Social capital in Chinese farmer cooperatives: Function and influencing factors

Qiao Liang¹
Zuhui Huang²
Xinxin Wang³

1 Background

The changing structure of agriculture, the specialization of supply chain participants, as well as the increasing market share of farmer cooperatives have led both practitioners and scholars to questions regarding whether farmer cooperatives perform well enough to compete their counterparts. Cooperatives may be not sufficiently competitive in terms of financial capital and human capital, compared to capitalistic firms, due to the governance structure features of cooperatives. A governance structure specifies ownership rights, decision rights, and income rights regarding (physical or financial) assets (Hansmann, 1996). Cooperatives are defined as a member owned, member controlled, and member benefitted governance structure. They are organized to serve members’ needs rather than seek economic benefits.

The ownership characteristics of cooperatives, as well as the collective decision making feature, make the cooperative governance relatively ‘expensive’ in terms of transaction costs, compared to capitalistic governance structure (Valentinov, 2004). Unlike market in which two actors are involved or investor-owned firms where authority is held by a few investors, cooperatives are featured by high involvement and interaction of all the members in decision making and benefits distribution. Interpersonal relation is therefore the key foundation on which internal transactions based. A notation in the literature that has much to say about facilitating cooperation, relationships, and trust is social capital. (Beugelsdijk and van Schaik, 2005). As Valentinov (2004) puts it, “cooperatives are a special, social capital-based, type of organization”. It is collectively owned capital by all the members of a group. Social capital is therefore more essential in cooperatives than in counterparts. The role of social capital to cooperatives is comparable as that of physical or financial capital to investor owned firms, or human capital to the individual. Chloupkova, Svendsen & Svendsen (2003) regard farmer cooperatives as a proxy of social capital, pinpointing to the network component of social capital.

¹ Assistant professor, Zhejiang University, email: liangqiao2323@126.com
² Professor, Zhejiang University
³ Doctor, Zhejiang University of Finance and Economics
During the last two decades, many cooperatives have been transforming from democratic organizations to more capitalistic or economic oriented organizations (Nilsson et al., 2012). The declining of social capital in cooperatives is considered as one of the reasons and meanwhile the consequences of the transformation. As the organization size and member heterogeneity expand, cooperatives are losing social capital (Nilsson, et al. 2012). There are less communication, collaboration, and trust between members and the cooperative, as well as between members.

Though social capital has captured the attention of scholars and practitioners, there is no satisfactory definition regarding social capital. Portes (1995) defines social capital as ‘the capacity of individuals to command scarce resources by virtue of their membership in networks or broader social structures.’ To be more specific, social capital includes norms, values, and trust embodied in the specific structured forms such as investor-owned-firms, cooperatives, communities, and so on (Adler and Kwon, 2002). We tend to misunderstand social capital as the social relations of an organization with external individuals, organizations and institutes. Nevertheless, social relation is one aspect of social capital, not even the main aspect. The most important part of social capital is trust within an organization, such as the trust between members, or members and leaders.

Despite of the position of farmer cooperatives in markets and awareness of their social capital based characteristic, definition and measurement of social capital in farmer cooperatives have not been broadly investigated or applied yet. Besides, social capital has been widely investigated in corporate studies, yet not in those regarding cooperatives. For example, few studies on the effect of social capital in farmer cooperatives have been seen. Social capital is increasingly recognized as an important factor influencing economic performance (Beugelsdijk and van Schaik, 2005). This research therefore seeks to formulate a framework defining and clarifying various aspects of social capital, identify the factors influencing the creation of social capital, and examine the effect of social capital on members’ participation and performance in farmer cooperatives, based on data from farmer cooperatives in China. To be specific, the research questions are:

1) What are the contents of social capital in farmer cooperatives in China?
2) If social capital has any influence on member participation in various activities of their cooperatives?
3) What are the impacts of social capital on the economic performance of cooperatives?
4) What are the factors affecting the level of social capital in farmer cooperatives?

