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# **Do Institutional Incentives Matter for Farmers to Join Cooperatives: A Comparison of Two Chinese Regions**

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## **Abstract**

This paper analyzes Chinese farmers' participation in agricultural cooperatives. Special focus is placed on the country's cultural and institutional background and its impact on cooperatives' governance structure. The impact of differences in regional economic and social development and the need for formal institutions and democratic governance of farmers' organizations are also examined. The empirical analysis utilizes survey data from 373 agricultural cooperative members in two provinces in China of differing economic development levels: the western, less developed region Sichuan, and the well developed region Zhejiang on the eastern coast. Hypotheses regarding differences between the two regions, aimed to target each of the four levels of social organization discussed by Williamson (2000), are formulated and tested.

**Keywords:** Agricultural cooperatives, Chinese agriculture, Williamson's four levels of social organization

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## **Introduction**

As a transition country, China shares many similarities with other developing economies regarding the importance of building institutions that can enable, motivate, and guide economic actors' incentives to create both private and social wealth. China is one of the countries that have successfully constructed an institutional foundation for a market economy and optimized economic resources within the context of a gradual and stable institutional transformation. In agriculture, this institutional transformation began in the late 1970s with the introduction of the Household Production Responsibility System (OECD, 2005). This basic rule of the game – individual decision-making by family farmers – has enhanced agricultural productivity by stimulating farmers' incentives. Institutional transformation goes beyond the rule of the game (property) to also include the play of the game (contract) (Williamson, 2000). China's agricultural sector faces an arduous task regarding how to play the game: it must cultivate a suitable institutional environment for its more than 200 million small household farmers.

In recent years, there has been debate among scholars and policy-makers concerning the consequences of rapid changes in the food supply chains of small farmers in China. This concern mainly arises for the following reasons. First, Chinese agriculture faces increasing competition on the global market, as well as a dramatic change in downstream segments (Hu et al., 2004). Second, China's food economy is characterized by complexities and a dual structure of food chains (modern supermarket chains and traditional wet or fresh market chains) as a result of various food safety requirements and regulations (Hu, 2005). Third, China's food market is characterized by few regulations, easy entry, and literally thousands of traders in every market (Rozelle and Huang, 2007). Fourth, the whole agro-food supply chain in China faces a tremendous challenge in meeting the growing demand for food quality. The last reason relates to Chinese farmers' lack of history and culture of working together in self-managed organizations (Chen, 2004).

Cooperative organization may enable farmers to receive better returns for their purchasing, production, and marketing activities, as well as gain access to technical and market information. In a Western context, agricultural cooperatives are grassroots organizations, meaning that they are governed by the members, and these members have incentives to use, control, and invest in the organization. At the governance level, cooperatives traditionally use democratic principles for decision-making. Countries with a historically cooperative culture, such as Denmark and Britain, have no special cooperative legislation, and cooperatives operate within the general laws (Baker and Theilgaard, 2004). However, those basic principles may apply differently in the Chinese context. First, in China the government is involved in cooperative development, and there is an absence of

grassroots organizations. Second, varying degrees of economic development exist in different parts of the country.

In this paper we are interested in how farmers in China are organized and what drives them to join farm cooperatives. We focus on the following questions: Does the Chinese cultural and institutional background influence the cooperatives' governance structure? Do differences in Chinese regional economic and social development have an impact on the demand for formal institutions and the democratic governance of farmers' organizations?

The above issues are examined by comparing two Chinese provinces characterized by different levels of economic development: the western, less developed province Sichuan and the well developed province Zhejiang on the eastern coast. The theoretical discussion and formulation of hypotheses aim to target the four levels of Williamson's social analysis (Williamson, 2000). The hypotheses are tested using data collected in the two regions.

The paper is structured as follows. The following section discusses the increasing need for formal institutions regarding coop<sup>2</sup> development in China, and provides a short background on the selected regions. Testable hypotheses are formulated thereafter. The subsequent section presents methodological issues regarding the data collection procedure and statistical method. Finally, the results of the empirical study are presented, followed by a concluding discussion.

