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### Research on Trust Mechanism in Rural Cooperatives

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Abstract The thesis introduces the generation and mechanism of action of trust during cooperation, which indicates that trust can activate the members' participation in management and investment, and preclude the generation of members' will and behavior of breach of contract so as to guarantee the stable development of farmers' cooperatives; the decreasing degree of trust can put sand in the wheels of farmers' cooperatives. Based on these, we conduct survey of questionnaire on 197 rural households of 10 farmers' cooperatives in Yanliang, Xi'an, Lintong and Yanglin. By analyzing the generation of trust mechanism and survey data, some suggestions are put forward as follows: promote inner communication; remodel the trust culture of informal system; hew to contractual system; perfect the system of motivation and punishment; establish the system of equal property right and investment; implement management and supervision by job rotation so as to promote the trust degree among the members of farmers' cooperatives and keep the benign recycle of "trust-cooperation".

Key words Cooperatives, Trust mechanism, Members' will and behavior, China

Trust, the basis of farmers' cooperation, can reduce the internal transaction cost effectively and elevate the operating efficiency of organization. From the process of the development of farmers' cooperation, we can find that the spontaneous cooperation is mostly based on the trust among members. China's new farmers' cooperatives are mostly sponsored by government, and farmers' participation in this type of cooperation is just for obtaining more governmental support and enjoying relevant preferential policies. The trust degree is not high among members. Although they join the cooperatives nominally, the loyalty degree is not high, so there is frequent phenomenon of defaulting on obligation to sell agricultural products in private when the price of market is high. In addition, the farmers' cooperatives have not yet formulated the punishment system resulting in the low cost of farmers' breach of contract, disjunctive organization and poor ability of resisting risk, so elevating members' trust degree is important guarantee of ensuring the lasting development of cooperation. Many scholars analyze this in the perspectives of economy and management. They ascribe the success of cooperation to management cost, operation strategy, capital problems, system design and so on; give priority to the research on the factors of system and economy during farmers' cooperation, pay little attention to the factor of trust, lack documents of researching trust factors during the development of farmers' cooperatives [1-4]. This research probes into the mechanism of generation and action in the process of cooperation, conducts the data analysis on trust and members' will and behavior by virtue of survey, and puts forward the countermeasures and suggestions to elevate members' trust degree.

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## 1 The mechanism of generation and action in cooperation

1.1 The generation of trust in cooperation Trust, associated with people's intercourse behavior closely, influenced by the system, culture and material basis, is a kind of attitude and evaluation of individual and organization to environment and the surrounding people. In the recent years, as the traditional trust model bears the brunt of new situation, the entire trust environment in rural areas is relatively poor, which can be seen as follows: firstly, the trust based on consanguinity is dimmed; secondly, the trust radius shortens; farmers' trust degree on the government of town and village descends. The reason of the environmental deterioration of rural trust is as follows: firstly, there is a shortage of trust system supply; secondly, it is driven by economic profit; thirdly, the social mobility is strengthened<sup>[5]</sup>. The objectives of this research are members' trust on organization system, members' trust on managers of organization and the generation and action of trust mechanism as well as trust among members. There are two approaches of the generation of members' trust, namely "relationship trust" and "system trust". The "relationship trust" is the trust which is generated gradually by the association among farmers. By the perceptual knowledge and the information generation of other channels in the process of frequent association, the "relationship trust" is the evaluation and expectancy on whether the other organizations and individuals are worthy of trust. The "system trust" is the trust generated by system, and on one hand, the national macro laws and policies make farmers confident and optimistic, and on the other hand, it is the guarantee of organization and system. When farmers are faced by joining the cooperatives, they will consider whether the sponsors of cooperatives are worthy of trust, and whether the cooperatives can bring the expected income for themselves. There are some premises: firstly, the trust degree on rural social environment is low; secondly, whether the relationship is close determines the trust degree on others; thirdly, the trust degree on strangers is

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changed by continuous association; fourthly, the farmers have a good reputation in villages, impacting others' behavior.

