

Research on Compensation Mechanism of Rural Cultivated Land under the Background of Local Financial Pressure

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Abstract: With the acceleration of the pace of urbanization, the farmland area is gradually shrinking, and the protection of farmland becomes crucial. However, the financial pressure of local governments and the drive of officials' interests make farmland protection meet many challenges. In order to further optimize the farmland compensation mechanism, ensure national food security and strictly adhere to the arable land red line, this paper uses literature analysis to discuss the existing problems of the current rural farmland compensation mechanism from the new perspective of local financial pressure, and puts forward optimization suggestions.

Keywords: Cultivated land protection; Compensation mechanism; Research status; Main problems.

1. Introduction

In recent years, China's local finance has been in a 'dilemma': on the one hand, due to the global economic slowdown and the reduction of tax revenue and other factors, the national budget has been strained; On the other hand, the extra expenditure caused by the outbreak of the epidemic has made the situation even more severe -- all of which have brought huge burdens and challenges to China's local financial situation. As a result, many regions have begun to seek more revenue through land sales as a coping strategy: They often take land at a low cost and sell it at a high price to create local performance or improve their funding sources. However, in the process of government land expropriation and transfer, the state requires relevant governments to compensate for the requisitioned rural land.

Rural cultivated land is the survival basis of farmers and also the food security guarantee of the country, and with the acceleration of urbanization, rural cultivated land is gradually reduced, and the protection of cultivated land has become the top priority. Therefore, China implements the strictest cultivated land protection system and sticks to the red line of 1.8 billion mu of cultivated land. However, due to the local economic burden and the needs of administrative personnel for their own interests, there are still many challenges in the task of protecting rural farmland. At present, the main strategy for securing farmland is the implementation of program management and use restrictions, which focus on ensuring that farmers fulfill their land maintenance responsibilities, but do not fully consider the losses they may suffer: This depriving conservators of the incentive to actively participate, which is a hindrance to our national agricultural land conservation goals.

For the country, farmland compensation is an important measure to stick to the red line of 1.8 billion arable land, and its ultimate goal is to ensure national food security. For local governments, broadening the ways of the cultivated land compensation mechanism and earnestly observing the cultivated land compensation policy can ensure that the government has land available and increase fiscal revenue.

Therefore, this paper studies the existing rural farmland compensation mechanism and its implementation effect, collates and analyzes the relevant literature for the follow-up research.

2. Current Research Status at Home and Abroad

2.1. There is a theory of ecological compensation for cultivated land protection

At present, the theories about ecological compensation for cultivated land protection mainly cover the aspects of ecosystem services, externalities, public goods and utility value.

2.2. Subject of ecological compensation for cultivated land protection

Haipeng Niu argues that identifying relevant stakeholders can solve the problem of compensator's responsibility and behavior limitation in the process of cultivated land protection externalities. At present, the academic circle has carried out long-term research and in-depth discussion on the clarity of ecological compensation for cultivated land protection from multiple perspectives.

2.2.1. The perspective of legal system

Some researchers argue that all persons or organizations that can participate in a certain legal association can be regarded as the subject of the legal system. They also emphasize that the main components of ecological compensation for cultivated land include government departments, compensation givers (i.e. environmental damages, resource users and income recipients) and victims (such as people who suffer losses and external effects), and make it clear that only the natural ecological environment of cultivated land is the core object of compensation. By analyzing the main body of economic compensation for ecological maintenance of cultivated land from the Angle of law, it not only broadens our research vision on this topic, but

also provides key support for constructing and improving relevant laws and regulations. However, because this kind of ecological compensation is mainly to make up for the cost caused by the utility of cultivated land in the ecosystem, the compensation subjects involved in it will be affected by many

factors such as their understanding level and payment intention, and have certain uniqueness. Therefore, it is not enough to define the subject and object of the economic compensation for the ecological maintenance of cultivated land only according to a certain point of view.

Table 1. Main related theories and applications of ecological compensation for farmland protection

Theories	Theoretical application	Scheme
Ecosystem services theory	The multifunctional nature of agricultural land is based on its additional benefits in terms of improved air quality, water storage capacity, conservation of biological populations, security of food supply, social harmony and spatial landscape value, all of which form a core part of ecosystem services.	Costanza, Daily, Wallace, Kremen
The theory of externalities	As a unique ecosystem, cultivated land has obvious externality. By establishing the mechanism of externality internalization, we can maximize the comprehensive benefit of cultivated land.	Randall, Dinar, Nigatu and Xinhua Zhu
Public Goods Theory	According to the characteristics of the spillover effect of land in the public resources, such as the characteristics of spanning regions, selfless sharing and indivisibility, it is easy to appear the problem of "free riding".	Paul A. Samuelson and William D. Nordhaus
Utility Value Theory	When evaluating the external benefit of land, the scarcity of land resources should be taken as the basic condition, and the marginal benefit of ecological product protection should be used to evaluate its economic value.	Fengqing Yu and YunlonCaig

