

# Characterizing Cooperatives in China

Yining Xu, George W.J. Hendrikse, Hongdong Guo, and Qiao Liang

**Abstract** Scholars question whether Chinese cooperatives are different from Western cooperatives. Five cooperatives in Zhejiang province are described, and they are evaluated from various perspectives. Next we address various differences between cooperatives in China and the Western world. We highlight aspects of the political and the economic environment, such as the farmland system, the cooperative law, the financial support and intervention from the government, the limited education of most farmers, and the substantial capital requirements in order to have a successful cooperative.

## 1 Introduction

China is in many ways a fascinating country. It is a huge country with a large population, has grown economically fast during the last decades, has unique political and economic policies, and drastic changes are going on in many areas. One of the drastic changes is the organization of the agricultural sector. During a decade the number of cooperatives has risen from virtually no cooperatives to more than 1.5 million cooperatives. This number is startling, but the actual organization of the cooperatives behind this number deserves attention due to various unusual features, such as the concentration of ownership and the connectedness with other stakeholders (Liang et al. 2015).

There are various views about the characterization of an agricultural cooperative. One view is that a cooperative has to satisfy certain principles in order to qualify as a cooperative. A prominent example is the list of seven cooperative principles formulated by the International Cooperative Alliance (ICA, 1995):

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Y. Xu • H. Guo • Q. Liang (✉)

China Academy for Rural Development, Zhejiang University, Yuhangtang 866, Hangzhou 310058, China

e-mail: meggiexyn@163.com; guohongdong@zju.edu.cn; liangqiao2323@126.com

G.W.J. Hendrikse (✉)

Rotterdam School of Management, Erasmus University, Postbus 1738, Room T10-56, 3000 Rotterdam, The Netherlands

e-mail: ghendrikse@rsm.nl

voluntary and open membership; democratic member control; member economic participation; autonomy and independence; education, training, and information; cooperation among cooperatives; and concern for community. Another view is that a cooperative is a specific governance structure, where a governance structure is defined in terms of ownership rights, decision rights, and income rights. Dunn (1988, p. 85) defines a cooperative as "a user-owned and controlled business form which benefits are derived and distributed on the basis of use."

Section 2 presents some statistics and five cases regarding cooperatives in China. Section 3 evaluates the cases from the two viewpoints. Various aspects of the Chinese political and economic environment are identified in Sect. 4 to understand some aspects of the organization of cooperatives. Section 5 concludes.

## 2 Some Statistics and Five Cases Regarding Cooperatives in China

This section starts with some statistics regarding the development of cooperatives in China. Next we describe six cooperatives to highlight the unusual governance structure of cooperatives in China and to illustrate the variety of governance structures.

China is experiencing a revolution in the governance of agriculture. Figure 1 shows the development of cooperatives in China during the last decade. The number of registered cooperatives was 26,400 when the Chinese Cooperative Law was promulgated on July 1st, 2007. This number has increased to 1,685,900 by the end of March 2016.

Table 1 provides additional information on the development of cooperatives. 100,900,000 households<sup>1</sup> participate in cooperatives. The average membership of cooperatives is increasing, but it is still small compared to cooperatives in the West. The total registered capital has reached 3.32 trillion yuan in 2015. The average registered capital of cooperatives is increasing in the course of time.

There are a number of positive effects of cooperatives. Cooperatives have a significant positive effect on members' income (Deng et al. 2010; Ito et al. 2012), market access (Deng et al. 2010; Jia et al. 2012), and decreasing growing cost and realizing economies of scale (Huang 2013; Yang et al. 2013). The emergence of cooperatives in China also decreases consumers' food security risk (Jia and Huang, 2011). Nowadays cooperatives have therefore a significant role in the agriculture sector and rural China.

It turns out that many different organizations are hidden behind these numbers. They are all referred to as cooperatives, but their actual governance structures differ substantially. We illustrate this variety by presenting various governance structure features of five cooperatives in Zhejiang province in the remainder of this section.<sup>2</sup>

<sup>1</sup>Farmers may participate in more than one cooperative.

<sup>2</sup>Zhejiang is one of the earliest provinces where cooperatives emerged and the number of cooperatives ranks second in China.

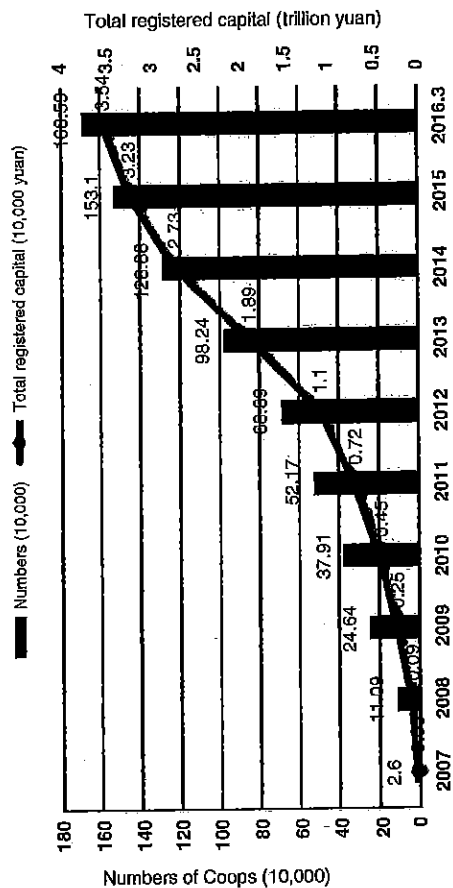


Fig. 1 Number and total registered capital of cooperative in China (2007–2016)