2 Theory
2.1 Social capital
Physical capital, human capital, and social capital are the three basic and key capitals that generate productivity as well as economic benefits (Adler and Kwon, 2002; Granovetter, 2005). Physical capital, including financial assets, is the material resources that used to improve flows of future income, while human capital refers to the knowledge and skills that individuals use to solve problems. Social capital is the arrangement of human resources to improve the flow of information and future income (Ostrom, 1994). It refers to anything that facilitates individual or collective action, generated by networks of relationships, trust, social norms, and so on. Physical capital and human capital are generally owned by individual persons, whereas social capital, although it benefits individuals, is a group or organization level conception (Uphoff and Wijayaratna, 2000). Putnam (2000) refers social capital to the collective value of all social networks and the inclinations that arise from these networks to do things for each other. Many scholars define social capital as mutual trust and how effectively people work together (Chloupkova and Svendsen et al., 2003). A large quantity of evidence shows that people trusting each other are more willing to take cooperative activities (Fukuyama, 1995; Putnam, 1993; Tyler & Kramer, 1996).

Social capital provides an informal institution frame with shared information, cooperation, and collective decision making (Zhao, 2003). A person spends less to protect themselves from opportunistic behaviors during transactions in the context of high trust level. The origination of social capital lies in the interaction between each other (Valentinov, 2004). It increases possibilities to cooperate and smooths the communication and coordination within an organization, which therefore reduces transaction costs and generates economic benefits. As Arrow (1972, p357) puts it, trust is essential in every transaction. People working together try to find better ways of making possible the achievement that in the absence of social capital would be not possible (Ostrom, 1994; Coleman, 1988). The more social capital that each other share, the less transaction costs they need to pay. Both the flow and quality of information are improved and better outcomes are achieved (Granovetter, 2005). Besides, new economic opportunities may arise from social capital based networks (Bingen and Serrano et al., 2003).

Besides, innovation in new products or technology may be discouraged in a low trust group, due to that managers devote more time to prevent malfeasance by employees or members, and they have less time to devote to innovation (Knack and Keefer, 1997). Trust between persons therefore can be a substitute for contract to a certain extent. Uphoff and Wijayaratna (2000) distinguish two forms of social capital: structural form and cognitive form. Structural form of social capital includes roles, rules, procedures, and social networks, which are more external and objective. Cognitive form of social capital is more internal and subjective, including norms, values, attitudes, beliefs, and trust.

Social capital not only produces economic benefits, but also has various non-economic influences. Narayan and Pritchett (1997) point out that social capital facilitates community cooperative action and solves “common property” or vaguely defined property rights problems. Social capital extends the resource exchange and
linkages between individuals and groups, which therefore promotes product innovations as well as speeds the diffusion of innovations (Robison and Schmid et al., 2002; Tsai and Ghoshal, 1998). Social capital plays an irreplaceable role in the building of human capital (Coleman, 1988). People gain human capital not only by investment in knowledge and skills, but also mutual transforming between social capital and human capital.

Like physical capital and human capital, the creation of social capital requires sustainable investment of time and effort. The investment takes the form of bargaining over formal and informal rules regarding the allocation of benefits and costs (Ostrom, 1994). A long-term and focused commitment is required to develop social capital. The output of social capital building is less easily observed and more qualitative. Specific ways of gaining social capital are trainings, participation in collective activities, and so on. Training helps the building of network and trust, which contribute to the development of social capital. Cooperative principles and members’ participation may reinforcement social capital as well. Besides, social capital is characterized by idiosyncrasy, i.e. it is strongly connected to the personal identity of its bearers and cannot be transferred to other groups without losing value or cost (Valentinov, 2004). As the size and/or member heterogeneity of a group expand, the maintenance and growing of social capital become increasingly difficult.

2.2 Social capital and farmer cooperatives

Social capital in organizations characterized by collective action is attached higher value to and is denser since norms and trust are emphasized (Granovetter, 2005). Small groups have higher social capital density because people have closer spatial and emotional contacts. Although the creation and benefits of social capital are related to individuals, it is bound to groups and produces goods that are collective (Uphoff and Wijayaratna, 2000). We talk about social capital of a group, an organization, or a society, yet never a certain person.

