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Induced Institutional Transition of Contract Farming in Shandong Province

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Abstract This article describes the process of institutional transition of contract farming in Shandong Province. The changes in preparatory stage of contract farming express in: One, the information asymmetry of the two sides of the contract is reducing; Two, the security system of contract farming tends to be perfection; Three, the organizational form of contract farming tends to be simplification. The measures taken in production stage of agricultural product are as follows: The first is investment in means of production; The second is perfection of field management; The third is soundness of quality test. The measures taken in purchase stage of agricultural product are as follows: First, product is developing from preliminary working to intensive processing; Second, leading enterprises develop to large-scale and standard. The changes in profit distribution stage of contract farming are as follows: First, the profit relationship between enterprises and peasant households turns from opposition to mutual benefit. Second, the means of default issues turn from emotional self-discipline to rational self-discipline. Performance of contract farming is analyzed: First is putting forward the transformation of agricultural operational form; Second is reducing the uncertainty; Third is truly realizing the risk sharing and participation of interest. The defect of institutional transition of contract farming is discussed: First is no longer the operational form that benefits many farmers; Second is still the typically incomplete contract; Third is expansion of capability gap of business game between leading enterprises and farmers; Fourth is the still existence of information asymmetry; Fifth is informal institution falling behind formal institutional arrangement. The corresponding countermeasures are put forward: First is developing professional cooperation; Second is completing land circulation system; Third is constructing honest information system; Fourth is building social honesty system.

Key words Contract farming, Induced institutional transition, Performance, Honest information system, China

Contract farming in Shandong Province develops quickly, however, there exists some problems such as high default rate, small scale, few categories, nonstandard contract and so on^[1]. Both sides of the contract are constantly seeking for solutions of problems in practice. It makes contract change from short-term contract to long-term contract, from one-time game to repeated game. Along with the continuous improvement of organizational form of production and management like contract farming, at the time of release and expression of performance of new system, new problems appear at the same time. So, it is necessary to make better acquaintance of these problems and find out corresponding solutions.

1 Institutional transition of contract farming in Shandong Province

1.1 Preparatory stage of contract farming Before contract farming putting into effect, both sides of contract need to complete two things: One is choosing appropriate partner, the other is signing contract. In the process, there mainly comes out the following changes.

1.1.1 Reduction of information asymmetry of the two sides. This mainly means that peasant households and enterprises will make acquaintance of the production and operation capacity of

each other before signing contract. In particularly, the leading enterprises are strict with the selection of peasant households. Before signing contract formally, they will make informal or formal investigation. Firstly, they request peasant households participated in contract have a certain invest capital. If the initial invest capital of agricultural production completely relies on charge sales of means of production from leading enterprise, operational risk appears due to great occupancy of capital. Secondly, peasant households wanted to sign contract are required to have a certain production and management capability as well as relatively high level of knowledge and technical ability. They need to rapidly understand and grasp the quality standard and operation requirements of leading enterprises in purchasing agricultural products. Thirdly, the signed peasant households are required to have close geographical relationship and be responsible for the quality issues.

1.1.2 Perfection of security system of risks of contract farming. In the past, security of risk of contract farming generally means leading enterprises purchasing with base price to cope with market price risk and fluctuating along with market changes when market price is rising. At present, security system of natural risks of contract farming tends to be perfection. Firstly, specific to natural risk, leading enterprises increase their input of science and technology to improve the risk resistant capacity of agricultural production. The main practices are sending additional technicians, giving answers and solutions to related issues at any time, making sure of technical support from means of production input to harvest and transportation of agricultural and animal products. Secondly, specific to market risk, leading

enterprises cope with technical trade barriers of export by improving facilities of quality test. Through careful market research and reasonable price position, constantly develop markets at home and abroad. Thirdly, specific to credit risk, leading enterprises mainly take two measures: one is carrying out deposit system. Ask for a certain amount of deposit from farmers, in order to avoid that breach of contract cannot get corresponding punishment due to lack of compensation capability. The other is requirement of specific investment. Leading enterprises increasingly tend to ask for specific investment from farmers. It is not only for reducing transaction cost of leading enterprises, but also for improving compliance rate of farmers. For example, request peasant households to put into at least 50 or 100 acres land, and the land should have certain isolation belt, necessary building facilities (such as specialized rooms for storing pesticides and agricultural implements) and agricultural production facilities (such as fly net).

