

Conventionalization of Organic Agriculture in China: A Case Study of Haobao Organic Agricultural Company in Yunnan Province

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This study aims to understand the current situation in China's organic sector by exploring the introduction of an organic agriculture enterprise in Kunming, Yunnan. As the recent growth in organic farming has given rise to the "conventionalization hypothesis," which states that contemporary narratives on organic farming through third-party certification systems are reducing its social-movement components and replacing them with an industrial approach, a case study has been chosen to analyze this trend in China. Nonagricultural capital injection in 2012 led the company in our case study to adjust its business strategy with rapid expansion, during which social values, such as energy recycling and community building, had been easily bypassed and replaced with commercial interests.

Key words: organic agriculture, conventionalization, opportunistic behavior

1. Introduction

Organic agriculture movements, as an alternative to the increasing intensification of agriculture, emerged during the 1930s when chemically intensive farming faced a crisis in the form of soil degradation, poor food quality, and the deterioration of the social life and traditions of agricultural communities. With the growing awareness of environmental sustainability and food safety, the organic sector has grown from a local network of producers and consumers to a globalized system of regulated trade that links distant sites of production and consumption. To facilitate global trade, third-party certification systems have been developed and introduced to producers in the Global South by suppliers and retailers in the Global North.

Recently, there has been a lively debate among academics on whether there is a trend towards "conventionalization"¹⁾ of the organic sector. In particular, many have argued that organic certification standards tend to favor entry into the sector by capitalized and large-scale producers at the expense of the relationship between the farmer and consumer. This leads to greater opportunities for agribusiness capital to convert organic off-farm inputs into this market and monopolize the lucrative parts, which leads to the whole

sector to become "industrialized" in the process. The main problem pointed out by analysts is that the growth in this sector actually emerges from the conventional interest in niche commodities, raising concerns of the "conventionalization of organic agriculture" in the Global North (Guthman, 1997; Best, 2006; De Wit, 2007; Reed, 2010; Jordan and Hisano, 2011).

Compared to the Global North, the Global South shares a pattern of developing organic agriculture that is export-oriented to support the organic food supply chains in the ongoing globalization process. This pattern is inclined to conventional contract farming that focuses on the completion of arbitrarily assigned production tasks rather than treating it as a social movement in the food industry. The principles promoted by organic pioneers have been replaced by commercial interests. This research explores the possibility of whether or not this phenomenon exists in China.

Since the organic tea from Lin'an county of Zhejiang province was exported using the Netherlands' SKAL certification, the organic agriculture in China has rapidly developed. The number of organic producers in China has risen from 102 in 2003 to 6,051 in 2013; and the number of organic certificates that were issued has increased from 22 in

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1) Use of word "conventionalization" emphasizes the process through which organic agriculture, envisioned during early stages as a social movement with principles such as being eco-friendly, reduction of off-farm inputs, fair trade, and local

promotion, gradually resembles elements of the mainstream food sector (more use of off-farm inputs; industrial mode of production; erosion of local food systems; and wasteful energy consumption for long-distance trade), leaving itself undistinguished from conventional agriculture that it had originally aimed to oppose.

2004 to 9,957 in 2013 (CGFDC, 2011; CNCA, 2014). By the end of 2013, the retail sales of organic products in China's domestic market had reached 17.5 billion Chinese Yuan, which led to China having the fourth largest market in the world. Meanwhile, China became the fourth largest organic farming country in the world, maintaining 2.1 million hectares of agricultural land dedicated to organic products in 2014 (FiBL and IFOAM, 2015).

Meanwhile, over the past decade, China's organic agriculture sector has shown a trend toward diversification that is away from the dominance of export-oriented companies—that marked the sector's initial stages—to the co-existence of various ownerships (Gao and Dai, 2013). Three models—including company leading model, farmers' cooperative model, and the model of alternative certification (also known as participatory guarantee system)—dominate the organic sector in China. To understand the current situation of China's organic sector from a producer's perspective, the following measures have been taken.