Cooperatives are characterized by duel attributes, the economic attribute and the social attribute, which makes them a proxy for the formation and development of social capital. Valentinov (2004) therefore argues “social capital is best governed by the cooperative governance.” The greater trust members hold for others, the more likely they are to participate. Interpersonal relations between members have essential influence on the coordination and decision making costs of a cooperative. Better relationships smooth and save the cost of coordination and collective decision making. The better members trust each other and the managers, the lower the transaction cost within the cooperative will be, which therefore leads to better economic performance.

Nevertheless, the social capital dependence nature of cooperatives causes the limitations. Zhao (2003) specifies that the presence of social capital may restrain the entry of outsiders, limit members’ business motivation and innovation, and hold up the promotion of some talent persons. Besides, insufficiency of social capital reduces the efficiency of cooperatives. The creation of social capital is even more difficult.
Cooperatives nowadays face the decrease of social capital because of various reasons (Valetinov, 2004). First, the enlarging scale of cooperatives leads to the loose relation between members, as well as between members and the management, which causes the change in member attitudes towards cooperatives. Member commitments are therefore relaxed. Second, the management of cooperatives is becoming more powerful and more independent. Member managers played essential role in the past. Nevertheless, professional management has been adopted by most of cooperatives in the world, which drift apart the distance between members and the management. Communication and bridging between members and the management are more principle-agent based, rather than community and trust based. The dominance of professional management is both a cause and a consequence of the loss of social capital. Third, cooperatives are transforming in the direction of capitalistic firms in terms of both internal governance and external activities. Fourth, members interact with their cooperative on the basis of economic efficiency. Members put more value on economic benefits and transactions pertained to market activities. Besides, as the size of cooperatives increase, return on economic capital exceeds the return from social capital. The creation and investment in social capital are therefore weakened.

2.3 Measurement

The measure of social capital is complex and tricky, just as that of transaction cost. Up to now, social capital has not been measured directly yet. Often highly aggregated and undifferentiated proxy measures are used, or the concept is reduced to one of its components. Chloupkova and Svendsen et al. (2003) use three factors as the measurement of social capital, i.e. membership of voluntary organizations, trust, and civic participation. However, there are mutual effects between these factors. Membership of an organization influences the level of trust within the organization (Nilsson et al., 2012). Generally, an organization with a bigger size of membership tends to have a lower level of trust between members. This method of measurement focuses on the within-organization dimensions of social capital and neglects the external social network dimension.

Putnam (1993) demonstrates that networks, norms, and trust are three factors of social capital. Networks, also referred to as social relationships, are relatively easy to be measure. The quality and quantity of relations with formal institutes or other organizations is adopted as the measurement of networks. Many studies therefore focus on the network dimension of social capital and even equate networks to social capital. Norms specify what actions are acceptable or unacceptable (Lyon, 2000). Tsai and Ghoshal (1998) distinguish three dimensions of social capital, i.e. structural dimension, relational dimension, and cognitive dimension. Structural dimension of social capital refers to the social interaction or social ties. Relational dimension of social capital is the trust and trustworthiness embedded in the organization or among members. Cognitive dimension is pertained to the shared vision that facilitates the
understanding of collective goals and ways of acting in an organization. Bhuyan (2007) measures social capital in terms of structural capital referring to external social networks and cognitive capital which includes members’ trust on each other as well as members’ satisfaction with the cooperative management.

Lin (1999) argues the measuring of social capital need to contain not only the volume but also the use of social capital. He distinguishes three ingredients of social capital. They are volume of social capital possessed by members, members’ accessibility to the social resources, and utilizability of the social resources by members in actions. Other ingredients included in the function of measuring social capital are network size (Lin, 1999), location of individuals in a network (Borgatti, Jones, and Everett, 1998), and strength of ties (Granovetter, 1973), etc.