1.1.3 Simplification tendency of organizational form of contract farming. At present, leading enterprises mainly struggle to develop two kinds of organizational form. One is 'enterprise + big peasant households', the past form 'enterprises + peasant households' gradually quit the stage, which means enterprises face to thousands of scattered peasant households. The other is land enterprises contract land to build production base of agricultural products and hire peasant households to manage. The key distinction between the two forms is contractor of land-use right. Land is contracted by the peasant households participating in the contract in the former form, and by the leading enterprises in the latter form. In the latter form, peasant households just participate in the contract as employers.

1.2 Production stage of agricultural product In production stage of agricultural product, in order to ensure quality of purchased agricultural product, leading enterprises not only strengthen quality test of agricultural product, but also take quality control in the whole process of production. So, most of the signed contracts are production contracts.

1.2.1 Input of means of production. For the input of means of production from peasant households, use centralized purchasing to ensure quality. Leading enterprises use their inspection and testing equipments to test the qualification rate of seeds, active principle chemical fertilizer as well as whether the pesticide will lead to pesticide residue overproof. Ensure the quality of agricultural products from the source of production. In addition, patterns of providing means of production develop from charge sales to cash settlement. Because charge sales take up a great deal of business capital, business risk is increased. Meanwhile, cash settlement of means of production can avoid a certain default risk and prevent the embarrassment condition of collecting no agricultural products after charge sales of means of production.

1.2.2 Improvement of field management. Through building perfect farm management system, allocate field managerial and technical staff in every production base and farm, participate in the entire productive process, help peasant households to formulate production design and specific operational approach.

Require peasant households to be in strict accordance with good agriculture practices (GAP) to use chemical fertilizer and pesticide. The usage, dosage, time of fertilizer and pesticide should be scientific and standard. peasant households cannot use pesticide arbitrarily. It is necessary to use pesticide under the technician's guidance. Make sure of the variety, dosage and sprinkling time of pesticide. Mark every land with farmland mark, in order to build the quality review system. Realize the management from field to dinning table, so that, if there is a quality problem, we can investigate the responsibility to persons.

1.2.3 Soundness of quality test. The quality safety of agricultural product has already become the key factor of restricting export of agricultural product in our country. So, leading enterprises make quality as the key point of improving international competitiveness. On the one hand, construct the standard production system of agricultural system, organize production according to standard of importing country; On the other hand, make sure of the quality of agricultural exports by building their own quality test centers of enterprises, and using different quality test method to different purchased products.

1.3 Purchasing stage of agricultural products

1.3.1 Transformation of target in purchasing agricultural products. An important role of contract farming is ensuring material supply for leading enterprises. In initial stage of development of contract farming, the main target is satisfying the processing requirement of leading enterprises in quantity. At present, in order to improve market competitiveness, the target of leading enterprises in purchasing agricultural products changes from satisfying quantity to reaching a certain quality standard on the basis of satisfying quantity. In other words, in the first place, in contract farming, purchasing agricultural products is to acquire enough quantities of materials of agricultural products for production. However, along with product quality and market taking up a more and more important position in business operation, the target of purchasing agricultural products turns to pay attention to quality. For example, in the questionnaire survey for leading enterprises by the author, there are 174 effective answers to "major target of leading enterprises in signing contract with peasant households". Among them, "ensuring material supply" takes up 90.8%, and "ensuring the quality of purchased agricultural products" has already taken up 62.6%.

1.3.2 Building reasonable incentive mechanism. In purchasing stage of agricultural products, leading enterprises build reasonable incentive mechanism to promote reasonable competition among the peasant households in the contract. To those peasant households who has a high yield and good credit, enterprises will offer a certain reward. For example, award the advanced title, invite them to do empirical report for other farmers, hand out a certain amount of bonus, enjoy charge sales for good credit farmers and so on. To those who complete the production task not very well, for example, rate of emergence less than 70%, they will receive corresponding punishment such as reducing the purchasing price. In this way, in the same participation in contract farming, there may be a big difference of average revenue in unit land area. Thus, sense of competi-

tion among peasant households is aroused.