The spontaneous farmers' cooperatives are generally established by the farmers with close relationship after consultation. The trust degree of this type of cooperation is very high, and the trust is from the personal relations among farmers. This cooperation tends to be lasting. The "relationship trust" is the principal approach to sustain cooperation, but the system and relationship is not categorically antithetic. Out of tentative cooperation, the farmers will adopt relevant system to underpin cooperation, like the cooperatives system and the protocol of unified purchase and sale, but it is merely kept by farmers' mutual trust, lacking corresponding punishment measures. When part of farmers default on obligation, they are objurgated morally by other members, and the cost of breach of contract is not high. After initial successful cooperation, the farmers will be motivated greatly to participate in management and investing, thus the trust chain is consolidated; if the members breach contract or the farmers' cooperatives do not answer members' expectancy, the trust relationship between members and organization will be sundered, resulting in the disintegrated cooperatives. As to the cooperatives which are sponsored dominantly by government and enterprise, there are many reasons regarding farmers' joining the cooperatives. Primarily, they want to get the preferential policies and support of government, and resources of enterprises. During surveying the reason of joining the cooperatives, we find 85.3% farmers' joining the cooperatives is to get governmental support. So in the cooperatives sponsored by government, the farmers trust the government primarily and the relationship among members secondly. Being that the village shows not high trust degree on local government, the trust basis of joining cooperatives is shaky, the positive external effect of cooperation will cause the "hitchhiking behavior", everyone knows clearly the objective of joining the cooperatives, so the farmers defaulting on obligation show no excessive worry about the objurgation of public opinion, and the shortage of punishment system makes the cost of breach of contract low. Consequently, the trust chain in the cooperatives is very shaky. When the market price is high, the farmers are inclined to sell the products directly to market. According to survey, only 7.6% of members flatly refuse such temptation, 30% of members accept it fain, and 60% of members' attitudes are uncertain. So, no matter the cooperatives are established spontaneously by farmers or sponsored by government, they need perfect design of organization and system. Under the circumstances of poor rural trust environment, keeping the trust chain of organization and members not only merely depends on relations, but depends on the guarantee and control of system so as to ensure the benign recycle and promote the trust on interpersonal relations at the same time.

1.2 The action mechanism of trust Due to the shortage of system control, trust and the interaction mechanism of members' will and behavior can be generalized as "trust-cooperation-strengthen trust-continue to cooperate". What keeps such recycle is "relationship", and the relationship is close in the cooperatives which are established spontaneously, but the trust degree is low in the cooperatives which are established by government or enterprise, so the trust chain to keep the trust between organization and farmers is shaky. When it is undergone the external interference, this recycle of cooperation is difficult to keep. If we add the system control to the cooperative recycle chain of trust, increase the cost of breaching cooperative contract, and elevate the trust degree of farmers and organization, then the recycle will become benign and the cooperatives also develop smoothly. We should use system to guide farmers' will and behavior in order to make honesty become habit, remodel the social order of honesty, reinforce the trust between farmers and organization and the trust among farmers by repeated communication and understanding, and keep the benign recycle of cooperation.

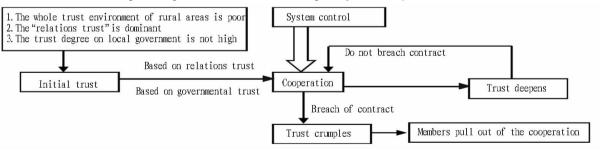


Fig. 1 The generation mechanism of trust

As can be seen from Fig . 1, members' will and behavior of joining cooperatives are out of initial trust. One is the trust on government, and the other is the trust on sponsors.

Initial trust hinges on external trust environment and internal trust habit. The purpose of farmers' joining the cooperatives is to increase economic income. Due to the different age, gender, education, family income and the status in organization of every member, different will and behavior is generated after joining the cooperatives. The members' will includes the will of joining the organization, the will of participating in management, the will of investing, the will of defaulting on obligation, the will of quitting, the will of supporting the reshuffle of organization, the will of breaching contract to sell products, the will of selling cooperative stocks and so on; the members' behavior includes the behavior of voting, the behavior of attending the members' meeting, the behavior of communicating with the managers of organization, the behavior of quitting and so on. Trust is a principal motivation of stirring the members' will and behavior of joining the cooperatives, while the members' will and behavior also exert impact on trust. After the "trust-cooperation" recycle becomes benign, the members will fulfill the obligation, attend the members' meeting, and communicate with the organization frequently according to the requirements of organization, thus there will be more communications among members, and more communications between members and the managers of organization.

