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# Transformation from Comparative Advantage to Competitive Advantage——A Way to Improve Regional Agricultural Competitiveness

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**Abstract** Primarily this paper analyses the internal correlation between comparative advantage and competitive advantage, and holds that there are no conflict and contradiction between the two, the industries with comparative advantage often easily to have strong competitive advantage. Then this paper analyses the factors influencing regional agricultural competitiveness, including resources endowment, ecological environment, quality of labour forces, infrastructure, technology innovation and transformation capacity, industrialization degree, relevant support industries, market demand structure, government management and policy and so on. Finally, based on the analysis of conversion mechanism of regional agriculture from comparative advantage to competitive advantage, this paper puts forward the countermeasures for promoting regional agricultural competitiveness as follows: vigorously develop agricultural industrialization, and foster the leading enterprises; improve the national policy system for supporting agriculture, and increase the inputs into infrastructure and scientific research innovation; promote the development of related industries and support industries, and promote agricultural competitiveness; increase consumers' demand for the quality of agricultural products, and propel business investment and innovation.

**Key words** Comparative advantage, Competitive advantage, Regional economy, Agricultural competitiveness, China

With China's accession to WTO, agricultural development is no longer in a relatively stable and moderate environment, and it must face fierce international competition. The agricultural infrastructure in developed countries is sound, and the majority of them establish strong agricultural organizations, and boast suppliers of means of production, providers of technology development services, and processing exporters with high degree of specialization, to form the group effect in a network. China has long been dominated by small-scale peasant economy. The farmer organizations are loose, for want of market competition experience, and individual farmers can not pit themselves against the large farms in developed countries, therefore, to improve agricultural competitiveness is an inevitable trend. This paper uses the theory related to international trade in analysis framework of regional agricultural competitiveness, unravels the relationship between comparative advantage and competitive advantage, and thinks that to realize the transformation from comparative advantage to competitive advantage is the key to enhancing agricultural competitiveness.

## 1 Internal correlation between comparative advantage and competitive advantage

In accordance with the specific circumstances, many of the researchers and policy makers in the world use the theory of competitive advantage to guide the economic development of the country or region. However, there is a great flaw when people learn, understand and accept the theory of competitive advantage. Some of the proponents of theory of comparative

advantage believe that this theory is the concept antithetic to the theory of comparative advantage, and even assert that the advancing of it is to replace the former theory of comparative advantage. This is actually a misunderstanding of the theory of competitive advantage. There is no complete antithesis or replacement between the theory of competitive advantage and the theory of comparative advantage. Since the two theories are unified within the system of international trade theory, they complement and reinforce each other.

Theoretically, the theory of competitive advantage is mainly used to describe the factors (or sources) influencing international competitiveness of the enterprise or the region, so the theory, like the theory of comparative advantage, is subordinate to category of international trade theory, and there are great similarities between the two. The theory of competitive advantage is used to explain the phenomena of international trade and intra-industry trade under the condition of similar factor endowment structure, therefore, it falls within the sphere of new trade theory. The field of international trade undergoes the development thread of "classical trade theory-the neo-classical trade theory-the new trade theory". In different stages of economic development, specific trade phenomena prompt the generation of different trade theories. The theory of comparative advantage can explain the trade phenomena between two countries with different structures of factor endowment (such as the developed countries and developing countries), while the theory of new trade explains the phenomena of trade between the countries with slightly different structures of factor endowment (such as the developed countries and developing countries), in conjunction with the phenomena of intra-industry trade.

In practice, the relationship between the two is close, and the industries with comparative advantage often easily to have

strong competitive advantage, in other words, comparative advantage is the intrinsic base of competitive advantage, and comparative advantage and competitive advantage can be transformed into each other. Only when the industry with comparative advantage forms strong competitive advantage can it obtain real benefits; on the contrary, it is difficult for the industry lacking comparative advantage, to form and maintain competitive advantage, and comparative advantage and competitive advantage are often interdependent. For developing regions, giving full play to the existing comparative advantage and fostering industrial competitive advantage, will help the developing regions get rid of "comparative advantage trap" so as to implement catch-up strategy. The regional agricultural development must rely on comparative advantage, and gradually promote, exert and maintain competitive advantage<sup>[1]</sup>.

## 2 The factors influencing regional agricultural competitiveness

Regional agricultural competitiveness is an evolving concept, from the initial pure competitiveness of agricultural products to competitiveness of agricultural industry, which is the industrial competitiveness formed relying on the advantage of geographical location and comparative advantage of elements. The regional agricultural competitiveness can be reflected in the following aspects: market competitiveness of regional agriculture, agricultural growth ability, profitability of agriculture and the future sustainability of agriculture.

There are many factors influencing regional agricultural competitiveness, and from respective research viewpoints, the scholars advance the factors influencing agricultural competitiveness, including resource endowment, ecological environment, labour quality, infrastructure, technological innovation and transformation capability, industrialization level, relevant support industries, the market demand structure, and government management and policy<sup>[1-4]</sup>. Agricultural production has strong dependence on water, soil, climate and other natural resources, and the quantity and quality of natural resources is the foundation and lifeblood of agriculture. Ecological environment mainly consists of forest vegetation, biodiversity, soil and water conservation, soil, water and air quality, etc., and the level of environmental quality directly affects the efficiency of agricultural input and output, and quality safety of agricultural products. The cultural and educational level of China's farmers is low, while the farmers are the carrier for the advanced production technology to play role, thereby restricting improvement of agricultural productivity. And the farmers who adopt decentralized management mode lack awareness of the market economy, so the decision-making is blind, difficult to avoid market risks. Rural infrastructure includes irrigation, roads, transportation, electricity, energy, communications, etc., having direct and indirect effects on the level of agricultural input and output, labour productivity, and agricultural production structure. The higher the improvement level of agricultural infrastructure, the more the positive effects on competitiveness of agricultural products. The developed countries often offer considerable ag-

ricultural subsidies for agriculture, in order to enhance its international agricultural competitiveness. Although China in recent years has carried out large-scale reform of government institutions, the transformation of government functions is not complete, and the public service role and function of government has not yet been exerted. Due to institutional barriers, monopoly occasionally occurs in some regions, seriously affecting the circulation of agricultural products. The market demand structure of the state and the region also affects agricultural competitiveness to a certain extent. The more abundant the varieties of agricultural products needed by the market, the higher the requirements on quality. And agriculture will develop in this direction to meet market demand, which will help improve agricultural competitiveness.

## 3 Conversion from comparative advantage to competitive advantage—a way to improve regional agricultural competitiveness

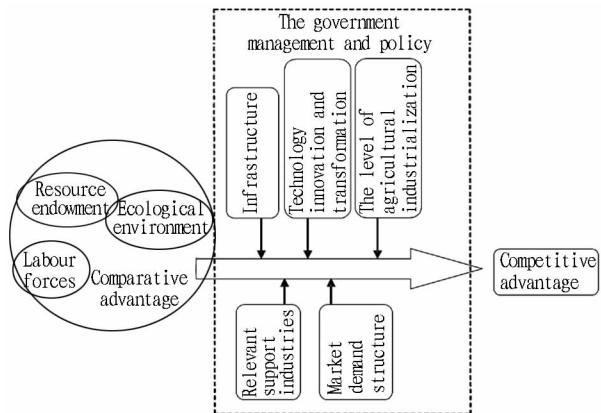
### 3.1 Analysis of conversion mechanism of regional agriculture from comparative advantage to competitive advantage

Based on the theory of comparative advantage, the pattern of regional industrial division of labour is established, and the main purpose of inter-regional trade is each supplying what the other needs. Nowadays, with market integration, the agricultural products in various regions, have clear aim of occupying larger market share and getting more interests in domestic and international markets. To achieve this goal, agricultural development should not just stay at the existing local comparative advantage, but focus on creating competitive advantage. In international trade, the comparative advantage purely determined by the resource endowment may have no competitive advantage, and if we determine international trade structure merely according to the resource endowment, we will fall into "comparative advantage trap"<sup>[5]</sup>.

The comparative advantage is a potential advantage, often expressed as the relative abundance of endowment of one factor. However, having comparative advantage does not mean having competitive advantage. Exerting comparative advantage is the basis of realization of competitive advantage. The competitive advantage is a real prominent competitive force, and the result of comprehensive coordination of the constituent elements of productivity. As Schultz put it, the viewpoint of food production being subject to the merciless nature is not consistent with economic history. History has proven that we can expand resources through the accumulation of knowledge. The human future is not subject to space, energy and farmland, but depends on human intelligence. With the wide application of modern high technology to agriculture, the "bottleneck" problems of land, labour and other production factors in agricultural development are conquered, for example, Israel, a country with severe water shortage, adopts project technology, biotechnology, and water-saving irrigation technique to overcome the water shortage predicament. Under this trend, the comparative advantage in traditional sense-resources, labour advantages will reduce the opportunity to create more interests. The

differences in ecological level, the degree of processing, and extension of industry chain will cause disparity of quality and feature of agricultural products, and cause the hypothesis of "fully competitive homogeneous market of agricultural products" under the theory of comparative advantage to be replaced by "heterogeneous market of agricultural products with imperfect competition or monopolistic competition".

Based on the special nature of agricultural industry, this paper builds an analysis framework of international agricultural competitiveness converting comparative advantage into competitive advantage (Fig. 1). Under the condition of imperfect competition and scale economy, the abundance of elements is embodied in price advantage of agricultural products. The price advantage determines the comparative advantage of agricultural products within the region, while non-price advantage determines the agricultural competitive advantage. Non-price competitive advantage includes infrastructure, technological innovation and transformation capability, the level of industrialization, relevant support industries, the market demand structure, the government management and policy, etc. Driven by the government, non-price advantages within the region promote the agricultural comparative advantage to be converted into competitive advantage, and the two advantages jointly determine the level of regional agricultural competitiveness.