1.4 Processing and sale stage of agricultural product

1.4.1 Products developing from preliminary working to finish machining. The main exports of contract farming in Shandong Province are Japanese and Korea. In the past, the main work of export is the simple processing of agricultural products, such as washing, selecting, incising, precooling, grading, packaging and *etc.*, to make into fresh-cut vegetables, so, the additional value of products is little. But now, export agricultural products turn to finish machining, including prepared food, FD (freeze drying) product, aquatic product, oil product, meat product, condiment and so on. The agricultural product with finish machining has a high processing stage, so the additional value is relatively high. The target of profit maximization promotes enterprises changing from production enterprises to branding enterprises. And then, it requires leading enterprises to ensure quality of raw material in production and purchase, and constantly improve fining degree in processing stage.

1.4.2 Leading enterprises developing to large-scale and standard. Leading enterprises develop from purely relying on market to actively guiding the market. In the past, we produced and processed as what the overseas market needed. This will cause a vicious circle like market demand-mass production-supply exceeds demand-profit decrease. Now, enterprises no longer put risks into a single basket, they strive to product diversification. In addition, disorderly competitions among enterprises obtain effective resistance along with the establishment of market position of large-scale leading enterprises.

1.5 Profit distribution stage of contract farming

1.5.1 Profit relationship between leading enterprises and peasant households turning from opposition to mutual benefit. In the past contract farming, profit relationships between leading enterprises and peasant households were described as asking a tiger for its skin, the loss of one side was the gain of the other side. Along with the development of market economic system and improvement of contract farming, now, the enterprises and major peasant households both realize that: On the one hand, peasant households need market development and technical input from enterprises to make sure of products sales. Because the target of enterprises is also profit maximization, it is impossible to ask enterprises for bearing all the market risks, enterprises only can bear a part of market risks under enormous capital support. On the other hand, enterprises need peasant households to put into land and field management, cultivating and raising techniques, in order to reduce the cost of production. The relationship between the two sides is mutual demand and interdependency for realizing profit maximization. So, the contract farming of Shandong province changes from short-term to long-term contract, business of the two sides of the contract changes from one-time game to repeated game.

1.5.2 For default issues, changing from emotional self-discipline to rational self-discipline. The default issues in our county always tend to solve by the two sides of contract themselves, rather than relying on laws. It's just that in most cases, the contractors know more conditions and grasp more information

than the third party involved in latter. The designed settlement of disputes is often more brief and effective than that by court, and the cost is cheap. Contract is still leading by self-discipline. But, through incentive mechanism, threatening mechanism and supervision mechanism, we can make management of contract afterwards by private orders rather than by laws. For example, give material and spirit reward to the peasant households who complete the contract well, threaten the peasants for never co-operation if they default, and send technicians to supervise the whole process of production, and so on. Therefore, private orders show up a strong and changeable procedure of implementing contract and restraining cooperators.

2 Performance analysis of institutional transition of contract farming

The above mentioned institutional transition in the development of contract farming pushes forward contract farming into virtuous circle.

2.1 Pushing forward transformation of agricultural business form In China, scale of operation is small, land is broken into small part, it restricts the improvement of agricultural labor productivity and development of agricultural modernization. Through developing production base in contract farming and the minimum scale demand of land input from peasant households in the contract, business scale of land is improved, circulation of land management right is enhanced. The primary scattered peasant households gradually become big peasant households with rich experience of production management and management accounting. They have the qualification to organize to dialogue with leading enterprises and negotiate the agricultural product price. It plays an important role of improving organization degree of farmers and changing their weakness position.

2.2 Reducing the uncertainty Uncertainty means external shocks and behavioral uncertainty caused by bounded rationality and opportunism^[2]. On the one hand, the current contracting farming uses modern agricultural science and farming techniques and builds swift information network and scientific channel of distribution to minimize the uncertainty caused by bounded rationality; On the other hand, specialized assets input is using to resist opportunism of both sides. Along with the standardization of leading enterprise, peasant households, especially the big peasant households gradually adapt to market economy, both sides of the contract increasingly seek for long-term profit. Along with the increment of frequency of transaction, they change from one-time game to repeated game, so as to reduce the opportunism behavior.