### **The rising need for a formal institutional framework in China and background of the two selected study areas**

Chinese producer organizations are known by many different names: farmer associations, farmer professional associations, farmer professional cooperative organizations, farmers' cooperative associations, farmer cooperative economic organizations, etc. In general, all these organizations mainly function as service cooperatives and are registered in various governmental departments, such as the Ministry of Agriculture, Ministry of Civil Administration, State Administration for Industry and Commerce, and Science and Technology Associations. Different levels of government administration below the county level (township governments and village communities) are often involved in the management or supervision of producer organizations. Thus, development that is hindered by the absence of an institutional framework is further constrained by the lack of

2 The term "coop" will hereafter be used as an abbreviation for "agricultural cooperative", and "coop members" will refer to members of agricultural cooperatives.

communication and coordination between the various departments and different levels of governmental administration.

A formal institution (“rule of the game”) of producer organizations, which distinguishes producer-owned organizations (coops) from other types of organizations, is badly needed by farmers and their organizations. In a situation with generally poorly educated farmers and a lack of cooperative governance experiences, the codification of cooperative legislation in a special law can be conducive to the promotion of coops (Münkner, 2005). In China, the first national cooperative law was enacted in 2007, and was to a certain degree promoted by the Zhejiang provincial law, enacted in 2005. The national law explicitly states that the Agricultural Bureau at the county level or higher is responsible for the operation of cooperatives, that cooperatives should be registered at the Bureau of Industry and Commerce, and that the role of all other agencies is to provide support and service to the coops. This law also confirms the independence of coops and emphasizes that members must be voluntarily and democratically organized.

Zhejiang enjoys the so-called “three firsts” in terms of producer organization development in China: the first modern Chinese agricultural cooperatives were established here; it is also a pioneering province that was selected by the central government in the 1980s to experience agricultural cooperative management; it enacted provincial laws and regulations for special agricultural cooperative organization in China before the national farm cooperatives law was introduced in 2007. Therefore, Zhejiang provides a unique chance to study the development of farm cooperatives in China.

Sichuan was selected due to its first “grassroots” experiences of farm organization in China. Economic, geographical, and cultural differences also motivated our choices. Zhejiang is one of China’s economically well developed coastal provinces, with an average rural household net income that ranks number three, just behind Shanghai and Beijing, over the last twenty years. Meanwhile, private, family-oriented medium and small business is one of the distinguishing characteristics of Zhejiang. Sichuan is located in Southwest China and is one of the country’s largest agricultural provinces, with a rural household net income below the national average. Some basic information about Zhejiang and Sichuan is provided in Table 1.

**Table 1: Basic information on Zhejiang and Sichuan**

	Zhejiang	Sichuan
Geographical location	Eastern and coastal region	Southwest and inner land region
Rural population (million, 2007)	21.66* 42.8%*	52.34* 64.4%*
Share of rural population in total population		
Rural household net income (yuan, 2007)	8,265**	3,547**
Main rural (business) culture	No business is too small, family business-oriented.	Unavoidably colored with the closed and static nature of agricultural civilization, at the same time open mind to the outside world.
Number of agricultural cooperatives in 2008	10,732***	6,340***
Type of cooperatives	Service cooperatives, mainly supply and marketing	Service cooperatives, mainly supply and marketing
Economic development	Eastern Coastal Well Developed Region	Western Less Developed Region

\* China Population & Employment Statistics Yearbook (2008)

\*\* China Rural Statistical Yearbook (2008)

\*\*\* Zhejiang and Sichuan Provincial Agricultural Bureau Website

### **Farmers' decision-making and formulation of hypotheses**

Farmers' decision-making process is a complex issue influenced by factors such as age, sex, knowledge, attitudes, personality, family, reference groups, opinion leaders, social classes, culture and institutional environments. If we examine the basic issue of the decision-making process - to join or not to join a cooperative - we believe that Williamson's four level social analysis (Williamson, 2000) is a suitable framework to apply here. Williamson's four level social analysis facilitates an analysis of the organization of small, dynamic farmers who are affected by certain social norms and informal institutions (first level); social rules and formal

institutions (second level); transactions and governance (third level); and on a micro level, the farmers' own individual characteristics. Our intention is to apply the holistic view of Williamson's approach to formulate hypotheses regarding differences in the two regions.

When analyzing the importance of institutional incentives for Chinese farmers' for joining coops, it is necessary to bear in mind some fundamental differences between the respective business cultures of the West and China. For example, whereas in Western countries the motivation for networking is usually characterized primarily by economic incentives, Chinese networking is generally characterized by both economic and social motivations (Chen, 2001). Related to this is the concept of "guanxi", which refers to the role of personal relations in Chinese social and business life (e.g., Davies, 1995). Concerning governance in business relationships, Western business relationships are to a larger degree characterized by formal contracts, whereas in China they are more often characterized by personal trust rather than written contracts (Chen, 2001).