2.2.2. Theoretical perspective

Some researchers point out that the marginal cost of farmland protection between farmers and local governments exceeds the marginal benefits, leading to a serious imbalance in the distribution of responsibilities. As the main implementers and guides of the cultivated land protection plan, they are also the key subjects, so their economic benefits and burden have become the focus of scholars. Through in-depth discussion of the relationship between these two aspects, it can be more clear who should provide what kind of support for cultivated land protection and enjoy the corresponding rights and interests. However, at present, no consensus has been reached on the responsibility of farmland compensation, and the existing farmland compensation system still has many inadequacies, which still need to be improved.

2.2.3. Resource value perspective

Some researchers argue that farmland ecological subsidies should be given to farmers to reflect their ecological benefits to land natural resources. This view is based on the scarcity and irreplaceability of farmland resources, emphasizes that farmers are the most important and direct beneficiaries, and recognizes their key role in the maintenance of farmland ecosystems. However, considering that compensation for farmland protection requires the joint efforts of different actors, we should not only recognize the important role of farmers, but also comprehensively evaluate the contributions of all relevant parties to ensure that the compensation mechanism is fair and reasonable.

2.2.4. The perspective of interest needs and tendencies

Some experts point out that the responsibility for farmland protection should be vested in those who are related to it and have close interests, including the central government, regional administrative departments, farmers and urban residents. In addition, they stressed that the implementation of farmland protection compensation can effectively balance the interests of all parties and at the same time optimize the social and economic effects of using land resources. Therefore, how to determine 'who to pay' and 'who to bear' has always been a

key focus in the field of ecological compensation.

2.3. Measurement method of ecological compensation for cultivated land protection

At present, on the issue of ecological compensation standard for cultivated land protection, experts at home and abroad mainly focus on how to establish appropriate measurement methods and models. These measurement methods include cost calculation method, characteristic valuation method, tourism fee usage method, condition evaluation method, combination analysis method and selection simulation method and so on. Haipeng Niu summed up a category: one is the value estimation method that illustrates personal preferences (such as alternative cost method, cost analysis method, characteristic valuation method, travel fee usage); The other is the value estimation methods that express personal opinions (such as conditional evaluation method, combination analysis method, selection simulation method). In addition, Gaodi Xie et al. use a modified method to determine the service value of the ecosystem in their research field based on previous research results, which is called the parameter comparison method or equivalent factor method. However, at present, in the process of establishing the ecological compensation standard for cultivated land protection, the use of a single method (such as conditional evaluation method, replacement cost method and parameter comparison method) and the comparative analysis combined with a variety of methods (that is, the comprehensive method) have gradually attracted wide attention and been applied in practice. The key point and challenge of the ecological compensation standard for cultivated land protection is to establish the specific amount of land ecological service, but so far there is no consistent measurement system of land ecological service value.

3. Problems in the Practice and Mechanism of Ecological Compensation for Cultivated Land Protection in China

3.1. The compensation standard is unreasonable

At present, the compensation standard for rural cultivated land is generally low and cannot truly reflect the value of farmers' land. Some local governments take the 'land use right transfer fee' as the standard, ignoring the production value and social value of land, resulting in farmers' land rights and interests are not fully protected.

The full value of farmland has not been fully assessed, which makes its valuation more complicated. According to Chai's research, from 2009 to 2015, the total annual value of each hectare of agricultural land in China was about 70,366 yuan, of which the non-economic part accounted for 76.56 percent, more than three times the economic value. Therefore, more attention should be paid to the additional benefits generated by farmland protection. However, in addition to the directly provided products and services, the value of other forms of service has received some attention, but not enough attention and protection.

3.2. The rights and responsibilities of the interests of compensation funds are not clear

The source of compensation funds for rural cultivated land is not clear, resulting in insufficient compensation amount, which is difficult to meet the reasonable needs of farmers. Some local governments have included the compensation funds in their local fiscal budgets, but the actual use is difficult to monitor and prone to misappropriation and retention.