2. Methodology

Our previous work based on 13,126 valid organic certificates, collected from the Certification Information System for Food and Agricultural Products of China during the period from July 31, 2014 to August 1, 2015, reveals that among 7,526 organic producers in China, 5,308 (70.5%) are enterprises and 1,744 (23.2%) are farmers' cooperatives. The company leading model is dominating China's organic market. As there is no time-series database available to conduct a quantitative analysis on the changing pattern of producers' behavior in China's organic market, we use a case study in this research. Haobao Organic Agricultural Co., Ltd. (hereinafter referred to as Haobao Company) was chosen as a typical case due to three reasons: 1) it has a long history of organic farming with organic certificates issued by the China Organic Food Development Center (OFDC) for 12 consecutive years since 2003; 2) the turning point of this company came in 2012, when a typical pattern of conventionalizing organic agriculture with large capital was revealed; 3) the opportunistic behavior that Haobao Company adopted to meet its needs of rapid expansion is not considered an isolated phenomenon in China's growing organic market.

3. Overview of Target Area

The first production base of Haobao Company was located

in Tuanjie Sub-district, which belongs to Xishan District of Kunming City in Yunnan Province. Tuanjie Sub-district is 30 kilometers away from the center of Kunming city. By the end of 2013, the total population of Tuanjie Sub-district was 32,518, of which 72% were ethnic minorities. Financial revenue of local government was 32.92 million yuan in 2013, and the per capita net income of its agricultural population was 3,648 yuan (KSB, 2015). The farmland leased by Haobao Company for its production base Haobaoqing is part of Daleju village, which has 26.7 hectares of arable land and a total population of 892, belonging to 231 households. Villagers in Daleju depend on agriculture for a living. A total of 285 villagers worked outside the village in 2013. Farmland leased to Haobao Company from Daleju village was originally a large, barren, unfarmed hillside that had not been used for any farming activity for nearly 12 years.

4. Development of Haobao Company

Haobao Company, formerly known as Haobaoqing Eco-Agricultural Co., Ltd., was founded by Mingyi in August 2002 with registered capital of one million yuan. It is known as the first organic food enterprise that grows organic vegetables with Chinese national organic standards in Yunnan province.

Before the establishment of Haobaoqing Eco-Agricultural Co., Ltd., Mingyi ran a company that developed and produced electrical equipment in Kunming City. After witnessed the land pollution caused by overuse of chemical fertilizers and pesticides, he decided to pursue organic farming.

The company's first farmland was located in Daleju Village of Tuanjie Sub-district, along a narrow valley on the west side of Woyun Mountain. Haobaoqing base was set up when Mingyi signed a contract with the village committee of Daleju Village in 2002. The first 7.74 hectares was signed in 2002 for fifty years at the price of 400 yuan per acre per year. According to the agreement between the company and villagers, land rent will rise by 100 yuan per acre per decade. Haobaoqing area in this base was first certified as organic from OFDC in 2003. Later, in 2009, Mingyi visited Dali City, a county-level city of the Dali Bai Autonomous Prefecture in northwestern Yunnan, and established another production base, the Dali base in 2010. Eight hectares of farmland were leased from Yiniao Township, near the Erhai Lake, to grow organic paddy rice. Dali base got its first organic certification from OFDC in 2010.

As a pioneer in China's organic farming industry, Mingyi encountered many difficulties in the first decade, since the public had little awareness of organic farming at that time. By the end of 2010, Mingyi had invested 9.8 million yuan into his organic business. After consecutive losses for eight years, his company finally became profitable in 2010.

Organic farming drew more attention after 2010, when investors seeking opportunities in this agribusiness sought to collaborate with Mingyi. Mingyi accepted their offer in 2012. They initially shared the same strategy but then ran into disagreements regarding the issue of business expansion. Mingyi believed that organic farming needs slow-paced practices. It takes time to fully convert certain areas of farmland to make them suitable for organic cultivation. In addition, Mingyi dedicated himself to building a local-based healthy food service system including setting up an "Organic Life" exhibition center in Kunming, promoting cooperation with surrounding villages near Haobaoqing base and even introducing agri-tourism into its production base to boost public knowledge about healthy diets and lifestyles. However, the other investors considered organic farming as nothing more than a business, which therefore needed large-scale expansion to occupy the market as fast as possible. Pursuit of profit maximization was their priority. As a result, Mingyi left

the company in 2012. After Mingyi's departure, Haobaoqing Eco-Agricultural Co., Ltd. adjusted its shareholding structure and was renamed Haobao Organic Agricultural Co., Ltd. in 2012.