As mentioned above, this study focuses on the comparison of two Chinese regions and differences in, for example, their culture and economic development. When formulating the hypotheses, an underlying assumption is that farmers in the more market-oriented region of Zhejiang will emphasize factors such as economic goals and formal rules.

#### ***Informal institutions and decision-making***

Farmers have incentives to form and support cooperatives when, by doing so, they can obtain benefits they would not be able to obtain individually. Thus, there may be various reasons for joining a cooperative. The most obvious reason is to fulfill economic goals, or the desire to become financially better off (McLaughlin, 1996). Howard and Klosler (1991) identified the following reasons that farmers tend to form agricultural co-operatives: lack of market power; non-existent outlet of a facility; government grants; better technical and market services; possibility to reduce price variability; and to diversify risks and pool resources.

Aside from the abovementioned economic incentives, there are also reasons to believe that some individuals join cooperatives in order to realize social satisfaction through their coop membership. Those social incentives may include the desire to interact with other members and develop personal and business networks. Indeed, farmers may seek to satisfy their social goals largely through their interactions with other members. Conversely, farmers will generally seek to satisfy the economic goals of their membership largely through their interactions with opinion leaders or coop managers (Hansen et al., 2002). As part of this interaction, members evaluate the abilities and reputations of the opinion leaders to further their own economic interests. Common informal institutions (norms) which

have been developed among members of the coops and between members and opinion leaders or managers of the coops can facilitate the transaction and eliminate the risks along the lines of formal institutions.

As discussed above, social goals (alongside economic goals) are usually of greater importance in Chinese business relationships compared to Western business relationships (Chen, 2001). Therefore, social goals are expected to be of relatively high importance for coop members in both regions. However, given the more market/business-oriented climate in Zhejiang, one may also expect that economic goals are of greater importance in Zhejiang than in Sichuan, and that social goals are of greater importance for coop farmers in Sichuan than in Zhejiang. Also, as a result of the more market-oriented business environment in Zhejiang, it may be expected that outside support (government subsidies and private business support) are of greater importance for coop farmers in Zhejiang than in Sichuan. Thus, the following three hypotheses will be tested in the empirical section:

**H1:** Social goals have a greater impact on farmers' decision-making regarding joining coops in Sichuan than in Zhejiang.

**H2a:** Economic goals have a greater impact on farmers' decision-making regarding joining coops in Zhejiang than in Sichuan.

**H2b:** Both government and private business supports have a greater impact on farmer's decision-making regarding joining coops in Zhejiang than in Sichuan.

#### ***Formal rules, institutions, and decision-making***

The institution of ownership accompanied by secure property rights is the most common and effective institution for providing people with incentives to create, maintain, and improve assets (Milgrom et al., 1992). The underlying hypothesis is that economic growth requires a legal order offering stable and predictable rights of property and contract. A typical formulation of the importance of property rights in modern economic development is provided by the work of Douglass C. North (1990). North (1990) asserts that bilateral transactions with third-party enforcement has been the mainstay of successful modern economics involved in the complex contracting necessary for modern economic growth, and the inability of societies to develop effective, low-cost enforcement of contracts is the most important source of both historical stagnation and contemporary underdevelopment in developing countries (regions). As a result, in a modern economic society, economic agents who are involved in a cooperative governance state should encourage and provide the laws and regulations of farmers' organizations. In view of that fact, those formal rules of the game are important factors for the economic actors who want to make investment worthwhile. Therefore, farmer organization law, namely agricultural cooperative law, can help to clarify the legal status of those farmers who have joined cooperatives and allow them to enter in complex contracts.



Traditionally, Chinese business contracts are often characterized by personal trust rather than written contracts. Therefore, we expect the importance of formal rules to be relatively low in both regions. However, given the differences in background and culture of the Zhejiang and Sichuan regions, it can be expected that formal rules are of greater importance in the more market-oriented region of Zhejiang. Thus, the third hypothesis to be tested in the empirical section is as follows:

**H3:** Formal rules have a greater impact on farmers' decision-making regarding joining coops in Zhejiang than in Sichuan.