2.3 Truly realizing risk sharing and participation of profit Risk sharing in current contract means the division of work in risk sharing turns from vague to clear. Peasant households in production base mainly undertake natural risk, such as production reduction and crop failure caused by climate and natural calamities. Leading enterprises undertake part of the market risk. If market price falls, enterprises will purchase by base price. If market price rises, they will properly raise the purchasing price, rather than fully fluctuating along with market chan-

ges. And credit risk is undertaken by both sides. About participation of profit, the so-called profit is not only for the profit after sales, it also includes channels, markets and so on.

3 Defect of institutional transition of contract farming

3.1 No longer business form benefiting most of the peasant households Contract farming chooses big peasant households as its partners, many scattered small peasant households are excluded. The original intention of contract farming is linking small peasant households to guaranteed and profitable product market. Through contract, enterprises and peasant households face the risk together, it can defuse market risk from the source to a certain degree, so as to improve the marketization degree and income level of farmers. But when contract farming excludes scattered small peasant households, the function of reducing uncertainty of transaction will be confined to big peasant households. But to the scattered small peasant households who are in sore need of getting over uncertainty in production and management. It is impossible to seek for potential external profit from agricultural products processing or signing contract, so contract farming is no longer business form benefiting most of the peasant households.

3.2 Still typically incomplete contract Although using many effective measures in the operation of contract farming, the behavior assumption of bounded rationality and opportunism determines that in actual transaction, formulating and executive contract is still incomplete. Firstly, before formulating contract, it is impossible to consider all the inevitable and accidental events in the future. Secondly, in the time from formulating to performing contract, there is filled with incomplete information, uncertainty and opportunism behavior tendency of economic entity. Thirdly, even if spend a large amount of time, energy and money, it is unable to realize complete execution of the contract which always exists omission by the third party such as arbitration or court.

3.3 Expansion of capability between leading enterprises and peasants households At present, most of agricultural product markets are buyer's markets, so, leading enterprises don't need to worry about the amount of raw material. The main purpose of developing contract farming is to obtain high-quality raw material. This makes them become the rule maker, while the discourse right of peasants is still weak. For example, in many design of contract, there are many obligations of peasants but few of enterprises. Such rule is obviously bad for peasants participating in the contract and enjoying corresponding right. For example, capital shortage makes many technical peasants out of contract farming because of inextricability of cash pledge and reproduction input.

3.4 Existence of information asymmetry Although information asymmetry of both sides has reduced somewhat, the main reason is that enterprises make acquaintance of production and management conditions, capital strength and geography relationship of peasants before signing the contract, send technicians to supervise the whole process of production opera-

tion of peasants households. But peasant households are not aware of distribution channel, sale price, selling cost, selling profit as well as risk condition and reputation of enterprise^[3]. So, information asymmetry between two sides still exists.

3.5 Informal system is behind of formal system Formal restraint can exert effects only in the condition of be compatible with informal restraint and implementation mechanism. In contract farming, formal systems develop rapidly, such as threatening mechanism, supervision mechanism, incentive mechanism and contract standard. However, the adaptive informal systems have already fallen behind, such as honest compliance of contract, self-restraint and mutual trust mechanism between enterprises and peasant households. It is undeniable that in the development of contract farming in our country, there still exists such problem as low compliance rate, widespread default phenomenon. Honesty is the key factor of influencing compliance rate. However, current construction of social honest system is obviously not enough to support smooth operation of contract farming.

4 Conception of tendency of institutional transition of contract farming

Specific to the defects of institutional transition of contract farming, the author considers improvement of contract farming in the following aspects.

4.1 Developing professional cooperation Through professional cooperation of farmers, we can not only reduce the transaction cost in signing and operation of contract, but also improve organization level of peasants, so as to strengthen discourse right of peasants and change the issue of big gap of the capability of business game of the two sides of the contract. Cooperative economic organization plays an important role of promoting development of contract farming. For example, in the questionnaire survey of organizational form of contract, the ideal forms considered by enterprises are "enterprises + cooperative economic organization of peasants + peasant households" and "enterprises + local government + peasant households". It explains that enterprises hope to have an intermediate organization to reduce the cost of organization. This is determined by particularity of agriculture and limitations of household management. Especially in the transformation process of socialist market economy, various functions of cooperative economic organization are irreplaceable by government and enterprises, they can accomplish tasks which cannot do or cannot do well by market mechanism and government intervention. The current cooperative economic organization can provide first-rate services in many aspects for peasant households, such as formulating industrial standard, offering quality certification, information consultant, developing market, spreading techniques, holding exhibitions, training, coordinating disputes, punishing or even expelling member enterprises which have harmful behaviors, protecting guild regulations and so on.

4.2 Improving land circulation system Land fragmentation leads to remain the cost of production of agricultural products high and lack of international competitiveness. And scale of business is too narrow and will lead to serious concurrent

business phenomenon. It is not good for improvement of production efficiency and development of industrialization and urbanization, and then, the improvement of labor productivity and economic profit will be restrained. In the development of contract farming, in order to improve discourse right of peasant households, it is necessary to scale of operation and production of peasant households. And to realize moderate scale operation, it is necessary to further improve land circulation system and make full use of limited land resources. On the one hand, further improve land property right system in countryside, give peasant households the land contract for the managerial right. Never intervene peasant households in legal, volunteering and compensated land circulation of contracted land in contract period. Make peasants as the real main part of profit in land circulation. On the other hand, build sound market of land circulation, set up trading place for land management right, provide trading platform and system guarantee for standardization and institutionalization of land circulation.

4.3 Building honest information systems Take follow up investigation realistic record of honesty conditions of leading enterprises and peasant households. Announce honesty index regularly, form an open information platform of honesty. Building personal honesty file can set out from quality record of agricultural products. Spread the record system of the whole process of production of agricultural products, so as to review the responsibility of the agricultural products in the market to the producers. Make records and archives administration of the honesty conditions of producers. In addition, strive to develop service network of agricultural information, guide peasant households using existing communications media such as broadcast, TV, internet to explore and grasp market informa-

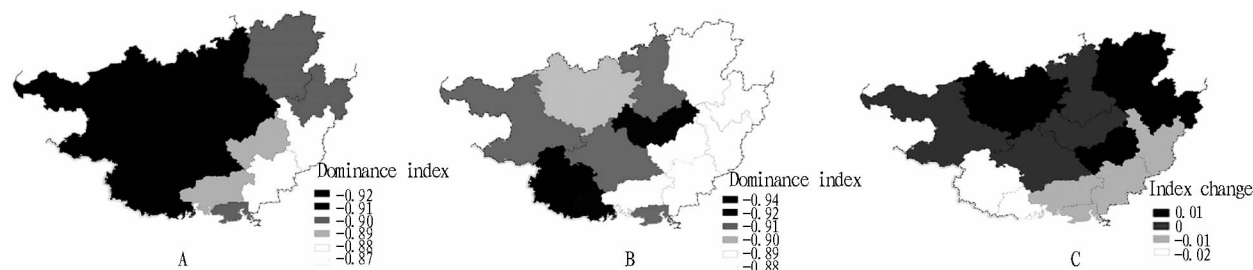
tion, so as to change its weakness position of information.

4.4 Constructing social honesty system Honesty is one of the social capitals, and also the lubricant of the operation of contract farming. It can save transaction cost by a large margin. When construct social honesty system, firstly, it is needed to have a honesty information database, in order to make sure of rapid transmitting of dishonest information of enterprises or peasant households. On the basis of information database, construct credit rating system. Not only determine line of credit of enterprises as a peasant households by this, but also use credit rating as the standard to determine enjoyed right of economic bodies in all aspects of production, management and recreational activities. Truly make honesty become the necessary personal moral for living in the society. Secondly, it is needed to have a believable punishment mechanism. The contractors can not get no punishment of dishonesty because of lacking of compensation capability or other reasons. At last, moral restraint is a low cost supervision means, we can convert social norm into value orientation of people. Only the honesty enjoys popular support, can thee relevant system of supervising dishonest behavior operate with high efficiency.

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(From page 4)



Note: A and B show the index change in the years 2003 and 2008; while C indicates the change of comprehensive index.

Fig.1 Changes in the comprehensive dominance index of grain production in Guangxi in recent five years

in eastern Guangxi and northern Guangxi will be weakened and the advantages will be transferred into central Guangxi and southern Guangxi. This is also an inevitable result of the market reform. Weakening the grain production will help to optimize the agricultural structure, to promote the rational allocation of labor, and to increase the farmers' income level in central and southern Guangxi. Therefore, we should make full use of the comparative advantage in agricultural production, guide the structure adjustment of agricultural production in different areas according to the law of comparative advantage, and achieve the rational distribution and specialized production of agricultural production.

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