Table 1 The development of cooperatives in China (2007–2016)

	Numbers (10,000)	Registered capital (trillion yuan)	Average registered capital (10,000 yuan)	Total membership (10,000 households)	Average membership (households)
2007	2.64	0.03	11.5	35	13
2008	11.09	0.09	81	142	13
2009	24.64	0.25	101	392	16
2010	37.91	0.45	119	716	19
2011	52.17	0.72	138	1196	23
2012	68.89	1.1	160	2373	34
2013	98.24	1.89	192	2951	30
2014	128.88	2.73	212	9227	72
2015	153.1	3.23	211	10,090	66
2016 (by March, 2016)	168.59	3.54	210	/	/

Date sources: China's State Administration for Industry and Commerce and China's Ministry of Agriculture 2015

### Case 1: Datong Silk Cooperative

The Datong silk cooperative was set up in 2001 in Deqing, Zhejiang Province. It is the first registered farmer cooperative in China. This cooperative started its business with purchasing members' cocoons and mulberry leaves and selling them to silk filatures or food-processing factories. Middlemen have been excluded by the cooperative. Nowadays Datong's main source of revenue is processing cocoons and mulberry leaves to make silk and mulberry tea. It has expanded its business downstream by producing raw silk since 2003. It produces also quilts. In 2009 it

became a provincial-level demonstration cooperative. In 2013, Datong collaborated with a medicine company from Taiwan and introduced new equipment to produce diet tea and medicine by processing mulberry leaves.

Benefits of the cooperative for the members consist of payment for deliveries, technical support, access, and providing credit to the members. Members receive a higher price than the market price. Payments to members are differentiated based on the quality of the deliveries. Common members obtain their benefits by selling cocoons and mulberry leaves to Datong. The allocation of residual income stays within the limits delineated by the cooperative law. The members receive 60% of the residual income. The remaining 40% is kept as retained earnings and is entirely invested in high value-added downstream investment projects. The revenue of Datong was 5.33 million yuan in 2015. Members can choose to invest in the cooperative. They are paid according to share. In order to ensure the quantity and quality of the production of raw silk, Datong cooperative provides technical training in growing mulberries (whose leaf is the food of silkworms) and feeding silkworms (who produce cocoon used to wave silk). Plant growth is supported by the cooperative, but not insect health. Over 1000 silk farmers benefit from it.

During the visit on June 8, 2016, the chairman of the cooperative made the membership list available, which is presented in Table 2. The table indicates that the cooperative has 8 core members and 613 common members. The cooperative is not an open membership cooperative anymore. It is now closed and tries to reduce the membership. The financial manager and the marketing manager of the cooperative are nonmembers. Recently, the cooperative has hired four young, nonmember employees specialized in marketing.

Each core member has contributed a substantial amount of capital. Common members nominally invest 200 yuan and own one share of the cooperative, while they actually put no money into the cooperative. The reason they invest nominally is that the precondition of establishing cooperative in the law requires that each member must invest in the cooperative. Furthermore, only scaled cooperatives whose membership exceeds 100 receive additional support from the local and the central government. Common members are not willing to invest and bear the risk of the business of a cooperative. Therefore, core members receive the residual income as the payoff for their investment based on their capital share.

Equipment used for processing, and other investments, are financed almost completely by the core members. (The cooperative does not want support from the government due to too many restrictions.) They jointly own a downstream processor. Investments consist of buying equipment and maintaining the cooperative's operation when it needs revolving capital in the harvest season. A recent

Table 2 Membership of Datong silk cooperative in 2015

Number of members	Capital share (%)	Capital investment (CHN)
1	8.2	55,000
7	4.9	33,000
92	0.45	3000
503	0.03	200

investment project was financed by retained earnings of 1,500,000 yuan and a loan of 2,000,000 yuan.

Since core members actually own the cooperative, they control this cooperative. The decision rights are allocated based on the share in the cooperative. Major issues, such as accepting new members and investing in a new production line, are decided by core members and communicated with common members in the annual general meeting. The board of Datong consists of the core members. In the board meeting, the decision rights are allocated according to core members' capital investment in the cooperative. Datong's president is the core member who has the largest capital share and can decide all daily affairs.