In the light of the approach of generating trust, the close interpersonal relationship can elevate the mutual trust degree among members, here we presume that the "trust-cooperation" becomes benign recycle, namely the members' behavior will not breach contract and be detrimental to the development of organization. After incessant recycle, the trust degree among members and the members' trust degree on organization and managers will be promoted. But if the recycle of "trustcooperation" is malignant, it will generate the members' will and behavior of guitting or breaching contract to sell products. Once the members choose the aforesaid behavior, it will generate linked effects, and the members' trust degree will also descend, which will disintegrate the farmers' cooperatives when it is serious. In order to preclude the happening of this circumstance, it is necessary to adopt the means of system control to guide members' will and behavior, for example, increasing the cost of members' breach of cooperative contract, forcing members to decrease the will and behavior detrimental to the development of organization, and preventing the internal trust environment of organization from damage, so as to make the members believe the justness and safety of organization and system. Although some members choose the behavior of breaching contract to sell products and other behavior damaging the trust among members, the members can trust the organization and system, and believe that the managers of organization can adopt effective means to protect the benefit of the members who keep promise, punish those who breach contract so as to ensure the justness and stability of organization.

## 2 The data analysis of trust and the members' will and behavior

The data sources of survey The samples of survey are selected from Yanliang, Xi'an, Lintong and Yanglin in Shaanxi province, and 10 farmers' cooperatives are surveyed, such as Fukang Melon Cooperative in Yanliang, Pomegranate Cooperative in Lintong and so on. The involved industries are the local dominant industries, such as dairy, vegetable, fruit and breeding. The form of giving out the questionnaire is concentrated directive filling in the information. The questionnaire is given out when farmers hold meeting or conduct the concentrated training, and there is someone who will answer the guestions when filling in the information, so the reply rate and correctness rate of questionnaire are both high. 202 questionnaires of survey are given out, and 197 questionnaires are replied effectively. The reply rate of this way of survey reaches 97.5% and the results are very correct. The questionnaire adopts secret survey, so it can guarantee the expression of members' real will. Some respondents leave the contact phone number voluntarily, and also express their opinions and suggestions in the

open-end questions, which indicates that part of the members are highly concerned about the farmers' cooperatives, and the effectiveness of the questionnaire is high.

#### 2.2 Results and analysis

2.2.1 The members' behavior and trust degree in farmers' cooperatives. The results of survey regarding the members' behavior and trust degree of farmers' cooperatives can be seen in Table 1, In Table 1, there are 37.56% members with high rate of attending members' meeting who make a score of 6 points; there are 15.22% members attending members' meeting inactively, make a score of below 3 points: there are 41,63% members who vote actively and 19.8% members who vote inactively: there are 45.18% members with high rate of communicating with managers, and 16.24% members with low rate of communicating with managers; there are 37.57% members who have high trust degree on society, and 9.65% members discrediting the society: there are 50.25% members with high trust degree on other members, 6.61% members with low trust degree on other members, 61.42% members trusting the management department highly, and 8.64% members discrediting the management department; there are 59. 19% members trusting highly the cooperatives, and 9.18% members discrediting the cooperatives. These data indicate that the members' behavior of participating in the organization and management is not so active, and there are below 50% members participating in the management of farmers' cooperatives with enthusiasm. 60% members approximately have high trust degree on the cooperatives, and 40% members who entertain the attitudes of hesitation and dubiety towards the cooperatives, which exerts negative impact on the development of the farmers' cooperatives, and the low trust degree also influence the members' loyalty and fulfillment degree of obligation. Especially faced by the external temptation, the behavior of breaching contract to selling products easily happens.