The existing research has not fully elaborated the responsibilities and rights of the beneficiaries of compensation, the actual contributors have not been properly compensated, and the profits of the indemnators have not reached an agreed standard, resulting in the distribution of compensation is rather disorderly and lack of fairness. As for the compensation recipients, the compensation is distributed in the form of transfer payment, so the provincial governments have become the main beneficiaries of the compensation for cultivated land ecological protection. However, a single method of ecological compensation may weaken the enthusiasm of major contributors, especially farmers, to protect farmland. As for the paying party, the problem of 'who will pay' is not clearly defined in our country. Only the central government was mentioned as the leading institution for agricultural ecological compensation, but there was no detailed list of what tasks central departments at all levels need to perform and what responsibilities they have. This makes the ecological compensation system for farmland environmental protection unable to achieve effective operation during the implementation process, thus reducing its effectiveness.

3.3. The coordination degree of ecological compensation for regional cultivated land protection is low

At present, 'how to compensate' between regions has

become the research focus and difficulty of the ecological compensation system for regional cultivated land protection. With the rapid advancement of industrialization and urbanization, the economic growth and natural resources status of different regions have produced significant differences, resulting in the imbalance of inter-regional development, which may affect the effect of the cultivated land protection compensation policy and the realization of the expected goals. At the same time, the conversion of agricultural land to other uses has not been completely stopped, which also increases the difficulty of solving the spillover cost of land property rights preservation. Therefore, the problem of how to calculate the compensation amount according to the difference of soil quality in different places has always been the key point that needs to be further explored in ecological compensation.

4. Summary and Research Prospect

In summary, the research contributions of experts from home and abroad in the field of ecological compensation for cultivated land protection have provided a good reference frame for us to establish and optimize the compensation system for cultivated land protection in China, which has far-reaching guiding value for the development and improvement of the compensation system for cultivated land protection in our country. However, more in-depth research is needed on the theoretical framework, research strategy and regional compensation plan design of cultivated land protection compensation. In view of the current problems encountered in the implementation of cultivated land protection and ecological environment compensation, after a comprehensive review, we should focus on two points in the future:

4.1. Strengthen the value cognition and recognition of cultivated land ecosystem service function, and build a complete value system of cultivated land

Research on spatial differentiation and timely changes of farmland ecosystem services was strengthened to assess the multi-functional needs of cultivated land. Based on the marginal benefit of each participant's investment element in land conservation, we can determine how to equitably distribute land conservation compensation, thereby reducing the imbalance of benefits. In addition, we should investigate the extent of economic losses and contributions among the various actors in order to set a reasonable amount of land conservation subsidies for them, and clarify how they raise and distribute funds within the region.

4.2. Clarify the rights, responsibilities and obligations of compensation subjects, and build a regional coordination mechanism

We need to establish a three-level regional coordination system of ecological compensation for cultivated land protection based on matching responsibilities and rights, which can promote supervision and cooperation among all parties. At the same time, we should optimize the allocation process of subsidies to minimize the damage to the rights and interests of the beneficiaries of farmland property rights protection, and strive to ensure that their rights and interests can be maximized.

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References

- [1] Wells G J, Stuart N, Furley P A, et al . Ecosystem service analysis in marginal agricultural lands: A case study in Belize[J].Ecosystem Services, 2018, 32: 70-77.
- [2] Zhang Q, Song C, Chen X . Effects of China's payment for ecosystem services programs on cropland abandonment: A case study in Tiantangzhai Township, Anhui, China[J] . Land Use Policy, 2018, 73: 239-248.
- [3] Zhang K, Artati Y, Putzel L, et al. China's conversion of cropland to forest program as a national PES scheme: Institutional structure, voluntarism and conditionality of PES[J].International Forestry Review, 2017, 19(S4): 24-36.
- [4] Kroeger T, Casey F. An assessment of market-based approaches to providing ecosystem services on agricultural lands[J]. Ecological Economics, 2007, 64(2): 321-332.
- [5] Niu H P. Research on the externality of cultivated land protection and its economic compensation [M]. Beijing: China Agriculture Press, 2010.
- [6] Zu J, Hao J M, Chen L, et al. Connotation and path analysis of the protection of quantity, quality and ecology of cultivated land [J]. Journal of China Agricultural University, 2018, 23(7):84-95.
- [7] Xie G D, Zhang C X, Zhang L M, et al. Improvement of valuation method for ecosystem services based on unit area value equivalent factor[J]. Journal of Natural Resources, 2015, 30(8):1243- 1254.
- [8] Zhang X J, Ou M H, Li J G, et al. Application of regional compensation mechanism for cultivated land protection -- A case study of Heilongjiang and Fujian Provinces[J].Journal of Huazhong Agricultural University (Social Sciences Edition), 2010 (1): 76 -81.
- [9] Ou M H, Wang K P, Guo J. Research progress on ecological compensation mechanism of cultivated land protection [J]. Research of Agricultural Modernization, 2019, 40(3): 357 -365.