Since then, the company entered a period of rapid development (Table 1). It set up its first sales branch in Beijing in June 2012, one in Shenzhen that November, followed by Tianjin and Shanghai sales branches (both established in December). In addition, while maintaining its original production bases, Haobao Company set up another production base (113.3 hectares) near Songhuaba reservoir, the water source area of Kunming City, in 2012 while in 2013 it added another 6.96 hectares of farmland to Haobaoqing base and expanded Dali base to 100 hectares. In 2014, the company planned to set up another base (20 hectares) in Xinping County of Yuxi City to grow winter vegetables.

Initially, the company entrusted its logistics to S.F. Express, one of China's largest logistics companies. After May 2012, Haobao Company set up its own cold chain logistics for its products, especially fresh vegetables. The same year, it developed its own e-commerce platform, the Haobao Agricultural Products Trading Platform, to take orders from across the country.

Table 1. Strategy changes of Haobao Company after capital injection in 2012

	Before 2012 (Focus on local development)	After 2012 (Focus on market expansion)
1. Company structure	Local company in Kunming	State-level company with headquarters in Kunming and four sales branches in Beijing, Shenzhen, Tianjin and Shanghai
2. Production base	Two production bases (15.74 hectares)	Four production bases (248 hectares)
3. Sales	Local sales through membership	Sales through membership and big clients across the country, and internet orders through its own e-commerce platform
4. Logistics	Commissioned local logistics with S.F. Express	Independent cold chain logistics system in cooperation with commissioned airport logistics for its sales branches
5. Localization strategy	"Organic Life" exhibition center in Kunming; "Organic Village" near Haobaoqing base*; Agri-tourism in Haobaoqing base**	Abandoned

Notes: 1) The "Organic Village" project began in 2009 in Shiliqing village, closed to Haobaoqing base. Haobao Company made a verbal commitment with eight households in this village to guide them grow organic vegetables on 4 hectares of farmland and promised to deal with all their harvest. A guaranteed price was set as 2000 yuan per mu per year. 2) To promote agri-tourism in its Haobaoqing base, Mingyi established an organic restaurant and set up a cave-based hostel on the site. Meanwhile, several local promotion activities were organized during that period, such as self-picking activity and the annual torch festival in cooperation with local government.

5. Production Management

As its first production base, Haobaoqing received its organic certification in 2003 when it belonged to Haobaoqing Eco-Agricultural Co., Ltd. This base mainly grows

vegetables on a total area of 14.7 hectares as of 2014. Its personnel structure consists of one base manager and two assistant managers in charge of production and daily maintenance. Five groups were set up to manage production,

including the Haobaoqing area group (20 employees), Fangdaoshan area group (14 employees), statistics and compost group (5 employees), seedling group (7 employees), and package and quality inspection group (2 employees). In terms of daily maintenance, an electro-mechanical group (4 employees) is responsible for water control, machinery and environmental maintenance. In addition, 18 employees are responsible for warehouse, finance, and base canteen operations. There were totally 70 employees in Haobaoqing base, earning an average of 1,900 yuan per month in 2014. The base's busiest season begins in April and lasts through the end of September.

Since data recording is very important for organic certification, daily seedling records (including target lot, serial number, quantity, date, labor cost, and cost of supplies),

and growth records (including lot number, variety, production number, area, weight, labor cost, supplies cost, and harvest records) are required, including specific details. Regarding pest control practices, regular guidance is sent from headquarters in cooperation with the Yunnan Academy of Agricultural Science. As to the use of compost, it is produced by the base itself, according to the following proportions: 20% straw, 5% organic crop residues, 30% animal waste, 40% weeds, and 5% soil. Table 2 shows the production and distribution of Haobaoqing base in 2014. The average loss ratio of its produce reached 24.4% ($100\% - \frac{\text{②}}{\text{①}}$) from field to the sorting center. It can be estimated that more is lost in the company's long-distance transport from the sorting center to its sales branches, then to each client.