2.2.2 The members' will. Table 2 is the results of survey of the members' will, from which we can see that 70% members are willing to pay the membership fee, invest, and participate in organization and management. The existing members who have the will of guitting the cooperatives and the will of defaulting on obligation are below 20%, which indicates that the members' loyalty degree is high. But the members who are willing to sell the cooperative stocks reach 30%, and the members who support the reshuffle of cooperatives into joint-equity enterprises reach 50%, which indicates that members have strong will of participating in management and investing, but it is impacted when the will is transformed into behavior. According to the results of survey in the questionnaire, 78.7% members are willing to invest in the farmers' cooperatives; when the members are asked about the proportion of the investing will in the annual income, 33.5% choose 1% -5%; 25.4% choose 5% - 15%; 10.7% choose 15% -25%; 12.7% choose 25% -30%; 8.1% choose 30% -35%. In the light of the will of supporting the reshuffle of organization and selling stocks, the existing farmers' cooperatives can not answer the need of some members in many aspects, especially in the aspect of economic factors.

They want the farmers' cooperatives to be reshuffled into joint-equity enterprises in order to obtain more economic profit. Only 7.6% members flatly refuse the preferential conditions of other companies to breach contract to sell products; 30.5% members will choose to breach contract to sell products; 61.9% members will hold the wait-and-see attitude. That is to say, if there is no corresponding system to curb these behaviors, most of the members may breach contract to sell products, and sell

the products to other companies rather than the cooperatives. We can see that the members' behavior of participating in management and investing needs to be improved. In order to mobilize members to participate in cooperation, it is necessary to conduct system reform so as to motivate members to participate in organization, management and investing, and decrease the members' behavior detrimental to the development of the cooperatives.

Table 1 The survey results of members' behavior and will degree in rural cooperatives

%

Score	Frequency of attending members' meeting	Voting Frequency	The frequency of communicating with managers	The trust degree on society	The trust degree among members	The trust degree on the management department	The trust degree on organization
1	7.61	12.18	4.06	3.05	1.02	1.02	2.04
2	3.55	4.57	3.55	3.05	1.02	1.02	0.51
3	4.06	3.05	8.63	3.55	4.57	6.60	6.63
4	17.26	18.27	12.18	20.81	13.20	8.63	14.80
5	22.84	20.30	26.40	30.46	29.44	21.32	15.82
6	21.32	26.40	25.38	21.83	28.93	31.47	18.88
7	16.24	15.23	19.80	15.74	21.32	29.95	40.31

Note: score1 signifies that the degree is lowest, 7 signifies that the degree is highest, and part of respondents give no choice.

Table 2 The survey results of the members' will in rural cooperatives

0/2

Choice	The will of paying the membership fee	The will of investing	The will of participating in organizing and management	The will of quitting	The will of defaulting on obligations	The will of supporting the reshuffle of cooperatives	The will of selling stocks
Yes	76.6	78.7	68.5	20.3	18.3	50.2	28.9
No	23.4	21.3	31.5	79.7	81.7	49.2	71.1

The analysis of Table 1 shows that part of the members participate in the management of organization with little enthusiasm, invest inactively, and show low trust degree on managers. Among the members, there is negative will detrimental to the development of organization, such as supporting reshuffle, selling out the stocks and defaulting on obligation. The impact of these will and behaviors on organization is embodied as following aspects: firstly, the human resources are scanty. From the survey, we can find that the sponsors of many farmers' cooperatives are as managers, and other members have not high spirit of participating in management. The setup of some management institutions is not sound. Some cooperatives are even operated by "empty shell", while farmers hold that these cooperatives are not their own organizations. The members who join the cooperatives just respond to the call of the government, and have not yet organized and established the relations of economy and production, so the members lack the will of participating in the management of organization, and the cooperatives are merely managed by the sponsors or the relevant personnel of governmental departments, which causes the problems of the shortage of human resources and the abortion of cooperation. Secondly, the capital is scanty. Although the statistical investing will shows that the members' will of investing and paying the membership fee is not weak, the shortage of capital still is the main problem confronted by most of farmers' cooperatives, which indicates that the farmers' investing ability is limited, while the existing organization system does not motivate the members to invest actively and it restricts, to some extent, the members' investing behavior. Thirdly, it is hard to control the behavior of breaching contract. Because it is short of restriction mechanism and the cost of members' breach of contract is low, 1/3 members will choose to breach contract to sell products when the market price is high. This drives 61.9% wait-and-see members, inflicting great loss on the farmers' cooperatives. Once the negative will is transformed into behavior, it will influence the stability of the farmers' cooperatives, and bring about the disintegration of organization and failure of cooperation when it is serious. From the analysis of the trust mechanism in the cooperatives, we know that if we elevate the members' trust degree on organization, managers and other members, the members will participate in the management of organization actively, increase the investment in the cooperatives and reduce the behavior of breach of contract, so one of the most effective approaches of solving the shortage of human resources, the shortage of capital and breaching contract to sell products is to elevate the members' trust degree.

#### 3 Countermeasures and suggestions

Trust is the basis of the development of farmers' cooperatives, and elevating members' trust degree should consider many aspects, for example, choosing prestigious leaders, strengthening the training to cultivate the cooperative cultural trust, encouraging the members to participate in management, reinforcing communication, increasing the members' income and so on.

3.1 Reinforce internal communication The managers of

cooperatives should fully know farmers' need, and adopt appropriate methods to promote the members' truest degree on organization so as to reduce the internal transaction cost and promote farmers' cooperatives. There are interacted influence between trust and the members' will and behavior. The factor of trust can effectively help members to choose the will and behavior conducive to the development of organization. By the increasing communication and cooperation among members or between members and organization, the trust degree among members and the members' trust degree on organization both increase. Thus the trust and cooperation will form a benign recycle, but the recycle is merely sustained by members' relations without the control of external system. This recycle is weak, and once it is damaged, it will hard to be repaired. So it is necessary to establish the system of communication, and the trust degree among members can be incessantly promoted by repeated communication. Communication can promote the trust generated by "relations".

- 3.2 Remodel the trust culture of informal system Although the traditional trust model does not answer the need of market economic development, the traditional trust culture of informal system also deserves our continuous promotion and inheritance. At first we get others' trust by our honesty, then others will return honesty, and we thus trust others so as to promote the benign development of "trust-cooperation". In rural areas, the interpersonal relationship is still the main source of generating trust, so in the process of establishing farmers' professional cooperatives sponsored by government, we'd better select some prestigious and reputed farmers or well educated farmers as organizers so as to strengthen the farmers' trust on the cooperatives.
- **3.3** Hew to contractual system The contract is the effective way of market economy to realize its rationality, and plays an important role of guarantee in the interpersonal trust. In the cooperatives, the organization system is not enough to curb members' breach of contract, so we can depend on the national statute. When the members join the cooperatives, we should sign the formal economic contract with organization. When the individual breaches contract, and defaults on obligation so as to inflict economic losses on the professional farmers' cooperatives and other farmers, we should offer certain compensation to the organization and other farmers. The contract plays an important part in the initial cooperation between the organization and farmers, and it is an important source of trust generation.
- **3.4 Perfect motivation and punishment system** The pure trust generated by "relations" is difficult to keep the effective operation of cooperatives, so it is necessary to design the motivation and punishment system to increase the cost of members' behavior of breaching contract and elevate the members' trust degree<sup>[6]</sup>. Firstly, as for the products purchase, we should have different standards. As for the high-quality agricultural products, we purchase them at high price; as for the low-quality products, we purchase them at low price; as for the products which are not up to the standard, we should not purchase them. We should also preclude the farmers' hitchhiking behavior, and use price to motivate members to produce high-quality agricultural products. Secondly, we should require the farmers

to invest and pay the membership fee. On one hand, it is as the punishment guarantee of farmers' breach of contract; on the other hand, it meets the capital need of cooperatives. As for the incapable members with the will of investing and paying the membership fee, we can adopt the other payment ways. such as using agricultural products to pay the membership fee and investment or using profit to balance out investment. Thirdly, as for the members who breach contract or default on the obligation of organization, we should adopt the punishment measures, such as keeping back the investments, stocks or public accumulation funds, and increasing the cost of breach of contract. Fourthly, the design of motivation system is improved mainly in the distribution system. If we want to motivate the members' will and behavior which exert positive impact on organization, we should offer certain rewards and moral encouragement for members, especially in the preliminary stage of the development of cooperatives.

#### 3.5 Establish equal property rights and investing system

Crystallizing the equal property rights is the important basis of trust generation. According to the survey, we can find that in many farmers' cooperatives, due to the different stock-ownership shares, the status and economic condition of members in the organization is different, which causes different individual objectives and generates beneficial or detrimental impacts. Elevating the trust degree primarily needs the equal property of rights and investing system so as to make members have the equal status, same rights and obligation in organization, and realize the real democracy. Equal investing and property of rights system can avoid that the equity interest is concentrated and controlled by few people, reduce the difference of members' behavior and will, ensure equality among members and the unified benefit of members and organization, and effectively promote the trust degree among members.

3.6 Implement the management and supervision by job The alternate management and supervision, elimirotation nates the phenomenon of hitchhiking and loitering, ensure the farmers' rights to participate in management, and also save the cost of employing migrant workers so as to make the members know the developmental strategies of organization and management cost and elevate the members' trust degree on the cooperatives. The profit of farmers' cooperatives is not high at the early stage, so the members had better work as employees alternately by themselves at the early stage. We should not remain the withdrawal of publicize accumulation funds, and return all the profit. On one hand, it is to meet the farmers' requirements of increasing income, and drive the other famers to join the cooperatives; on the other hand, it is conducive to members' supervision, saving cost and promoting the trust among the members.

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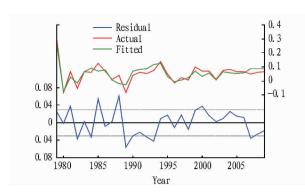


Fig. 3 The residual sequence of ECM model and the sequence of the actual value and the fitted value of In( R APCE)

sumptive expenditure per capita after taking logarithm from 1978 to 2009. The model shows that the consumption per capita of urban residents in Hunan Province hinges on discretionary income per capita greatly. The long-term elasticity of consumption per capita on discretionary income per capita is 0.892 013.

- (2) From error correction model (8), if the discretionary income per capita of urban residents in Hunan Province changes 1%, the consumption per capita changes 0. 860 623%, which indicates that consumption per capita of urban residents in Hunan Province has high sensitivity over the discretionary income per capita. Error correction model demonstrates that the deviation of the long-term balanced relationship between consumption per capita of urban residents in Hunan Province and the discretionary income per capita can be corrected in the next period.
- **4.2 Suggestions** The economic connotation, reflected by using error correction model, meets the strategic need of expanding domestic need in China. Increasing discretionary income per capita is the primary prerequisite, but we must also give attention to two or more things. The specific suggestions are as follows.
- **4.2.1** Open widely the income channel of urban residents. We should reinforce the financial market regulation in Hunan Province, promote financial innovation continuously, and expand financial investment implement; we should guide the residents of Hunan Province to transform from inflation-proof deposits to investing and financing step by step, we can obtain dividend and capital earnings by investing securities and investing insurance; we should actively create good environment of entrepreneurship, and encourage the urban residents to get more income by using multi-channels; we should strengthen the degree of wage reform, and elevate the percentage of labor income in the total income of whole province; we should strengthen

gthen the degree of governmental transfer defraval.

- **4.2.2** Create good environment of consumption. Firstly, we should reinforce the degree of executing law of administrative departments of business and technological supervision in whole province, and regulate and normalize the circulation order of commodity; secondly, we should reinforce the role of consumer association in order to protect the licit right of consumers vigorously; thirdly, we should broaden consumption credit business with might and main, and expand the scale of consumption credit in order to change the potential demand into realistic consumption; fourthly, we should ameliorate the service quality of monopoly industry and crush the commercial behavior of profiteering; finally, we should guide the transformation of urban residents' consumption structure step by step.
- **4.2.3** Perfect social security system. As for the social security system, endowment insurance, basic medical insurance, unemployment insurance, injury insurance and comprehensive social insurance and other system involving the interests of urban residents in Hunan Province, we should conduct comprehensive and up-to-date reform and solve the worries of urban residents.

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