3 Social capital in Chinese farmer cooperatives

Farmer cooperatives in China emerged in the 1980s and have been developing fast. Up to the end of 2012, there are 689,000 farmer cooperatives with a membership of 43 million. Cooperatives in China are facing transformation in terms of both internal governance and organization models. Some farmers have substantial capabilities in marketing, management, and so on, and hold most of income rights and decision rights, while most common members are seldom involved in decision making or have little power. However, this situation has been aware by the government, scholars, and common members as well. Cooperatives are therefore likely to adjust the governance regarding the dominance of authority by a few core members. In addition, cooperative union and association are emerging, due to that the limitations in small scale and locality of current cooperatives (Liang and Hendrikse, 2013).

Farmer cooperatives in China have different characteristics regarding social capital from cooperatives in Western countries. There are two dimensions of differences. First, “Guanxi”, meaning relationship, is especially important in Chinese society, both for political and economic activities. Farmer cooperatives are not an exception. Considering the “Guanxi” culture in China, social relationships or structural dimension of social capital may play an even more important role in Chinese farmer cooperatives. Actually “Guanxi” is generally held by a few elite farmers, rather than common farmers. These elite farmers, referred to as core members, initiate farmer cooperatives and hold most of authority over decision making rights in cooperatives (Liang and Hendrikse, 2013). Core members have substantial capabilities regarding marketing, management, and/or social networks. The social networks are referred to that core members have close contact or relationships with governmental departments, downstream wholesaler, or other stakeholders in supply chain, which comprises social capital of a cooperative. These social networks that core members have are the main part of structural dimension of social capital. In many Chinese studies, the social networks of core members are taken as the whole content of social capital, which deviates from the conception of social capital (Li and Zheng, 2008). Core members use their social networks to facilitate and increase their own welfare, which

meanwhile increase the welfare of the other members in the cooperative. Social networks of core members therefore are regarded as publicly owned social capital of the cooperative.

Second, farmer cooperatives in China are featured by small scale and geographically-based, which determines the even more important role of social capital in Chinese cooperatives (Liang and Hendrikse, 2013). Members are basically from the same town and know each other relatively well, which establishes the community-based cooperation foundation. These features imply the trust based or social capital based relationship in cooperatives in China. A series of conventional norms are created due to the community-based member relationships. Reputation of members or managers is damaged if they betray the norms, which can be substantial punishment for social based farmers. In addition, the community-based relationship of members helps the establishment of long-term cooperation between members within the community, which promotes the creation of social capital (Luo and Wang, 2010).

Zhang (2003) indicates that two extreme cases of modeling should be avoided when Chinese farmer cooperatives are studied. For one thing, social capital theory and measurements should be not copied to studies on cooperatives in China without characterizing the differences in social capital such as “guanxi”. For another thing, social capital theory as well as the measurements broadly applied in Western countries cannot be abandoned in the studies on cooperatives in China, though Chinese cooperatives have distinctive features from western countries.

Due to the distinctive features regarding social capital in farmer cooperatives in China from cooperatives in Western countries, theories as well as measurements of the formal topic are desirable. However, there are few studies delineating social capital in Chinese farmer cooperatives. In addition, empirical studies regarding social capital in cooperatives, such as the effect of social capital on member participation and the performance of cooperatives are not seen yet.

3 Methodology

To understand the impacts of social capital on member participation and economic performance, as well as the influencing factors of social capital, we employ a statistical analysis with a sample of farmer cooperatives. The data, measures, and descriptive analysis of various variables are specified in this section.