#### ***Cooperative governance and decision-making***

Cooperative organizations and other hybrids have always been important in modern food supply chains. A cooperative is an example of governance structure which consists of a collection of rules structuring the transactions between various stakeholders. A standard way of delineating the "rules" is to distinguish between decision and income rights (Hendrikse, 2006). Decision rights concern all rights and rules regarding the deployment and use of assets (Hansmann, 1996); they mostly specify who directs the firm's activities, and the organizational chart roughly describes the formal structure. Income rights address the question "Who benefits and how are costs allocated?" Income rights specify one's rights to receive benefits, and who is responsible to pay the costs associated with the use of an asset. In general, both decision and income rights are necessary and sufficient to implement the economic activities of decision-makers. However, a cooperative governance structure is embodied, as members are the users, controllers and owners of resources. Member control and democratic governance are essential for a cooperative to work in the interests of the members. This kind of grassroots demand might be stronger in a modern market economy region (country). An empirical study conducted by Laursen (2005) showed that members have strong influence on decision-making in Danish cooperatives. Österberg and Nilsson (2009) found that members' willingness to participate in cooperative governance is the most important explanation for member satisfaction.

Also in this case, we expect that the more market-oriented characteristics of Zhejiang compared to Sichuan implies that democratic and cooperative government structures are of greater importance for coop farmers in Zhejiang than in Sichuan. Thus, a fourth hypothesis to be tested in the empirical section is as follows:

**H4:** Democratic and cooperative governance has a greater impact on farmers' decision-making regarding joining coops in Zhejiang than in Sichuan.

### ***Farm-specific characteristics and decision-making***

Many cooperatives need to attract large-scale producers to achieve efficient operating size and reduce the transaction costs associated with supervision. Small-scale farmers have a relatively low reputation for keeping their promises. Opportunism means that, given the occasion, decision-makers may seek out their own interests (Williamson, 1985). Thus, creating specific assets is a way of creating credible commitments (Heide and John, 1988). Certain dedicated physical and capital investments may serve business partners' quality control and relationship safeguard requirements. This is accentuated when farm cooperatives are marketing high value-added and perishable products, which require timely and stable delivery, highly invested physical facilities, standardized handling and processing processes. Certain physical size and managerial skills facilitated by the higher level of specialization eventually lead to cost reduction and provide incentives for cooperation.

As for the previous hypotheses, we expect a difference between the two regions as a result of the more market-oriented environment in Zhejiang. In particular, we expect that certain farm characteristics have a greater impact on coop farmers' incentives to join coops in Zhejiang than in Sichuan. Thus, the last hypothesis to be tested in the empirical section is:

**H5:** Farm size and specialized farming experience has a greater impact on farmers' decision-making regarding joining coops in Zhejiang than in Sichuan.

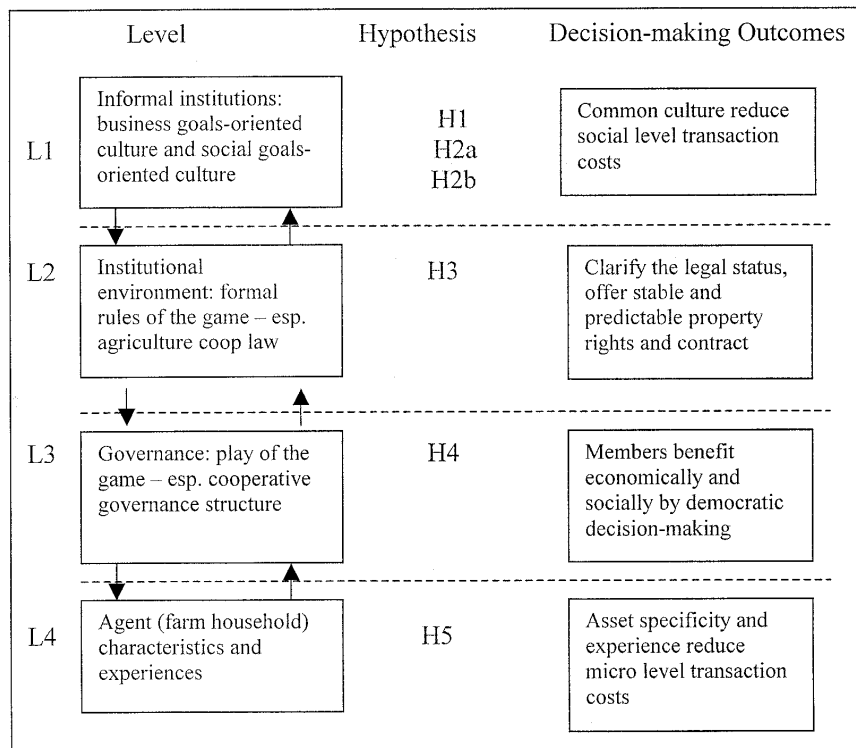
Figure 1 illustrates the relations and influences among different components within Williamson's framework. Although this study focuses on the comparison between the two regions, Figure 1 provides an overview of how the different levels affect farmers' decision-making.