#### Case 2: Beizhijiang Vegetable Cooperative

Beizhijiang vegetable cooperative was established in 2009 in Fuyang, Zhejiang. The main business for the cooperative is to purchase members' vegetables and send all of them to its biggest client, the Pangu Eco-agriculture Firm. The purchasing price of Beizhijiang is flexible and follows the fluctuation of the local market price. Members receive the same revenues as in the market. Besides the purchasing of the vegetables, Beizhijiang also pays attention to technological training and high-quality growing so as to make the quality of their members' products reach the high product standard of the Pangu. This cooperative also requires their members to use fertilizers and pesticides, which the vegetable firm specified, so as to ensure the vegetable safety. In 2014 it has been selected as a city-level demonstrated cooperative and then selected as a demonstration cooperative at the provincial level in 2015. The turnover of Beizhijiang has increased 300% to 20 million yuan, compared with the turnover when it was established.

Beizhijiang has 117 members in the latest survey, and 6 of them are core members. One of the core members is the Zhejiang Baihe Group and holds 20% share. Other core members are the president and his family. The president of Beizhijiang is also the leader of Pangu Eco-agriculture Firm. He and his family are the largest shareholder of both Pangu and Beizhijiang, and 90% of the registered capital shares of Beizhijiang are contributed by them. Other members nominally hold a share of the cooperative of around 5%, while they actually did not invest money. Their payment is very limited. The decision right of Beizhijiang is controlled by the president and his family. The cooperative hardly ever holds a general meeting, as the president has absolute power regarding important affairs, like increasing or decreasing the membership. Routine business, like the species and quantity of vegetables the cooperative buys from members, are also decided by the president.

Beizhijiang vegetable cooperative is a wholesaler. It is like an upstream department of Pangu Vegetable Corporation, because both of them are controlled by the president and his family. Members have no decision rights nor income rights beyond the benefits in the exchange with the cooperative. Vegetable growers (members) are actually independent from Beizhijiang. They have no capital share and no decision power/rights regarding the cooperative. The organization has long-term but flexible contracts with vegetable growers.

### Case 3: Liwen Bamboo Cooperative

Liwen bamboo cooperative was founded by 15 members in 2007. Bamboo can be used as food (vegetable or fruit), or as a material, such as chopsticks, and so on. The major product of Liwen bamboo cooperative is bamboo shoots. Bamboo shoots grow on bamboo trees, which are old at the age of 3–4 years. They grow in their natural environment in Zhejiang province and 4–5 neighboring provinces. Fresh bamboo shoots stay fresh for only 3 days and grow in the natural environment during March and April. Bamboo shoots differ in quality in terms of the outside shape, color, and size. Four classes of bamboo shoots are distinguished. Members are paid and selected by the director to do the measurements. The growers are paid immediately for their deliveries. Liwen cooperative was awarded by a government the prize for the best bamboo in 2012.

The founding members raised CHN 100,000 registration capital. The director and his agricultural development company contributed 40% to the initial capital. Two relatives contributed each 20% as a member, and the final 20% was contributed by the other 12 founding members. The director of the cooperative told in the interview on September 9, 2014, that the cooperative has currently 161 members. Table 3 presents the ownership shares in the cooperative in 2014. Each of the four core members owns 20% of the shares of the cooperative: the director owns 20% of the shares, his parents are a member farmer and own 20%, one uncle is a member farmer and owns 20%, and another uncle is a member farmer and owns 20% of the shares. The other 157 member farm households own the remaining 20% of the shares.

The membership has around 600 ha available for growing bamboo. Table 4 presents the distribution of land of the membership. The director has 200 ha available for growing bamboo. He has leased the land from the village for 30 years. During the harvest season, he employs around 100 additional persons temporarily. His 200 ha is governed by a separate legal entity, called agricultural development company. The director said that if there was not a separate legal entity, then there may be problems with the cooperative regarding the ownership of the land. This creates transparency. His parents grow bamboo on 5 ha and have one permanent employee. Each uncle grows bamboo part-time on 2 ha.

The focus of the cooperative is on general production skills to guarantee quality, the production calendar, and the highest segment in the market. The cooperative owns three trucks for transportation, which are driven either by members or by outsiders. The cooperative has invested in roads for transportation. A building is leased. The cooperative employs five persons: the director, one accountant, one

Member	Ownership share (in %)
Director	20
Parents	20
Uncle 1	20
Uncle 2	20
5–161	20

Table 4 Land available to members in Liwen bamboo cooperative in 2014

Number of members	Number of hectares
10	0–1
10	1–2
90	2–3
32	3–4
15	4–5
3	5–6
1	200

sales person, and two other employees. The director has many tasks: funding, procurement, developing the market, sales, selecting new members, formulating investment proposals and obtaining approval from the members, and communication with the village and the government. The director selects new members based on individual judgment. An important consideration is to prevent trouble and management costs.

Decision making in the cooperative is based on the one-member-one-vote principle. There is never a general assembly meeting with all members. However, a representative board meets 1–2 times each year. Board membership is based on location, and each board member represents 15 votes. The board in the cooperative consists therefore of 10–11 members. The director has also one vote and is one of the board members representing 15 other members. The main topics in the board meetings are the bamboo price, a review of the activities, and an evaluation of the plan for the next period. There is also a supervisory board consisting of 3–4 members. It meets 1–2 times each year.

Members decide how many bamboo shoots to deliver to the cooperative. They deliver about 10% of their bamboo to the cooperative. Members want to sell more via the cooperative because the cooperative pays a better price than the market or intermediaries. However, the cooperative does not have the selling and service capacity to sell more. Bamboo shoots of growers are sold via diverse marketing channels: local markets, local intermediaries, and cooperatives (to Liwen and others). Liwen bamboo cooperative has some internet sales, but most bamboo shoot is exchanged via direct sales due to the 2–3 days freshness feature. The director negotiates and establishes oral agreements with restaurants and grocery stores. Orders are finalized usually less than 1 week in advance due to the price fluctuations.

All members have activities beyond growing bamboo because the harvest period is during a limited time of the year. Two types of members can be distinguished. The factory-based farmers are full-time employed in a factory and grow bamboo part-time. 40% of their income comes from wages paid by a factory and 60% comes from bamboo. The factory-based employees ask somebody to sell their bamboo shoots. This is either the cooperative or somebody else. The income of farm-based members is based on bamboo (60%), animals such as chickens and ducks (20%), and vegetables (20%). They are more knowledgeable about the market fluctuations

than the factory-based members and sell less via the cooperative than the other members.

The cooperative owns also a bamboo research institute. It is a nonprofit organization and is a separate legal entity. Members of the cooperative have the exclusive access to a fertilizer developed by the research institute. The research institute provides also production training to members and nonmembers and develops technical skills. The six founders of the bamboo research institute are researchers and field experts regarding bamboo planting. Each founder covered a share of the initial capital. There are no government subsidies. Profits stay in the bamboo research institute, while losses are covered by Liwen bamboo cooperative and agricultural development company. The director of Liwen is the manager of the bamboo research institute and takes the daily decisions, while the other five founders do sometimes research. The director has 80% of the votes, but tries to achieve consensus in decision making. Research is carried out for various parties.

The short harvest season makes it attractive for the cooperative to invest in activities which extend the harvest and delivery season. First, bamboo shoots with a special treatment grow at least 1 month earlier and receive a much higher price. Second, bamboo shoots can be cooked and subsequently dried during 1 week. Not much technical skill is needed to do this. The cooperative considers to invest in a machine which dries the bamboo shoots. The dried bamboo shoots are marketed as a specialty product with a brand name. Finally, a storage house with cooling equipment extends the freshness of bamboo shoots from 3 days to 1 month. Storage is considered more desirable than drying the bamboo shoots.

Bamboo trees turn out to have a high early mortality rate. The investment by the bamboo cooperative in irrigation machines and a drainage system has reduced the early mortality rate from 50% to 10%. The technical skills and health-care program regarding the bamboo trees have increased profits by 10–20 times. The cooperative provides also other inputs to the members, such as fertilizers and biopesticides. Liwen has a contract with a fertilizer company from Singapore, which has resulted in a fertilizer price which is 30% lower per ton (CHN 600) than the market price. Additionally, the fertilizer is tailored to the local soil ingredients and reduces waste. Members as well as nonmembers face the same price.

The cooperative spends usually 60–70% of the annual profit in investments and services. The irrigation/drainage system was paid for 50–70% out of the retained earnings, while the trucks were paid entirely by the cooperative. The cooperative provides no price adjustments at the end of the year. The director likes to invest in a new production line for the processing of the bamboo shoots. He expects four sources of finance: borrow from friends/relatives, a limited loan from a bank, a new investment partner, and a government subsidy to pay for the interest on the loan. (The government does not provide loans.) Members are most likely not willing to invest according to the director because they have hardly assets and hardly an education and are short-sighted. Only large members may invest.

The director formulates also investment proposals. Approval has to be asked from the board, but they are always accepted. Members are not much involved in the decision making because they sell only 10% of the bamboo to the cooperative.

The director determines the size of the residual income based on the plan of the cooperative. He indicates that it is hard to guarantee and to convince the membership that nothing is stolen and that the members have a strong focus on returns. It is hard to explain to all the members that some of the residual income is paid to the capital-providing members as a reward for the capital invested in the cooperative. The price of bamboo shoots fluctuates every day. These fluctuations are hard to handle for the cooperative due to the low tolerance for risk of the members.

The director's opinion is that cooperatives are not good partners for banks. Cooperatives in China are too loosely defined in terms of ownership to get outside finance. Getting outside finance is difficult for smallholder farmers due to their lack of assets and the production field belonging to the county. Additionally, there are many shifts in the membership. A corporation is more transparent for banks in terms of ownership and receives therefore more loans. Most cooperatives are started by investors according to the director. Corporations are able to provide collateral by assets such as a company car, equipment in the company, and buildings. Farmers don't incorporate their farm because they will face more restriction on the farm, the land, and the buildings in rural China than in cities. Farmers spend most of their savings on renovating their farmhouse.

#### Case 4: Shuangjing Bamboo Shoots Cooperative

Shuangjing bamboo cooperative is established in 1986 when the rural reform of China was accomplished. It registered formally in 2008 after the Chinese Cooperative Law was promulgated. The aim of Shuangjing is to help bamboo farmers to sell their bamboo shoots and to add value. It sells members' bamboo shoots to supermarkets and wholesale markets in the harvest season. Compared with selling to wholesalers, members have higher incomes and a stable sales channel when they become a member of the cooperative. After years of capital accumulation, Shuangjing used it to buy equipment to gradually change its essential business to bamboo shoots processing (including slicing, drying, and packaging), which is less influenced by the season and could help the cooperative to add more value. In 2015, Shuangjing's turnover passed the 100 million yuan, and the number of employees increased to around 1000.

Shuangjing, unlike other big cooperatives, has only fifteen members. These members are big bamboo shoots farmers. They jointly own the processing facilities and capital of the cooperative. Shuangjing cooperative is led by five big bamboo farmers. These core members own most of the processing facilities and own more than 60% of the capital of the cooperative. Over 100 small farmers have been attracted by its outstanding performance and established a stable business relationship with it. They participated in it by investing 1000–5000 yuan per person and belong to the producer association part and the downstream part of this cooperative. Members are patrons and obtain benefits when trading with Shuangjing. They are different in terms of the amount land used to grow bamboo and the investments in the cooperative. Members have also an investor role because the residual income of Shuangjing is allocated according to their investment share.

Control rights are allocated in the same way. When members make decisions, the "one-share-one-vote" voting rule is adopted in the general meeting and board meeting. Core members are more influential than common members in the decision-making process. Routine business is decided by the president, who is also the largest shareholder.

Thirty percent of the profits are retained earnings for this cooperative, which are used to purchase or upgrade the bamboo shoots processing equipment in order to expand business scale. Members receive two financial benefits. First, they are paid according to their patronage. They receive a purchasing price which is 10% higher than the market price. Second, the remainder of the residual earnings are allocated to members at the end of the year according to their capital share in the cooperative in the form of an annual bonus.

### Case 5: Yangshanfan Peach Cooperative

Yangshanfan is a cooperative specializing in peach. It was established in 2005 and located in Tonglu, Zhejiang Province. It is the only peach cooperative in the village. Yangshanfan Peach Cooperative is an organization which is jointly owned by 180 peach growers. Due to the small peach-growing scale in the Yangshanfan village, the primary aim of Yangshanfan Peach Cooperative is to improve the competitiveness of farmers' peach and to introduce and link local farmers to the big market. When members grow peaches, it suggests members to use fine peach breeds. It provides these fine peach breeds and requires members to use low-toxicity pesticides. Moreover, Yangshanfan invites peach-growing experts to give agricultural technology trainings, which is free to members. The president also puts effort into searching good sales channels. In the harvest season, the cooperative sells members' peaches to their linked supermarkets and fruit chains. Members get a more stable price than when they sell to small wholesalers.

Core members have most of the decision rights regarding routine business, such as choosing pesticides suppliers, choosing tied supermarkets, and settling the peach-buying price in the harvest season. Several core members, including the president, have a larger capital share than common members. They trade more with the cooperative than the common members. Table 5 presents the number of members, the scale of production, the capital invested by each member, and the voting percentages at Yangshanfan peach cooperative in September 2014. The table shows that 86% of the voting shares are held by less than 6% of the members.

Unlike other cooperatives, Yangshanfan allocates more than 90% of the residual income to members according to the volume of peaches members sell to the cooperatives. Major issues are decided in the general meeting based on the "one-person-one-vote" rule. This decision-making rule results in limited retained earnings in the cooperative, because members, especially small farmers, tend to go for short-term benefits. Yangshanfan is therefore unable to expand its business of selling peach to downstream stages of production, such as packaging, branding, processing, and wholesaling, in order to improve its competitiveness in the market. It does not have a formal connection with a downstream party, though it keeps a long-term close relationship with several wholesalers.

Table 5 The membership composition at Yangshanfan cooperative in 2014

Number of members	Production scale (Mu)	Capital investment (CHIN)	Voting percentage
1	105.3	67,600	15
1	43.2	50,000	11
6	40.4-70.6	45,000	10
9	6.5-31.9	1000	0.20
1	8.4	600	0.14
8	5.5-27.4	400	0.10
148	2.3-36.1	200	0.05
6	8-55	0	0

The turnover of Yangshanfan Peach Cooperative in 2015 is 1.85 million yuan, which decreased sharply compared with 10.12 million yuan in 2014. Besides, the profit has decreased from 580 thousand yuan to 138 thousand yuan, though subsidies continue to stay at 650 thousand each year. The president attributes the reason to the development of village tourism. As the local government has been promoting the village tourism since 2012, Yangshanfan Village becomes famous. Urban visitors drive to the village and purchase peaches directly from local farmers at the retail price. Consequently, less members sell their peaches to the cooperative, and therefore the performance of Yangshanfan Cooperative has decreased.

## 3 Evaluation

The five cases of cooperatives show substantial variety in their organization. It is therefore not surprising that questions are raised about whether Chinese cooperatives are cooperatives or not. This section will address this question from two perspectives.

### 3.1 ICA Principles

The introduction section has formulated the seven principles of ICA by which cooperatives are sometimes evaluated. The practice of cooperatives in China differs from these principles in three aspects. First, unlike the democratic member control principle and the requirements in Chinese Farmer Cooperative Law, the decision rights and income rights in most of the Chinese cooperatives are held by core members who have more capital, marketing capabilities, and social networks. The common members are not involved (Liang et al. 2015; Xu 2005). Additionally, most of the profits are allocated to core members (Huang and Xu 2008). Secondly, it is not easy for cooperatives in China to keep their autonomy and independence. The central and local government plays an important role in the development of Chinese

Table 6 ICA principles and Chinese cooperatives

ICA principles	Chinese cooperatives
Voluntary and open membership	Barriers for joining the membership, such as capital size, land size, or geographic locations (Lou and Kong, 2014; Yu and Han, 2013; Zhang, 2014)
Democratic member control	Many Chinese cooperatives are actually dominated by core members (Huang and Xu, 2008; Shao and Xu, 2008)
Member economic participation	Mentioned in law but limited in practice (Zhang, 2011)
Autonomy and independence	Often affected by central and/or local government (Cui, 2014; Cui and Liu 2013)
Education, training, and information	Provide agricultural technical training and market information (Han and An, 2010; Wu et al., 2016)
Cooperation among cooperatives	Government encourage this kind of cooperation (Yuan, 2008; Zhang, 2012)
Concern for community	Mentioned in law but limited in practice (Li, 2016; Yan, 2011)

cooperatives. A series of policies have been implemented since the Farmer Cooperative Law of 2007. Subsidies, tax relief, and product promotions are provided by the various governments to support cooperatives. They intend to make cooperatives competitive in the market. It is helpful for cooperatives in establishing sufficient capital, to relieve the tax burden, and to enhance products' reputation. Thereby, cooperatives are heavily influenced by the government. Thirdly, different from voluntary and open membership, there are barriers for joining the membership in Chinese cooperatives. Capital size, land size, and geographic location are factors in selecting members. These deviations from the ICA principles make scholars doubt seriously whether Chinese cooperatives can be characterized as cooperatives (Table 6).

### 3.2 Member-Owned, Member-Controlled, and Member-Benefitted

A governance structure can be characterized by its ownership, decision, and income rights. Dunn (1988) views a cooperative as a specific governance structure, which is characterized as a member-owned, member-controlled, and member-benefitted organization. The owners/members of a cooperative have a dual relationship with it, i.e., a transaction relationship as well as an ownership relationship. Hansmann (1996) characterizes a cooperative therefore as an organization collectively owned by its patrons who transact with it, whether as sellers or as purchasers. This distinguishes a cooperative from an investor-owned firm (IOF), where the investors have only an ownership relationship with the firm.

A distinction is often made between a cooperative firm and a cooperative association. If a cooperative is characterized as a firm owned by a society of members, then the object of study is the firm and the relationship with the (upstream

or downstream society of) members. A cooperative may also be defined as an association of farmers. The association does not have a formal connection with an adjacent stage of production. The object of study is the association. One of the functions of a cooperative association is to bargain or negotiate with parties in an adjacent stage of production for better terms of trade.

A cooperative firm and cooperative association are considered cooperatives because both are owned by a society of members. This characterization of a cooperative is already useful for the evaluation of one of the five cases. Beizhijiang vegetable cooperative is owned by parties not growing vegetables. It is therefore not a patron-owned cooperative. It is better characterized as either contract farming with the downstream party dictating the terms of trade or backward integration. Vegetable firms in China prefer to purchase products directly from farmers, because buying them from a new organization (the cooperative) may increase the organizing costs of the firm. The value of the cooperative's existence is therefore doubtful. Nevertheless, for the vegetable firm, this cooperative plays an important role in attracting stakeholders' resources. With the cooperative title, Pangu collects farmlands in the form of inviting the local small farmers to participate in the cooperative and grow vegetables which Pangu needs to exploit economies of scale. Moreover, after the cooperative was established, the leader of Pangu and Beizhijiang could obtain various subsidies specified for cooperatives and use these funds to scale-up their business. The cooperative is therefore to some extent a tool for the vegetable firm to seize abundant subsidies dedicated for cooperatives (Huang 2013).

A cooperative is often associated with an equal and fair treatment of members. A well-known, but definitely not universal, feature of cooperatives is the one-member-one-vote rule, whereas IOFs are characterized by one-share-one-vote. Bijman et al. (2012) document that various countries in Europe have a cooperative law stating explicitly the one-member-one-vote principle in their cooperative law, but there are also a substantial number of countries not stating this requirement. These latter countries highlight in their cooperative law that the crucial feature of a cooperative is to serve its membership, which may be done with, or without, the one-member-one-vote rule. An advantage of a law without this provision is that it provides the cooperative with more flexibility to accommodate a heterogeneous membership. Several cooperatives in these countries have adopted therefore proportional voting (to a limited extent). China specifies in the cooperative law a ceiling regarding the percentage of votes that can be owned by one member of a cooperative.

These observations make it less obvious to characterize the other four cases: Datong silk cooperative, Liwen bamboo cooperative, Shuangjing bamboo shoots cooperative, and Yangshanfan peach cooperative. The four cases have all concentrated ownership of the cooperative by the core members. Most of these cooperatives have the one-member-one-vote principle, but these formal decision rights seem to apply to a limited number of issues. Most of the actual decision rights seem to be delegated to one of the core members. Additionally, the cooperative's profit and decision rights are allocated to the patron-owners based on the amount of the products they trade with the firm. It entails that a large share of the revenues of these

cooperatives are allocated to core members due to the size of their resources compared to common members. These features are in line with the pattern described by Liang et al. (2015, p. 198) that "... the distribution of ownership rights, decision rights, and income rights in a farmer cooperative is quite skewed towards a small proportion of members."

One position stresses the equal control by the members of the cooperative. Fulton and Jun (2009, p. 12) state that "... the C + C + H & Company + Co-operative + Household & model involves no investment by small farmers; as a consequence they have virtually no control over the decisions made in this enterprise, even when they account for more than 95% of the members." Their conclusion is that "... the C+C+H model is not a co-operative (at least in the way co-operatives have been understood historically" (2009, p. 1).

We take a different position by highlighting the feature of ownership by patrons. Crucial in our view is that the membership is served, where the membership may be very heterogeneous. The Dutch flower cooperative Royal FloraHolland has around 4500 members and proportional voting (1-6 votes). The annual turnover in 2015 of the smallest member is E10,000, while the turnover of the largest member is E80,000,000. It involves substantial challenges to deal with this heterogeneity, but there is no doubt that the membership owns the cooperative enterprise and its infrastructure. The bylaws of the cooperative allow the membership to vote for a demutualization of the cooperative.

Chinese cooperatives are similar to cooperatives in the Western world in the sense that they are owned by a society of members. Ownership rights are held by members, where a member has an ownership and transaction relationship with the firm. This is where cooperatives in Zhejiang province are similar to cooperatives in the Western world. However, the distribution of the ownership rights, decision rights, and income rights among the members is much more skewed than in the Western world. One of the reasons is that cooperatives in China are much more recent than in the Western world. They emerge often top-down in a setting of agricultural industrialization (Fulton and Jun 2009; Liang and Hendrikse 2013), while a substantial number of cooperatives have emerged bottom-up in the West (Petruchenya and Hendrikse 2016). The initiators of the cooperatives have usually much needed resources and capabilities to organize a cooperative enterprise, and they govern their investments on the one-hand by legal constructions regarding their member enterprise and on the other hand by the design of the governance structure of the cooperative enterprise. A more equal involvement of the entire membership is a huge challenge for the core members, as it is for boards of agricultural cooperatives in the West. This is most likely not only more difficult than in the West due to their recent emergence but also due to important differences in the political and economic environment.

## 4 Aspects of the Political and Economic Environment Facing Cooperatives

This section highlights a few aspects of the political and economic environment facing cooperatives in China. We address the farmland system, the cooperative law, the local and central government, the educational level of farmers, and the need for capital.

### 4.1 Farmland System

China's agricultural sector has a special system regarding the ownership of land. One feature is that the land is not owned by individual farmers, but by the village collective. The village committee, after the Chinese economic reform, granted usufruct and management rights regarding the collective lands to farmers according to the number of family members, whereas the ownership is still held by the village collective. Individual farmers can only use the land to make profit (by growing crops or renting it to other farmers), but selling the land is forbidden. Another feature is that the farmlands of household are small and fragmented. When the village collective allocates the farmland, farmlands are ranked in three or four levels according to the soil quality. Each family chooses 1-2 plots from each level and therefore has 3-6 farm plots which sum up to around 0.15 ha.

The system of land ownership has a number of effects. First, small and fragmented farmlands make it difficult to reach economies of scale, and therefore smallholders lack competitiveness in the big market. It is necessary for farmers to take collective activities to use farmland as a whole in order to achieve efficiency and access the market with low transaction cost. Second, as the collective-owned farmland is non-tradable, farms cannot be regarded as capital or investments when farmers participate in a cooperative. The result is that common members without other kind of investment are unable to have income rights and decision rights like core members. Finally, the literature regarding cooperatives has formulated the horizon problem, i.e., a member of a cooperative has an incentive to underinvest in long-term collective activities when the farmer is close to retirement. A second horizon problem seems to be present due to the land being leased from the village for a fixed period of time, often 20-30 years. Investment problems arise when the expiration of the land lease contract comes close. Investors realize that their investments belong to the village collective once the contracts expire. This results in anticipating holdup by the village collective and therefore a holdup problem in terms of underinvestment in value-creating investments. Additionally, cost is involved in renewing the land lease with the village collective.



## 4.2 Cooperative Law

The Chinese Cooperative Law of 2007 has defined cooperatives as democratic institutions collectively owned and controlled by members. One member, one vote is the building block of Chinese cooperatives, while proportional voting is also allowed with the ceiling of 20% of the total votes for each member. The law specifies also that at least 60% of distributable profit should be allocated based on patronage and at most 40% can be allocated based on equity capital. A survey of fruit and vegetable cooperatives in the Zhejiang province by Liang et al. (2015) reveals that the distribution of ownership rights, decision rights, and income rights in farmer cooperatives is quite skewed toward a small proportion of members. They conclude that several governance practices by cooperatives are not in line with the requirements specified by the law.

Democratic institutions develop often oligarchic tendencies. The iron law of oligarchy (Michels 1911) seems quite relevant for cooperatives in China. It states that the operation of enterprises requires the rule of an elite, i.e., core members. They are able to control who has access to information and often centralize their power successfully due to the nonparticipation and indifference of many members. This may have a strong influence on the outcome of any decisions made "democratically" by members. The development and enforcement of effective checks and balances is problematic in the top-down cooperatives in China.

## 4.3 Local and Central Governments

The local government is important because they own and allocate the land, which has been addressed above. The central government plays also an important role in driving and supporting the development of cooperatives. There are at least three aspects of the relationship between cooperatives and the government. First, the government regards cooperatives as an important tool for the purpose of rural economic development and village political stability (Liang and Hendrikse 2013; Xu 2014). Second, the government supports cooperatives via subsidies, tax relief, and various certifications. Subsidies are an essential capital source for cooperatives in the start-up age (Jia et al. 2012). Certifications and permissions establish products' reputation and increase cooperatives' competitiveness in the market. Third, the government tries to influence agricultural land integration, though it does not own the land. The government often persuades farmers with adjacent land to participate in the same cooperative so as to help them realize economies of scale after integrating the land.

## 4.4 Educational Level of Farmers

Farmers in China have usually a low educational level. According to a survey of 37 cooperatives in Zhejiang which is one of the most developed areas in China, 75.7% of the member chairpersons had middle school education and 21.6% had high school education (Liang and Hendrikse 2013). The relatively low educational level of chairpersons may make it hard to establish cooperative principles. In addition to the low educational level of CEOs in cooperatives, members are even more poorly educated. Based on the data of population census in 2010, around 40.3% of rural residents in China have primary school education or less, 48.1% of farmers in China have middle school education, and 11.6% have high school education. Hence, farmers are hardly aware of their rights of being a cooperative member, such as collective decision rights (Liang et al. 2015).

A cooperative may increase the quality level of farming for a number of reasons. Members join a cooperative primarily for economic reasons, like prices, other business terms, and transaction costs. The profitability of their individual farm household may increase due to several services provided by the cooperative, such as field services, technical services, risk management services, farm business consulting services, operating capital and facility capital financing, insurance programs, a unified brand, joint sales, and lobbying. Members pursue also noneconomic objectives, like deriving value from being a member of an association, a broader business education, leadership training, legislative influence, personal stature in the community, and a greater sense of achievement. Bringing these services to value requires the exchange of information between the members and the cooperative enterprise. This exchange is more likely to happen in cooperatives than IOFs because members own the cooperative enterprise, while they do not own the enterprise when it is an IOF (Hendrikse and Feng 2013). A cooperative may therefore take on auxiliary activities that an IOF would inefficiently forego (Feng and Hendrikse 2012).

## 4.5 Need for Capital

Cooperatives in China are featured by the lack of capital, which exerts a constraint on their development. This is due to a couple of reasons. First, cooperatives in China naturally lack financial capital due to farmers' shortage of financial capital. Members hardly pay, or pay a small amount of capital for obtaining the membership, except for a few core members (Liang et al. 2015). Hence, the asset capital of cooperatives is contributed mainly by a limited number of core members, which results in the lack of capital. Second, unlike most cooperatives in the Western world, cooperatives in China have difficulty in making profits. Both the limited history and the lack of professional management may make it hard for cooperatives to make profits (Xu et al. 2013). Many cooperatives therefore are dependent on

external assistance to survive, such as governmental support and investment from legal/company shareholders.

## 5 Conclusion

Descriptions of six cooperatives are presented to address the question whether Chinese cooperatives are different from Western cooperatives. The cases revealed that cooperatives differ drastically from cooperatives in the West. Some organizations with the label cooperative are not a cooperative according to the patron-owned definition of a cooperative. The distribution of ownership, decision, and income rights of cooperatives in China is much more skewed. This may be a response of cooperatives to the specific economic and political environment faced by them, such as the farmland system in China, the cooperative law, the financial support and intervention from the government, the low level of education of many farmers, and the need for capital.

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