

# The Construction of the Quality Evaluation System of China's Agricultural Economic Growth

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**Abstract:** in the Context of the Continuous Improvement of China's Agricultural Economy, It is Necessary to Clarify the Quality of Its Growth, So as to Ensure the Stable Development of Agriculture. and There Needs to Be a Corresponding Measurement Standard. through the Method of Constructing Quality Evaluation System, We Can Study and Evaluate from Multiple Perspectives of Agricultural Growth, and Finally Get a Set of Completed Evaluation System, Which Provides the Corresponding Reference for Agricultural Economic Growth. This Paper First Expounds the Theoretical Content of the Quality of Economic Growth, Then Explains the Significance of the Quality of Agricultural Economic Growth, and Finally Explains the Evaluation Method of the Quality of Agricultural Economic Growth.

## 1. Introduction

Under the promulgation and implementation of relevant policies in China, China's agricultural economic development has achieved good results. The comprehensive productivity of agriculture is steadily improving, and the corresponding level of science and technology is also growing significantly. However, despite the rapid development of agricultural economy, no one really studies the quality of growth. Although agriculture in many areas of our country develops rapidly and achieves good results, it comes at the cost of destroying the environment. In this way, although it promotes agricultural development, it does not conform to the current concept of sustainable development and cannot lay a good foundation for future agricultural development. China's agriculture has changed from high-speed growth to high-quality development. How to effectively implement and promote the high-quality development of agriculture will be one of the key tasks of the Chinese government in the future. From the structure, efficiency, stability of agricultural economy, rural development, agricultural modernization, agricultural resources and environment, 23 evaluation indexes are selected to construct the quality evaluation index system of agricultural economic development in China. Taking Hubei Province as an example, the quality characteristics of agricultural economic development in Hubei Province from 2000 to 2017 are quantitatively analyzed by entropy method.

## 2. Theoretical Content of Economic Growth Quality

Under the concept of sustainable development, the research on economic growth is not only in quantity, but also in quality, which needs to be changed [1]. Therefore, the corresponding economists began to study this. For example, Soviet economist kamayev mainly stressed that in the process of economic growth, it should include production resources, production volume, production quality, efficiency and other aspects. Another researcher said that economic growth should be one aspect of national development, and in this process, it should also be effectively combined with influencing factors, such as environmental development, risk management and so on. In China, Li Jingwen and others compared the developed countries and analyzed the laws of their economic growth, and finally came to the theory of "growth cost", which is to use some important data information to elaborate the quality of China's economic growth. Some economists think that the quality of economic growth should include economic benefits, structure and so on. In the research process, the relevant researchers in China mainly focus on the quality of economic growth, but they

do not discuss the quality of agricultural economic growth. With the continuous development of rural areas in the new society, we should pay more attention to the quality of agricultural economic growth to ensure the stable development of agriculture.

### **3. Quality Content of Agricultural Economic Growth**

#### **3.1 Stability**

For stability, it is mainly the increase in the process of agricultural economic growth. Only by ensuring economic stability can we achieve a better development speed [2]. Therefore, for the agricultural economic growth, the short-term economic growth should be closer to the long-term economic growth, and control it in a suitable range, which can ensure the stability of agricultural economic growth.

#### **3.2 Sustainability**

The so-called sustainability of agricultural economic growth is the ability of stable development of agricultural economy, among which the sustainable development includes land and economy, which is the basis for stable development of agricultural economy. And the stable growth of economy also shows that it is a process of effective combination with natural resources to a certain extent. If we don't pay attention to the protection of environment in this process and develop agriculture wantonly, it will seriously hinder the sustainable development of agriculture. Because in the process of agricultural production, in order to get more economic benefits, a large number of chemical fertilizers, pesticides and so on will be put into the process. Because of the lack of environmental awareness of farmers, all kinds of wastes generated in the process of agricultural production have not been properly treated. Although the agricultural economy has been growing well in this process, it is seriously broken Bad ecological environment [3]. Therefore, we can understand that only when we use natural resources and protect them, can we ensure stable economic growth. However, in the case of destroying the environment, the huge profits obtained have a negative impact on the development of the society.

#### **3.3 Scientific and Technological Progress**

From the perspective of world development, the future development of agriculture is to replace traditional agriculture with modern agriculture, in which the level of science and technology is the key factor. In order to ensure the stable development of agricultural economy in the current society, we need to give up the traditional agricultural management mode, increase investment and invest more and more advanced science and technology in agricultural development, so as to ensure the high yield and efficiency of agriculture and improve the utilization rate of resources through scientific and technological progress.

#### **3.4 Structural**

In order to adjust its development structure reasonably in the process of agricultural economic growth, we need to speed up the market-oriented development of agricultural economy, establish an economic system in line with the socialist development, and also need to refer to the agricultural economic benefits. For the adjustment of agricultural economic structure, the reality is to make clear how the market can play its role correctly, and also the process of market development law to promote agricultural development and ensure the continuous improvement of agricultural market level [4]. Moreover, it is to know whether agricultural resources can play their own value and be used reasonably. Under the new normal, the quality of China's economic growth needs to be improved. According to the literature review at home and abroad, combined with China's national conditions, this study comprehensively discusses the quality improvement model of China's economic growth under the new normal from five aspects: power mechanism transformation, economic structure optimization, open and stable sharing, ecological environment harmony and people's life happiness, and then constructs a comprehensive evaluation system for the quality of economic growth applicable to the new normal. Based on the statistical data of 2016, this paper

measures and evaluates the quality level of economic growth of 31 provinces in China's mainland, and finds that there are obvious spatial differences in the quality level of inter provincial economic growth, and the quality level of economic growth in the eastern region is ahead of that in the central region and the western region; at the same time, the quality level of economic growth in each province is different from its scale level Cause phenomenon.