### **Data and methodology**

To test the hypotheses formulated in this paper, a survey of 373 coop farmers specializing in the vegetable, horticulture and livestock sectors in the provinces of Zhejiang and Sichuan was conducted from July to September, 2009. The number of interviewed coop farmers was 155 in Zhejiang and 218 in Sichuan. Table 2 presents descriptive statistics for the surveyed coop farmers in both regions. It can be noted that the coop farmers in Sichuan have a higher average income than the coop farmers in Zhejiang, which is unexpected given the characteristics of the two regions described above. However, this can be explained by the fact that we had a controlled regional balance (city and rural; eastern and western parts) in Zhejiang, but due to security in the rainy season in Sichuan, only visited coops around the capital city Chengdu. In Zhejiang, we could not interview the larger cooperative

farmers, as they were too busy. One additional clarification is that we interviewed some of the most capital-intensive famers in Sichuan (ten farmers), who had a net income substantially higher than average (descriptive statistics excluding these ten Sichuan farmers are presented in parentheses in Table 2).

**Figure 1: Analytical framework applying Williamson’s four-level social organization model for farmer’s decision-making.**



In order to test the hypothesis derived in the previous section, the surveyed farmers were asked about a number of factors related to social goals, economic factors, outside support, institutional environment, governance structure, decision-making and farm characteristics. The respondents were asked to rank the importance of each factor regarding their decision to join a cooperative on a Likert scale ranging from 1 (not important at all) to 7 (very important). A summary of the variables can be found in the first column of Table 3.

**Table 2: Descriptive statistics for surveyed coop farmers in Sichuan and Zhejiang**

	Sichuan <sup>†</sup>		Zhejiang		
Number of coop farmers interviewed	218		155		
<b>Farm characteristics</b>	Mean	Standard deviation	Mean	Standard deviation	Signif. differences between means <sup>††</sup>
Net farm income, yuan	56,500 (20,000)	352,400 (51,300)	29,200	48,700	
Share of farm income	0.84 (0.83)	0.25 (0.26)	0.80	0.40	
Share of income from coops	0.57 (0.57)	0.42 (0.42)	0.71	0.36	***
Land, mu <sup>†††</sup>	19 (12)	85 (34)	37	180	
Age, years	47 (47)	10 (10)	51	9.4	***
Years of farming	23 (24)	13 (14)	24	15	
Years in coop	2.2 (2.1)	0.96 (0.97)	3.8	2.3	***
<b>Type of farm</b>	Number	Share	Number	Share	
Fruit	58	0.27	53	0.34	
Horticulture	12	0.05	6	0.04	
Livestock	58	0.27	62	0.40	
Vegetable	90	0.41	34	0.22	

<sup>†</sup> For Sichuan, the numbers in parentheses are descriptive statistics excluding the ten capital-intensive farms.

<sup>††</sup> \*\*\* indicates that the difference between the region means is statistically significant on the 1% level by t-test.

<sup>†††</sup> 1 mu ≈ 0.0667 hectares.

When testing hypotheses 1–5, differences between the two regions were tested by a Pearson’s chi-square test, which was applied rather than the more conventional t-test, as the latter requires the variable to be normally distributed. Since the variables are measured on a Likert scale they cannot be normally

distributed. As discussed by Clason and Dormody (1994), the Pearson's chi-square test is an appropriate test statistic when the data are measured by Likert-type items.