3.1 Data

Data consists of both documentary materials and empirical data. Face-to-face interviews will be conducted to collect empirical data. We choose farmer cooperatives in two cities in China’s Zhejiang province, Jiaxing city and Taizhou city. There are some reasons for choosing Jiaxing and Taizhou to collect data. First, cooperatives in China firstly came into being in eastern China where the economy and market levels are more developed and agriculture is more industrialized than those in the west part of China. Zhejiang is located in the east of China (see Figure 1) and is one of the most developed provinces in China. Zhejiang specializes in high value products such as
fruits and vegetables. Furthermore, Zhejiang is leading the way in farmer cooperative development in China, in terms of both quantity and quality. There are 25939 farmer cooperatives in Zhejiang, up to the end of 2011.5

Second, Jiaxing and Taizhou are respectively located in the northeast and middle of Zhejiang (see Figure 1) and are two of the most developed cities in Zhejiang. They have a parallel GDP, economic developing and market level. We therefore choose these two cities to control the general development status and performance of farmer cooperatives within a limited difference. There are more than 7000 farmer cooperatives in Taizhou and more than 3000 farmer cooperatives in Jiaxing.

Around 100 farmer cooperatives in each city will be chosen by random sampling. First, a face-to-face interview with the chairperson of each cooperative will be conducted. Data of the chairperson’s personal information and external network information, as well as the cooperative level information such as membership size, distance to the nearest market, shareholder structure, profits, and so on are collected. Second, three members from each cooperative will be interviewed based on a structured questionnaire. Data regarding members’ personal information, various indicators of social capital, participation in collective activities, and so on are collected. We will therefore have a database consisting round 600 cooperatives.

3.2 Measures

3.2.1 Hypotheses

Based on the theory regarding the relationships between social capital, member

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5 Data Source: Statistical Data from Agriculture Department of Zhejiang Province.
participation, and economic performance, hypothesized models are established in Figure 2. Three hypotheses are established.

H1: Higher level of social capital in farmer cooperatives facilitates members to participate in collective action.

H2: Social capital in farmer cooperatives generates economic outputs.

H3: Member participation in collective activities helps the creation of social capital, which produces economic performance of farmer cooperatives.

![Figure 2. Hypothesized model regarding social capital, member participation, and economic performance](image)

### 3.2.1 Measurements

Measurements of social capital, member participation, economic performance, and influencing factors are presented.

**Social capital**

Due to the difficulty in being measured directly, various proxies therefore are applied to conceptualize and measure social capital. We borrow the framework of Tsai and Ghoshal (1998) method to measure social capital. Social capital is measured by three dimensions of indicators, i.e. structural dimension, relational dimension, and cognitive
dimension. However, indicators used are partially different from Tsai and Ghoshal (1998) work, due to being localized to farmer cooperatives in China. The “chairperson’s working experience”, “chairperson being party member”, “if the cooperative has a corporation shareholder”, “if the chairperson has any contact with corporation managers, village managers, township level officials, city level officials, provincial officials, state level officials, or associations?”, and “the distance to the nearest market” are adopted as the indicator of structural dimension of social capital.

Members’ trust on the management and the cooperative, as well as the mutual trust between members, implies the level of social capital. We use members’ trust on their cooperative and the managers’ capabilities in service provision, products’ market recognition, enhancing members’ income, promotion of local agriculture development, and local social influence, as well as member cohesion, to measure the relational dimension of social capital.

Ostrom (1994) points out that farmers need to understand the principles, decision right and benefits allocation rules, developing and finance status, and various strategies of cooperatives. Members’ knowledge on profit, developing target, and finance status of the cooperative are hence applied as the indicators of the cognitive dimension of social capital.

**Participation behaviors**

We use “times of participating meetings and trainings last year”, “proportion of inputs purchased from the cooperative last year”, and “proportion of products sold via the cooperative last year” as the indicators of participation behaviors.

**Economic performance**

Social capital is formed at the organization level, rather than individual level. Though social capital and members’ participation behaviors are measured at the member level, they are actually indicators of the cooperative level. Hence, profits of cooperatives are used as the indicator of economic performance.

**Influencing factors**

The products, geographical area of members, size, foundation year, and distance to the latest markets of a cooperative may have impacts on the volume of social capital. Besides, the chairperson’s education level, age, and capital shares held may influence the creation of social capital in the cooperative, while members’ education level, age, and year of joining the cooperative may matter as well.

### 3.3 Variables

### 4 Results

### 5 Discussion

### 6 Conclusion and managerial implications
References:


