompasses a variety of interconnected ideas ranging from environmental technology advancements to creative approaches to promoting socially acceptable, long-term economic development. Eco innovation dissemination is an area of study that seeks to understand the process by which new carbon ideas and innovations are spread across society. The main goal of a greenhouse is to enhance the environment, and in the winter, crops are grown on the basis of greenhouse temperature simulations, which may be used as a greenhouse control hypothesis to regulate the temperature of the greenhouse. Green technology is a term

that has acquired significant momentum in the past two decades when it comes to defining ecologically friendly technology. This technique was created and is now being utilized in the field of environmental impact assessment. The underlying concept is to create the most up-to-date technologies that do not deplete our natural resources and have a minimal negative effect on human beings, animals, and the climate of our planet. Green systems make use of technology that are said to be renewable and environmentally friendly. Green technology is primarily intended to help decrease global warming and the greenhouse effect, among other things[7].

Because greenhouse microclimates often have little influence on the physical model, it is necessary to use an efficient technique for establishing parameters in a physical model with greenhouse microclimates when modelling a greenhouse system. If this technique is not used, mistakes or severe weather conditions can result depending on the actual greenhouse situation. In order to correctly estimate the important parameters in the experimental model, a large number of variables must be tracked and monitored. Existing models are capable of predicting solar greenhouse environmental factors, which implies that current greenhouse models cannot be used directly to prohibit the greenhouse system from operating. It is thus of more importance to conduct agricultural production research in conjunction with the modelling of natural ventilation solar greenhouses in order to increase yields. To improve the efficiency of solar greenhouse gas natural airing, mathematical modelling techniques have been used to simulate the system.

1.8 Infrastructure for The Environment

1.8.1 Framework for an Improved Environmental System

The purpose of this paper is to develop a fundamental structure for environmental system improvement from the perspective of the Green Technology Paradigm. This will be accomplished through comparative studies on green technology innovation and conventional technological innovation, as well as an examination of the differences in environmental system improvement.

1.8.2 Environmental Laws and Regulations

As China's green technology is still in its infancy, completing the associated environmental laws and regulations is an essential first step toward enhancing the environment system by using the conceptual green technology framework, which is now being developed. This has the potential to spur innovation in the field of environmental technology. Chinese environmental protection and surveillance laws, such as 'air pollution prevention legislation, "solid waste pollution protection legislation," 'hydro-pollution legislation,' 'environmental noise pollution legislation,' and other environmental protection legislation, as well as a vast array of environmental protection measures, have been constantly strengthened in recent years. It is necessary to create a plan for environmental and resource conservation as well as a framework for the governance of social and economic sustainable development before green technology innovation can be developed. It is proposed in this article that China gradually refines the laws needed for green technology innovation while also establishing a unique natural resource law and an industrial law[8].

1.9 The Environmental Accounting System

The upgrading of the existing accounting system does not include the reduction of climate costs and the conservation of natural resources. As of this writing, we are still in the creation and research stages of the environmental accounting system in our nation. Making an accurate evaluation of environmental costs and benefits may be a challenging undertaking. The following are the topics covered in this paper: a step-by-step approach to the advancement of environmental accounting research and practice; the unification of environmental performance and financial performance; a guideline for a proactive approach to environmental management, resource development and utilization, improved resource reuse rates, and the elimination of negative environmental impacts[9].

1.9.1 System of Incentive Payments for the Economic Environment

The government may provide discounts and pricing incentives to environmentally friendly businesses and products as part of its environmental goods strategy, as well as reduced import taxes on environmentally friendly equipment. Priority should be given to the development of the environmental, recyclable, and environmental sectors, as well as the development of green food industries, in order to encourage and guarantee innovation in green technology.

1.9.2 Technical Standardization System for the Environment

The environmental technical standard is a critical building element in the process of obtaining environmental recognition and is thus required. In order to comply with the ecological environment standard, the use of environmentally friendly technology in the production process is a key component, and the choice to do so or not is equally significant. As a result of the growth of green technology, development and distribution -ties are being converted into technological connections. A few examples of ways to strengthen the environment technical standard system include the development of an environmental standards framework, the strengthening of environmental technical standard studies, the formulation of a sustainability plan based on the mainstream pattern of international environmental technical standards, and the strengthening of environmental technical standard studies[10].

2. DISCUSSION

As described under the theory of New Institutional Economics, an economic system is defined as a collection of rules that control people's actions, which may include either formally organized or informally organized organizational structures. Introducing new institutional arrangements and ensuring that system major bodies operate properly is a complex procedure that mostly relates to the enhancement of existing institutions as well as the development of new systems in order to gain additional benefits. Because different system environments create different incentive and restriction mechanisms, which in turn influence people's technical creativity, there are important implications of the system environment on technological innovation, which are discussed in more detail below. Our society is committed to green technology innovation and, in order to accomplish this objective, we must create a green framework for technological innovation as soon as possible.

A system environment, such as the economic and political systems, in which green technical innovation is produced includes a variety of specific institutions and moral values, beliefs, ideologies, and cultural traditions, as well as a variety of particular beliefs, ideologies, and cultural traditions. Diverse systems produce a diverse range of different incentive mechanisms to influence people's desire to participate in green innovation, depending on the stage of social evolution at which they are operating. While the system with relative stability shows its significance over an extended period of time, it is particularly important during the system's initial development phase. In the event that technological innovation shifts, any systems that are supportive of green technology innovation would become adversarial to green technology innovation.

Because the system is now the most major barrier to the development of green technology, system innovation is very essential in this context. When system innovation is implemented, it will encourage green-technological innovation and the development of social-productive power, as opposed to a contemporary, science-based, and rational system that is backward and hostile to green-technology innovation and the development of social-productive power. The development of new gadgets has become more necessary and urgent in order to promote the development of green technology. One of the most important roles of framework innovation for green technological innovation is to promote green technological innovations, stimulate innovation that will inspire innovation, and activate green technological innovation behaviour. Another important role of framework innovation for green technological innovation is to stimulate innovation that will inspire innovation. Meanwhile, it should contribute to both the creation and restriction of green technology innovation by limiting or avoiding the external effects of green technological innovation through institutional measures, and ultimately by increasing overall productivity and the value of green technology innovation. The main objectives of a secondary purpose are to incentivize, limit, and direct system advancements toward green technology innovation by eliminating insecurity, internalizing economic externalities, and lowering transaction costs.

3. CONCLUSION

Development in green technology is a type of economic activity that aims to achieve a balance between environmental preservation and economic management via the use of new technologies. It is necessary to put technological, economic, social, and environmental sustainable development into action in order to achieve success. Innovative green technology on the other hand is an economic activity that is much more closely regulated, has a higher price tag, and needs a higher degree of capitalization than other economic activities. In order to have a consistent and efficient incentive, it is essential to think outside the box when it comes to how the system works. The institutional context has a major effect on the development of technical knowledge and skills. People's technical innovation is affected by a range of system settings that offer a variety of incentives, limitations, and guidelines. Technological innovation that is environmentally sustainable acts as both a limitation and a guide for system innovation.

The most essential element in guaranteeing the long-term development of the social economy is technical innovation in the context of the environment. This paper compares and contrasts green technology and conventional technological innovation, with the aim of implementing a framework for environmental performance improvement from the perspective of green technology innovation, which includes issues of environmental law and financial regulation,

environmental accounting, pollution prevention, and the environmental impact of products and processes.

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