## **Results**

Table 3 shows that social goals were of relatively high importance for the farmers' decisions to join cooperatives in both regions, and that the importance is slightly higher for farmers in Sichuan than in Zhejiang. According to the chi-square test, the difference between the regions is statistically significant, which provides support for hypothesis 1. It can further be seen that economic factors are of relatively high importance, and that average values for all factors are relatively higher in Zhejiang than in Sichuan. The differences are statistically significant, which provides support for hypothesis 2a. Regarding hypothesis 2b, it was predicted that the importance of outside support (government project subsidies and agricultural enterprise support) are higher in Zhejiang than in Sichuan. We find support for the hypothesis regarding enterprise support; it is found to be more important in Zhejiang, and the difference between the regions is statistically significant. However, government project support was found to be more important in Sichuan, which does not support hypothesis 2b. Regarding formal rules and institutional environment, hypothesis 3 is supported by only one of the measures; the importance of clear property rights is higher in Zhejiang than in Sichuan, but secure contracts and state law support were found to be more important in Sichuan. In general, the importance of formal rules was relatively low in both regions. Hypothesis 4, regarding democratic and cooperative governance, was not supported by the data; one farmer one vote systems and collective decision-making was found to be more important in Sichuan (as opposed to hypothesis 4, which suggested that they should be more important in Zhejiang). The last hypothesis, hypothesis 5, suggested that farm size and specialized farming experience have a greater impact on farmers' decision to join cooperatives in Zhejiang than in Sichuan. Concerning the importance of land size, no statistically significant difference was found in the two regions. The importance of agricultural machines was, consistent with hypothesis 5, found to be more important in Zhejiang than in Sichuan, and the difference is statistically significant. Not consistent with hypothesis 5 was that specific farming experience was found to be more important for the respondents' decision to join cooperatives in Sichuan than in Zhejiang.

**Table 3: Chi-square test for differences between the two regions regarding the factors that drive farmers to join coops**

Variable/statement <sup>†</sup>	Zhejiang		Sichuan		Testing for differences between the regions		Sign of expected difference under hypothesis (S – results support hypothesis, NS – results do not support hypothesis)
	Mean	Standard deviation	Mean	Standard deviation	Difference between region means	p-value, chi-square test <sup>††</sup>	
<b>Social goals (H1)</b>							
Better working environment	3.82	2.03	4.01	1.70	-0.20	0.000***	- (S)
Better communication with other farmers	4.47	1.97	4.70	1.41	-0.22	0.000***	- (S)
<b>Economic factors (H2a)</b>							
More beneficial prices	4.66	1.75	4.23	1.46	0.43	0.000***	+ (S)
Secure agricultural inputs	4.46	1.80	4.17	1.54	0.29	0.001***	+ (S)
Easier marketing	5.53	1.41	5.14	1.47	0.39	0.000***	+ (S)
Reduced marketing costs	4.48	1.68	3.97	1.52	0.51	0.002***	+ (S)
Increased bargaining power	4.02	1.76	3.32	1.51	0.70	0.000***	+ (S)
Better market info	4.82	1.50	4.57	1.34	0.25	0.005***	+ (S)
Higher profits	4.99	1.47	4.53	1.47	0.46	0.045**	+ (S)
<b>Outside support (H2b)</b>							
Government project subsidies	2.99	1.98	3.95	1.79	-0.96	0.000***	+ (NS)
Agricultural enterprise support	2.54	2.08	2.06	1.52	0.48	0.000***	+ (S)
<b>Institutional environment (H3)</b>							
Clear property rights	2.18	2.18	2.08	1.58	0.10	0.002***	+ (S)
Secure contracts	2.85	2.11	2.99	1.91	-0.14	0.004***	+ (NS)
State law support	2.50	1.75	2.96	1.73	-0.46	0.057**	+ (NS)

**Table 3 continued**

Variable/statement <sup>†</sup>	Zhejiang		Sichuan		Testing for differences between the regions		Sign of expected difference under hypothesis (S – results supports hypothesis, NS – results do not support )
	Mean	Standard deviation	Mean	Standard deviation	Difference between region means	p-value, chi-square test <sup>††</sup>	
<b>Governance structure and decision-making (H4)</b>							
One farmer, one vote	2.23	1.60	2.71	1.61	-0.48	0.001***	+ (NS)
Meeting other farmers (collective decision-making)	2.35	1.62	3.21	1.54	-0.86	0.000***	+ (NS)
<b>Farm characteristics (H5)</b>							
Land size	2.37	1.62	2.31	1.56	0.06	0.619	+ (S <sup>†††</sup> )
Agricultural machines	2.27	1.76	2.01	1.63	0.26	0.003***	+ (S)
Specific farming experience	3.50	2.13	3.94	1.59	-0.44	0.000***	+ (NS)

<sup>†</sup> All variables/statements are measured on a Likert scale ranging from 1 (not important at all) to 7 (very important).