**Fig. 1** The analysis framework of regional agricultural comparative advantage transforming into competitive advantage

### 3.2 The way to realize conversion from comparative advantage to competitive advantage in regional agriculture

**3.2.1** Vigorously develop agricultural industrialization and foster the leading enterprises. The development of agricultural industrialization can drive the development of agriculture, and the processing industry of agricultural products with competitiveness has important "elevation effect". The low holistic level of agricultural product processing industry is one of factors restricting further improvement of international competitiveness of China's agricultural products. The government should offer a series of preferential policies in terms of tax, credit and financing for the processing enterprises of agricultural products, increase technology inputs into the leading processing enterprises of agricultural products, and promote the development and prosperity of processing industry of agricultural products.

The leading enterprise is the organizer of industrialization management, market pioneer, and main body of technological innovation, and also the operation center, information center and service center of agricultural industrialization, which plays a key role in whole industrial chain. We should adjust measures to local conditions, to foster a number of leading international enterprises with strong international competitiveness and excellent profitability, which can promote employment for the farmers and improve farmers' income effectively. In addition, we need to establish and improve the agricultural organizations and commodity associations, to improve the level of organization and actively cope with the fierce market competition.

**3.2.2** Improve the national policy system for supporting agriculture and increase the inputs into infrastructure and scientific research innovation. According to Porter's competitive advantage theory, the government behaviour and opportunity is not a major factor, which only plays a supporting role, but the role of government in protecting agriculture is immeasurable. Through impacting various factors in diamond system, the government indirectly improves agricultural competitiveness. Developed countries overseas offer vigorous support for agriculture, so that the agricultural products have great competitive advantage in the international market. China should also establish a set of policy system to offer comprehensive support for agriculture, including production subsidies, technology promotion, disease prevention and control system, information service system of agricultural products, and building of export credit guarantee mechanism. Especially in agricultural infrastructure building, agricultural technology development and other fields of public goods, the private investment has no incentive function, so the financial inputs of government should give full play to its leading role. The government should establish and improve a number of policies and measures conducive to production and distribution of agricultural products, and reasonably guide the enterprise to take full advantage of all resources to improve competitive advantage, according to unique resource endowments in the region.

**3.2.3** Promote the development of related industries and support industries and promote agricultural competitiveness. The development of related and supporting industries can promote the improvement of regional agricultural competitiveness in many ways. The upstream industry and sector of agriculture includes research, development and promotion institutions, agricultural infrastructure construction, agricultural material industry, agricultural machinery industry, agricultural insurance industry and other social service sectors. The upstream industry with competitiveness can provide timely, high-quality and low-cost means of agricultural production, technology and services for agricultural production. Agricultural logistics system includes logistics market of means of agricultural production, wholesale market of agricultural products, distribution center of agricultural products, third-party agricultural logistics enterprise, rural and urban transportation network. The distribution industry of agricultural products with competitiveness can greatly reduce logistics costs and improve logistics efficiency. We should also

strengthen development of the related support service industries, carry out quality certification of agricultural products, further promote the standardization of production, and establish quality control system.

**3.2.4 Increase consumers' demand for the quality of agricultural products and propel business investment and innovation.** There are many factors influencing the market demand of agricultural products, and some which are exogenous demand factors, such as consumers' preference and taste, the enterprises should adjust measures to local conditions and take advantage of these exogenous influencing factors to frame appropriate competitive strategies according to their conditions. In Porter's theoretical system, it lists the knowledgeable and finicky customers as one of important parts of demand conditions, because the existence of customers' "special" needs can stimulate continuous investment and innovation of enterprise. We can protect rights and interests of domestic consumers through government legislation, regulation and other forms, to foster them as "critical customers", so that the agricultural enterprise can properly handle the consumers' legitimate but critical demand, promoting agricultural competitiveness invisibly under the external pressure.

## 4 Conclusion

The comparative advantage theory suggests that the states or regions should choose the path of economic development according to resource endowments or factor abundance, but it doesn't point out how to choose the right way to enhance economic strength. The competitive advantage theory emphasizes the role of high-level factors in enhancing the regional industrial competitiveness. The one-sided understanding of the relationship between comparative advantage theory and competitive advantage theory, causes people to completely negate compar-

ative advantage theory, instead espouse the competitive advantage theory, so that the states or regions never foster competitive advantage according to their own comparative advantage, triggering low efficiency of economic development and other issues. This paper argues that there is no antagonism between the two theories, but rather a complementary and mutually reinforcing relationship. According to influencing factors of regional agricultural competitiveness, combining comparative advantage theory and competitive advantage theory and achieving the transformation from comparative advantage to competitive advantage, is an effective way to enhance the regional agricultural competitiveness. Cultivating competitive advantage based on comparative advantage, is strategic choice for China's agricultural development in the future<sup>[6]</sup>.

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