Table 2. Production and distribution of Haobaoqing base in 2014 (kg)

	Actual harvest ①	Last month remaining	Distribution			②/① (%)	Loss			Remaining		
			Haobao restaurant	Sorting center	Total ②		Cold storage discarded	Ground discarded	Other losses			
January	16,936	1,501	1,686	14,652	16,338	86.5%	656	37	182	1,224		
February	26,566	1,224	1,392	20,493	21,885	77.1%	1,124	4,349	83	349		
March	23,396	349	1,288	14,888	16,176	63.6%	1,584	5,900	78	7		
April	23,389	7	2,149	19,140	21,289	81.8%	700	982	177	248		
May	64,927	248	2,278	49,289	51,567	75.9%	2,273	2,733	3,038	5,564		
June	54,278	5,564	1,707	42,498	44,205	78.3%	5,016	3,942	1,933	4,746		
July	36,397	4,746	1,540	28,150	29,690	77.3%	4,256	1,991	265	4,941		
August	37,892	4,941	2,054	34,212	36,266	90.3%	4,487	980	117	983		
September	35,476	983	2,166	29,041	31,207	81.9%	3,176	0	175	1,901		
October	28,902	1,901	1,761	19,946	21,707	69.0%	3,011	3,617	128	2,340		
November												
December	22,060	2,340	575	7,506	8,081	34.0%	543	13,960	131	1,685		
Total	370,219	-	18,596	279,815	298,411	75.6%	26,826	38,491	6,307	-		

After June 2015, Haobao Company ran into a bottleneck because its new management overestimated the company's sales ability in a highly competitive market. According to our previous research, the number of organic producers competing in China's domestic market in 2015 had reached 7,526, nine times the number operating in 2008. After investing extensively in its production bases, sales branches, and logistics, Haobao Company encountered breaks in its funding streams. It leased 36 hectares of farmland from Xinfang Village in 2012 for 17 years at 1,260 yuan per mu per year, but failed to pay rent in 2014. Currently, the village committee of Xinfang Village is pursuing the land rent through

legal channels.

As a result, the company had to abandon its Dali base and withdrew its planned expansion of the production base in Xinping County. By the end of September 2015, the company maintained only two production bases and halved the number of employees in Haobaoqing base.

6. Organic Certification

The average annual cost for organic certification from the OFDC is 130,000 yuan, which includes two certifications a year for Haobaoqing base, in March and June (30,000 yuan each), once a year in Songhuaba base (40,000 yuan), and

once a year in Dali base (30,000 yuan). The certified organic produce of Haobao Company in 2014 is shown in Table 3. All of the certificates maintained by Haobao Company have been certified only through OFDC from the beginning. Since organic certification is required every year, the actual area certified as organic depends on the annual certification status.

According to the Implementation Rules for the Certification of Organic Products (CNCA-N-009: 2014) adopted by the General Administration of Quality Supervision, Inspection and Quarantine of the People's Republic of China in 2014, each organic certificate must state clearly the production of each category of organic products, and a sale permit is issued based on this certified quantity of organic produce.

Table 3. Organic produce of Haobao Company in 2014

	Variety	Area (ha)	Certified output (t)
Haobaoqing	Broccoli	0.11	1.8
	Radish	0.06	1.5
	Carrot	0.18	4.25
	Yacon	0.05	1.28
	Yam	0.05	0.53
	Peas	0.08	0.4
	Cabbage	0.21	3.19
	Garlic	0.07	0.33
	Burdock	0.06	0.8
	Leek	0.2	2.75
Songhuaba base	Beet	0.13	2
	Lettuce	0.08	1.8
Total		5.63	20.63
Dali base	Kale	-	2.72
	Bamboo shoot	-	0.6
	Kucai	-	24.68
	Lettuce	-	8.88
	Cabbage	-	27.6
Total		35	64.48
Total		48.63	133.11

A great imbalance can be seen between the actual and planned amounts of certified organic products in 2014. The total amount of organic vegetables from Haobaoqing base certified by the OFDC in 2014 was 20.63 tons. However, the total harvest of Haobaoqing base in 2014 was 370.2 tons, of which 279.8 tons were claimed to be organic and sent to the sorting center (Table 2). The reason figures in Table 3 show

low yields of varieties except broccoli is because it only refers to the part that certified as organic. Take into account the fact that the average loss ratio of Haobaoqing base's produce reached 24.4% and part of its production was used for the company's restaurant, such low yields of certified organic products are not surprising. Besides, the company failed to apply for organic certification in the following growing season, which raises concerns that the company may be selling products in the market that have not been certified as organic.

7. Marketing and Sales

Haobao Company's main sales channel is via membership, the cost of which varies depending on order weight and delivery time. Usually, products are delivered to each member weekly according to their specific requirements, at a price averaging about ten times that of the ordinary products in the market; this is also higher than prices charged by other organic food companies, which are usually three to five times that of ordinary products.



Figure 1. Package of Organic Delivery

Haobao Company's main products are vegetables, which are all called organic. In addition, the company has orchards and raises chickens in Haobaoqing base. Output of these sectors is included in its sales as ecological, not organic, produce. Figure 1 shows the package used by the company to deliver products. The OFDC organic logo is printed on the box with a serial number of certificate, which may be used excessively, beyond certified amount.

To promote its products, Haobao Company has maintained relationships with large organizations, such as the CCTV and the Bank of China, as well as carrying out a number of market promotions, including in high-end residential areas. High-end consumer groups are the main sales targets of its marketing strategy. In addition to regular members, Haobao Company has business contacts with four big clients in 2015,

including FoodPedia in Shanghai (1 ton per month), Pookin Farm in Chongqing (1.5-2 tons per month), Brother Fortune in Inner Mongolia (2-3 tons per month), and Virgin Group in Hong Kong (5-6 tons per month).

By the end of 2014, Haobao Company had a cumulative membership of 31,587, of which 63.6% are located in Kunming City. Its sales increased from 2.1 million yuan in 2011 to 8.3 million yuan in 2012, and to 68.2 million yuan in 2013. Depending on the type of membership card, membership numbers fluctuate.

However, the company shows an inability to develop additional sales channels apart from membership. Since it abandoned agri-tourism at Haobaoqing base in 2012 and the production of organic rice at Dali base in 2015 due to breaks in the capital chain, the company's sales have been limited by reduced resources, resulting in a vicious cycle of shrinking production leading to decreasing size and reduced income, contrary to the original intention of the 2012 capital injection.

8. Summary

As a typical organic enterprise in China's domestic market, Haobao Company adopted "direct farming" instead of signing contracts with local farmers in the early stages because its initial farmland, leased from Daleju Village, had originally been a barren hillside devoid of farming activity for nearly 12 years. Originating from a city-level organic farm, Haobaoqing Eco-Agricultural Company spent its early years committed to producing organic products locally and promoting local-community development. In 2012, a non-agricultural capital injection led the company to adjust its strategy, resulting in the establishment of several sales branches across the country and a rapid expansion of production bases. These changes display obvious features of "conventionalization", as discussed earlier, which led the company to rely on energy-intensive sources of external inputs and caused energy consumption to skyrocket for its long-distance transport. Meanwhile, the social values central to the company's mission in its early stage were bypassed after 2012 and replaced by commercial interests; this led to the conception of organic as nothing more than a simple certification process.

This particular case illustrates that pursuing profit maximization through rapid expansion led the company to encounter several problems. As a result, the company had to abandon two production bases to save costs. Moreover, a great imbalance arose between the amount of certified

organic products and the amount supplied to its members, which has raised concerns that the company is on suspicion of selling produces that are probably not sufficiently qualified as organic. Such occurrence is considered to be possibly a potential threat that may have an implication which affects the development of China's organic food industry.

More importantly, growth in the organic sector following a large capital injection derives from conventional interest in niche commodities. In other words, the prevailing tendency for the conventionalization of organic farming is more likely to contribute to forging an unsustainable system, resulting in an erosion of local food systems and the core values of organic farming. This study aims to elucidate the concept of conventionalization of the organic sector in China beyond the question of whether or not it is occurring, by bringing the debate to focus on the extent to which such activities affect our daily lives.

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