<sup>††</sup> \*\* and \*\*\* indicate that the difference between the region means is statistically significant on the 5% and 1% level respectively by chi-square test.

<sup>†††</sup> The positive difference between the regions is not statistically significant.

To sum up, economic factors and social goals seem to be the most important factors for the surveyed farmers when they decided to join cooperatives (in both regions). Outside support, formal rules, governance structure and farm characteristics were found to be less important in both regions (though not completely unimportant). The data provided support for hypothesis 1 and 2a, i.e. social factors were found to be relatively more important in the less economically developed region of Sichuan, whereas economic factors are relatively more important in the more economically-developed region of Zhejiang. Hypothesis 2a, 3 and 5 were partly supported, and no support was found for hypothesis 4.

## **Discussion and conclusions**

The findings of this study indicate that economic incentives are the most important factor influencing Chinese farmers to join coops, followed by social goals and outside support. Formal rules, democratic cooperative governance, and farm-specific characteristics are not, according to our findings, important factors for farmers in their decision to join coops. This low demand for institutional incentives in Chinese farmers' decision-making may reflect the early stage of coops' development in Chinese agriculture. However, the farmers' marginal intimation for secure contract and specific farming experiences indicate that farmers still consider transaction costs.

The empirical testing of our first level hypotheses concerning social and business goals supports the idea that farmers who live in a society with a "less business-oriented culture" have a higher desire for social interactions, and that there exists a greater demand for secure business relationships in a "more business-oriented culture". Moreover, the findings emphasize that farmers require more help from market or private businesses in a modern economy context, and that they demand more help from government when they are in a less market-oriented region. In a region such as Zhejiang, where excessive great deal of private business and capital exists, farmers have greater expectations from private enterprise's assistance for investing and managing the coops. In reality, those non-farmers and private businessmen that have the knowledge and experience of marketing, management and attracting government policy support can facilitate ordinary coop member's access to knowledge and experiences. Meanwhile, farm members may be concerned about how to keep and maintain cooperative governance business if they know the fundamental principles of the coop. As a result, these kinds of expectations and concerns may create a demand for formal rules in Zhejiang.

The importance of democratic governance and member involvement in cooperative governance is well described by Österberg and Nilsson (2009). This



kind of grassroots demand for democratic governance may not be very extensive in regions where farmers are less educated and there is an absence of knowledge and experience regarding cooperative governance. However, we found that democratic cooperative governance has a greater impact on farmers' decision to join coops in Sichuan than in Zhejiang. There can be three possible explanations for this observation. First, a region with a long history of strong cooperative movements and culture might not require special formal institutions and governance structures to facilitate economic actors' behaviors (Baker and Theilgaard, 2004). Second, the lack of private businesses and strong local government involvement in Sichuan may create the relatively higher demand for cooperative governance. An example of this is that the infrastructure in Sichuan is much less developed than in Zhejiang, and there exists a demand for government involvement to improve it. The last potential reason is related to the representativeness of the interviewed Sichuan farmers; they might be large enough to consider democratic governance. The first explanation, however, is probably not relevant in the case of Zhejiang. Although Zhejiang experienced relatively early cooperative movements compared to other provinces in China, it was first enacted in the provincial law only five years ago (in 2005). We believe that a combination of the second and third potential reasons might provide the true explanations.

The hypothesis that formal rules are more important in Zhejiang than in Sichuan was rejected for two of the three measures. Secure contracts and state law support were, contrary to hypothesis 3, found to be more important in Sichuan. The higher importance of state law support (i.e. the national farm cooperatives law that came into force in 2007) in Sichuan might be explained by the fact that Zhejiang had already enacted provincial law and regulations for a special agricultural cooperative organization.

Asset specificity was found to be comparatively less important for farmers in Sichuan regarding their decision to join cooperatives compared to farmers in Zhejiang. Asset specificity is more important in modern business relationships for facilitating transactions and avoiding risks. However, it was also found that the role of specific farming experience regarding farmers' decision to join coops was less important in Zhejiang than in Sichuan. This might be explained by the fact that farmers in Zhejiang are more willing to take risks in order to explore new business opportunities. For farmers who live in a relatively closed and stable culture, it might be more important to have a certain level of experience in production before applying new production management schemes.

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