

Research on the impact of ecological compensation on the high-quality economic development of the Yangtze River Delta

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Abstract

At this stage, the high-quality economic development of the Yangtze River Delta is in a critical period of comprehensive deepening. However, a series of ecological imbalance problems caused by the rapid development of the extensive economy seriously restrict its development process. It is imperative to promote ecological compensation and restore ecological balance. Because of this, based on the perspective of the Yangtze River Delta, this paper puts forward relevant suggestions from the perspective of establishing a perfect mechanism by analyzing the current situation and problems, to provide theoretical reference for promoting the high-quality economic development of the Yangtze River Delta.

Keywords

High-quality economy; Yangtze River Delta; ecological compensation.

1. Introduction

Since ancient times, the Yangtze River region has been a rare golden waterway in the world. Its rich natural resources and superior geographical location have promoted the prosperity and development of the economy on both sides of the strait, created a splendid Yangtze River civilization, and played an important role in the historical process of our country. Nowadays, the Yangtze River Delta region is based on the development of the economic belt and has become one of the most active regions in my country's economic development with the trend of development. At the same time, with its strategic goal of responding to the new development pattern, it occupies an important place. In November 2018, General Secretary Xi Jinping made a public speech, raising the integrated development of the Yangtze River Delta region into a national strategy. In August 2020, the general secretary further emphasized the need to focus on the two keywords of integration and high quality, and steadily promote the integrated development of the Yangtze River Delta. At the same time, this also means that high-quality development, as the basic direction of regional economic development in the new era, will lead to the economic development of the Yangtze River Delta.

Ecological integration development is an important goal and approach to achieving high-quality integration in the Yangtze River Delta region. However, since the reform and opening up, to rapidly achieve economic development goals, the Yangtze River Delta has carried out predatory exploitation of natural resources. The long-term and extensive economic development mode has caused serious environmental problems, and the regional ecology has become increasingly unbalanced, even approaching the "ecological red line" for a time. , which poses a serious challenge to the high-quality integrated development of the Yangtze River Delta economy.

The ecological environment, by its nature, can be attributed to social public goods and has strong externality characteristics. A large number of studies and practical experience have shown that the effect of cross-regional public environmental governance is minimal if it only relies on the power of a government or department. To achieve the desired results, we must unite multiple public resources and forces to act together. As a major institutional innovation

to overcome the competition dilemma of local environmental governance and achieve regional ecological environment optimization, the ecological compensation mechanism has become the key to promoting the high-quality integration process in the Yangtze River Delta region. Although in recent years, under the unremitting efforts of all parties in the Yangtze River Delta region, the ecological compensation for air pollution control, watershed ecological compensation, forest ecological compensation, and soil ecological compensation have been extended, and various fields have achieved staged results. However, the overall ecological environment is still in a deteriorating trend, and the regional governance capacity is far less than the speed at which the environment is destroyed. Traditional theories such as "pollution first, then treatment, first damage and then repair" have severely restricted the high-quality economic development of the Yangtze River Delta.

In this context, the "14th Five-Year Plan" clearly puts forward new and higher requirements for the next step to promote ecological compensation in the Yangtze River Delta. Because of this, based on the perspective of the Yangtze River Delta, this paper puts forward relevant suggestions from the perspective of establishing a perfect mechanism by analyzing the current situation and problems, to provide theoretical reference for promoting the high-quality economic development of the Yangtze River Delta.

2. Literature review

From the perspective of the theme of ecological compensation affecting the high-quality economic development of the Yangtze River Delta, the existing research results mainly fall into the following three categories:

The first is theoretical research on high-quality development. Since the 19th National Congress of the Communist Party of China first proposed the concept of high-quality development, how to scientifically interpret the connotation of high-quality development, how to measure and evaluate the level of high-quality development, and how to explore the influencing factors and countermeasures of high-quality development have gradually become hot issues in the academic world. It is worth noting that high-quality economic development is different from the quality of economic growth. It combines the new features of China's development in the new era and is more distinctive of the times[1]. At the same time, high-quality economic development places more emphasis on the coordination and unity of innovation, coordination, greenness, openness, and sharing, and turns more attention to the prospects and consequences of economic growth. Compared with the standard that only focuses on the quality of economic growth, its connotation is also richer[2]. Although the current academic circles have different emphasis on the interpretation of the specific connotation of high-quality development, in general, they are mainly based on new development concepts, with more emphasis on scientific and technological innovation, social efficiency, and ecological quality[3]. At the same time, research on the measurement and evaluation of high-quality economic development has continued to develop. Based on the connotation of high-quality economic development, Zhong Taigang builds a new system for high-quality economic development, and builds an evaluation index system from six dimensions: basic, innovative, coordinated, green, open, and shared[4]. Based on a dynamic perspective, Zhang Bingyao constructed an indicator system for high-quality regional economic development from the three dimensions of the basic social aspects of development, social and economic achievements, and ecological achievements, and conducted empirical tests to measure the sensitivity of indicators in 273 cities above the prefecture level[5]. Regarding the influencing factors and countermeasures of high-quality development, Feng Qiaobin analyzed the five characteristics of high-quality economic development in my country and discussed its countermeasures from the perspectives of the central and local governments, the government, the market, and social security[6]. Through

policy-oriented analysis, Ren Baoping and Wen Fengan constructed a unified judgment standard for high-quality economic development in the new era and explored the realization path from multiple dimensions such as technology, industry, system, strategy, and promoting the all-around development of people[7].

The second is a separate study on ecological compensation. In recent years, with the continuous development of ecological and environmental protection concepts, ecological compensation has gradually become a research hotspot in the field of environmental and economic policies at home and abroad. In recent years, with the continuous development of ecological and environmental protection concepts, ecological compensation has gradually become a research hotspot in the field of environmental and economic policy at home and abroad. Taking the administrative level field as the standard, it can be mainly divided into horizontal ecological compensation and vertical ecological compensation. The former refers to a method of compensating ecological providers in economic construction for ecologically compensated areas that do not have an administrative affiliation, while the latter refers to areas with higher administrative levels to compensate ecological providers with lower administrative levels. As early as the 1960s, foreign experts carried out a series of studies on ecological compensation[8]. Although there are still differences on the key issue of its connotation, most scholars interpret it as "payment for environmental services (PES)." Among them, Wunder et al. made relevant suggestions for improving the efficiency of the user and government-funded PES programs through a large number of case studies in developed and developing countries[9]. It was not until the 1980s that China gradually began to study the related issues of ecological compensation[10]. Although it started late, the research progressed rapidly. Many scholars are actively engaged in the exploration of ecological compensation mechanism construction in forests, grasslands, wetlands, air, watersheds, mineral resources development, oceans, and other fields, and the research results in each sub-field are very rich[11]. For example, Guo Gaojing evaluated the benefits of Shandong air ecological compensation from multiple dimensions such as background, logical evolution, and policy framework analyzed the reasons for the success of its ecological compensation mechanism and put forward relevant policy suggestions on how to promote the mechanism nationwide[12]. Wang Na et al. introduced the equilibrium method and other empirical research methods, analyzed the forest ecological compensation mechanism in Chengde City through empirical analysis, and put forward constructive suggestions on the source and distribution of forest ecological compensation funds[13]. Wei Weixian and Wang Yuehong studied the development status of ecological compensation for air pollution in the Beijing-Tianjin-Hebei region by establishing a CGE model based on the opportunity cost method and provided important inspiration for the sustainable development of ecological compensation in this area[14]. Liu Lihua and Yang Binru combined the equivalent factor method and the functional value method to empirically improve the ecological compensation mechanism of cultivated land in my country[15]. In addition, in terms of ecological compensation mode, unlike foreign countries, my country is mainly led by the government and completed by policy support[16]. However, this model is difficult to deal with changing environmental problems, which not only reduces the participation of diverse social entities but also makes it difficult to maximize efficiency. In this regard, scholars have discussed and studied the current situation and problems of ecological compensation and proposed to give full play to the role of the market mechanism, adhere to the concept of the new development pattern, and innovate and explore diversified ecological compensation methods[17].

The third is to study the impact of ecological compensation on high-quality economic development. As a public good with strong externality, the ecological environment will be abused uncontrollably once it cannot be guided and controlled by reasonable policy guidelines. If things go on like this, various contradictions between ecology and economy will be exposed

and gradually become the focus of academic circles[18]. In this regard, on the one hand, some scholars believe from a static perspective that regulating the ecology will internalize the cost of negative externalities of pollution, thereby increasing the production cost of enterprises and inhibiting local economic development to a certain extent[19]. On the other hand, based on a dynamic long-term perspective, some scholars believe that appropriate and strict ecological regulation can force companies to innovate in technology, and make up for their losses through the "innovation compensation effect", thereby promoting high-quality economic growth through science and technology[20]. Then, as one of the important measures of the government's ecological regulation[21], the ecological compensation policy will have an impact on the high-quality economic development? Most studies have found that ecological compensation will have a non-linear impact on high-quality economic development. It can promote high-quality development in the early stage, but after a certain turning point, excessive ecological compensation begins to inhibit high-quality economic development, showing an "inverted U"-shaped relationship[22]. Bennett's research pointed out that although the ecological compensation for returning farmland to forest reduces the area of cultivated land, it improves the level of farmland intensification to a certain extent, which fundamentally promotes the increase of yield per unit area and promotes the high-quality development of the local economy[23]. By constructing a dynamic equilibrium model, Hu Juan et al. demonstrated that the harmonious coexistence of economy and ecology requires appropriate artificial regulation, and pointed out that vertical ecological compensation can play a role in compensating for opportunity costs, while horizontal ecological compensation can make up for direct input costs in the protection process, the organic combination of the two can effectively mobilize the enthusiasm of the ecological service provider area and the beneficiary area, thereby promoting the high-quality development of the regional economy[24].

To sum up, the existing literature focuses on the connotation and path of high-quality development, and the improvement of ecological compensation theory and mechanism. However, the key to high-quality economic development is to achieve high-quality regional development, but few previous studies have included high-quality economic development and ecological compensation in the Yangtze River Delta region into a unified framework to answer this question. Therefore, this paper analyzes the current situation of ecological compensation policy implementation in the Yangtze River Delta region, discusses the impact of ecological compensation on the high-quality economic development of the Yangtze River Delta region, and puts forward targeted suggestions.

3. Research on the impact mechanism of ecological compensation on the high-quality economic development of the Yangtze River Delta

3.1. Ecological compensation and industrial transformation and upgrading.

As a common problem in the process of industrial energy development, Dutch disease is one of the main symptoms of deindustrialization. In response to this problem, the ecological compensation mechanism based on the principle of "whoever develops will protect and whoever benefits will compensate" can increase the cost of resource development, and to a certain extent, can combat the wanton development of those primary industries and eliminate backward sectors, forcing the transformation and upgrading of their industrial structure. All in all, the continuous and in-depth implementation of the ecological compensation mechanism in the Yangtze River Delta region can not only optimize the industrial structure and improve total factor productivity, but also reduce pollution emissions, improve the quality of the ecological environment, and achieve the dual goals of economic performance and environmental performance, thereby promoting the high-quality economic development of the Yangtze River Delta.

3.2. Ecological compensation and enterprise innovation.

Ecological compensation will increase the cost of enterprise resource development. When the cost is higher than the economic benefit, or even higher than the expected cost of green innovation, the enterprise will have the motivation to independently carry out technological innovation of energy-saving and environmental protection, to reduce the production cost. In addition, enterprises will strengthen technological innovation and personnel training, and improve production efficiency, to enhance the competitive advantage of enterprises. That is, a strict and appropriate ecological compensation mechanism can stimulate the vitality of the market and the creativity of enterprises, and promote the high-quality development of the regional economy.

3.3. Ecological compensation and people's well-being.

The primary requirement to achieve high-quality development is to meet the people's needs for a better life, to make up for the shortcomings of people's livelihood, and to improve people's well-being from reality. On the one hand, the ecological compensation mechanism can improve the ecological quality to a certain extent, improve the living environment of residents, and enhance their happiness of residents. For example, the implementation of ecological compensation in the Xin'an River Basin has improved the water quality upstream and downstream, and ensured the safety of water for production and living in Hangzhou downstream. On the other hand, strict and appropriate ecological compensation can force technological innovation of enterprises, promote economic growth, and increase the income level of residents, to achieve sustainable, stable, and high-quality development of ecology, economy, and society.

4. Status Quo of Ecological Compensation in the Yangtze River Delta Region

4.1. The ecological compensation mechanism has achieved good results in the Yangtze River Delta.

In recent years, the Yangtze River Delta Regional Ecological Cooperation Conference has been held regularly, and a series of compensation and prevention plans have been signed, indicating that the ecological integration work is progressing steadily. At the same time, with the improvement and development of the ecological compensation mechanism, the governance environment in the Yangtze River Delta region has improved a lot. For example, in the new round of environmental quality inspection, the air quality of the three provinces and one city has been significantly improved, and the excellent rate has been greatly improved, with more than nine The water quality of the completed surface water test section reaches Class III and above.

4.2. Some practical problems remain to be solved.

4.2.1. The compensation method is single.

The Yangtze River Delta region has initially formed a comprehensive compensation model coordinated by the central and local governments, but the compensation method is mainly funded, lacks policy-based compensation, the "blood transfusion" ecological compensation mechanism has limited durability, and the role of the market in resource allocation in the ecological field has not yet been brought into full play.

4.2.2. The imbalance between ecology and economy within the region intensifies.

The eco-compensation area in the Yangtze River Delta has a developed economy but a poor ecological environment and the compensated area is rich in ecological resources but lacks economic development. To make up for the economic development sacrificed by environmental

protection in the compensated area, the compensated area will give certain financial compensation. However, because the use of compensation funds has not been well distributed and used, the gap between the compensation area and the compensation area in terms of fiscal revenue, per capita GDP, and other economic indicators has further widened.

4.2.3. Lack of cross-regional management and coordination mechanism.

The 41 prefecture-level cities have certain gaps in legal regulations, theoretical systems, governance capabilities, and measurement work, so they have not yet reached an agreement on compensation standards, methods, and assessments. Moreover, the existing ecological compensation management and coordination mechanism in the Yangtze River Delta has certain regional limitations, lacks higher-level rules and regulations, and requires joint legislation and governance by all governments.

4.2.4. The implementation field of ecological compensation needs to be expanded.

The focus of ecological compensation in the Yangtze River Delta is still on the watershed and the atmosphere, but with the continuous improvement of people's ecological requirements, soil, ocean, forest, and other fields must be accelerated to be included in the focus of the ecological compensation mechanism.

5. Suggestions and Countermeasures

5.1. Increase the investment in ecological compensation and unify the compensation standard.

Although the government's financial investment in ecological compensation shows an increasing trend year by year, it is still far from meeting the actual demand, and the durability of this "blood transfusion" compensation model is limited. Therefore, it is necessary to establish a sound and dynamic market-oriented long-term mechanism as soon as possible, and transform it into a "hematopoietic" compensation model. At the same time, it is necessary to strengthen the joint prevention and control of governments at all levels and formulate flexible and unified compensation standards according to different ecological values in different fields.

5.2. Improve the construction of the mechanism guarantee system.

To improve the phenomenon of insufficient compensation in the specific implementation process of ecological compensation, the government should improve the relevant rules and regulations at a higher level, improve the comprehensive cross-regional management mechanism, and strictly clarify the ecological compensation methods in various fields and the rights and obligations of relevant compensation subjects.

5.3. Increase publicity efforts.

Increase publicity efforts on social media, expand publicity channels, and take advantage of mainstream online media to create a publicity system for a universal ecological compensation mechanism. Starting from the interpretation of the achievements of ecological compensation at the current stage, the interactive publicity method is used to realize multi-dimensional experience, and the publicity is carried out in combination with high and new technologies such as cloud experience, to increase the social attention of the ecological compensation mechanism.

5.4. Increase social participation.

The development, utilization, and protection of the ecological field of the Yangtze River Delta are closely related to the interests of various social subjects in the region. Appropriate social participation can not only effectively improve the work efficiency of the competent departments, but also effectively express the interests of the public and promote high-quality economic and social development. In this regard, the government can guide the whole society

to actively participate by improving the social participation mechanism and selectively accepting effective feedback from the masses, enterprises, and other social institutions on the effectiveness of policies.

Acknowledgements

[Fund Project] This article is funded by the Anhui University of Finance and Economics Undergraduate Research Innovation Fund Project: Research on the impact of ecological compensation on the high-quality economic development of the Yangtze River Delta (XSKY22004ZD) research findings.

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