### 3.5 Quality of Life of Farmers

In the process of agricultural economic growth, we should not only understand the situation from the total amount, but also pay attention to people's living standards. Therefore, the growth of farmers' life is an important standard to promote the growth of agricultural economy. The evaluation system of agricultural economic growth is illustrated from these five aspects, as shown in Table 1.

Table 1 Evaluation Index System of Agricultural Economic Growth Quality

	First level index	Two level index
Quality of agricultural economic growth	stability	Fluctuation coefficient of agricultural economic growth
		Inflation rate (as measured by RPI)
	Persistence	Application intensity of chemical fertilizer( $kg / hm^2$ )
		Application intensity of pesticide( $kg / hm^2$ )
		Land desertification rate(% )
		Grassland degradation rate(%)
		Harmless treatment of accumulated feces in rural areas(% )
	Scientific and technological progress	Degree of Agricultural Mechanization
		Degree of agricultural electrification
		Agricultural Chemistry degree
		The degree of agricultural improvement
		Degree of agricultural informatization
	Structural	Per capita non-agricultural income of farmers (yuan / person)
		Effective irrigation coefficient(% ) .
		Multiple crop index(%)
		Proportion of output value of animal husbandry(% )
		Proportion of sown area of grain crops(% )
		Utilization rate of water resources(% )
		Land reclamation rate(%)
		forest coverage(%)
		Agricultural labor productivity (yuan / person)
		Water consumption per unit irrigation area( $m^3 / hm^2$ )
		Agricultural output value per unit of cultivated land
	Quality of life of farmers	Per capita disposable income of farmers
		Engel coefficient
Farmers' living quality index		
Proportion of cultural and entertainment expenditure of farmers		
Proportion of education expenditure		

## 4. The Evaluation Method of Agricultural Economic Growth Quality

### 4.1 The Evaluation Method of Agricultural Economic Growth Quality

This method is to clarify the changes between things through the processing of multiple factors. As a scientific method, this processing method can better simplify its indicator structure through the effective analysis of factors, use the least indicators to summarize the largest social development, and then use this method to achieve the most concise language to explain the things between things In fact, the factor analysis method of agricultural economic growth in a city is shown in Figure 2. Through the use of factor analysis to build evaluation model, first, the use of factor variables to

build agricultural economic growth quality evaluation basic data [5]. Second, the original data should be defined and transformed into the content that is in line with the actual situation of agriculture. Through such a processing method, the impact of different index dimensions and quantities on factors can be eliminated. Third, observe the relationship between the values of each variable, the same system can reflect the size of each variable. Fourth, through the effective calculation of the factors, we can get the corresponding scores, and classify them. Finally, according to the final score data, we can get the level and quality of agricultural economic growth in each region. And in this process, using the comprehensive score can also rank the growth quality level of each region, and then can make clear the development results of agricultural economic growth in each region.

Table 2 Factor Analysis Method of Agricultural Economic Growth

Variable index	factor 1	factor 2	factor 3
Rural employees	0.939	0.173	0.152
Total grain output	0.927	0.283	-0.058
Added value of agriculture, animal husbandry and fishery	0.913	0.179	0.138
Key leading enterprises of agricultural industry above provincial level	0.899	0.268	0.263
Per capita net income of farmers	0.172	0.923	-0.105
Total power of agricultural machinery per unit cultivated area	0.293	0.870	0.273
Net amount of fertilizer applied per unit cultivated land	0.460	0.565	0.352
Cultivated area of unit labor	-0.211	-0.103	-0.964
Multiple cropping index of cultivated land	0.048	0.069	0.936

#### 4.2 Analytic Hierarchy Process

This analysis method is an effective combination of quantitative and qualitative methods, which can help decision makers turn complex relationships into quantitative processes [6]. Through the application of this method, complex problems can be effectively analyzed into multiple factors, and then through the effective comparison between factors, it can provide corresponding reference for various schemes, as shown in Figure 3. In this case, experts need to be able to provide reference, determine the corresponding values, and then get the average value of each factor. According to the final score results, we can understand the results of agricultural economic growth in each region.

$$A = \begin{bmatrix} a_{11} & a_{12} & \cdots & a_{1n} \\ a_{21} & a_{22} & \cdots & a_{2n} \\ \cdot & \cdot & & \cdot \\ \cdot & \vdots & & \vdots \\ a_{n1} & a_{n2} & \cdots & a_{nn} \end{bmatrix} \quad (1)$$

Where  $a_{ij}$  must meet  $a_{ij} = 1/a_{ji} (i \neq j) (j = 1, 2, \dots, n)$   
 $a_{ij} = 1 (i = j)$

#### 5. Conclusion

All in all, only by constructing the quality evaluation system of China's agricultural economic growth can we understand what needs to be paid attention to in the process of agricultural economic growth. Among them, we should appropriately adjust the structure of agricultural economy, increase the investment in agricultural science and technology, pay more attention to the factors in the process of agricultural production, and help the stable development of rural agriculture. In this process, farmers should also change the mode of production, actively improve the productivity of farmers, promote the rapid development of modern agriculture, which can help agriculture make better use of the corresponding agricultural resources and improve the environment. In order to ensure the stable development of agriculture, it is necessary to formulate corresponding standards according to the actual situation in the development process, so as to better promote the balanced development of agriculture and lay a solid foundation for the economic growth of China's agriculture.

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