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Contract Farming in China: Perspectives of Smallholders

HONGDONG GUO

Associate Professor,

Center for Agricultural and Rural Development, Zhejiang University, China.

guohongdong@zju.edu.cn

AND

ROBERT W. JOLLY

Professor, Department of Economics, Iowa State University, USA

rjolly@iastate.edu

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CONTRACT FARMING IN CHINA: PERSPECTIVES OF SMALLHOLDERS

HONGDONG GUO¹, ROBERT W. JOLLY²

ABSTRACT

This paper explores the current status of contract farming in China by examining data from a survey of Chinese householders. The survey indicates that the actual proportion of householders engaged in contract farming is relatively low and significantly less than the proportion of householders willing to produce under contract. The primary reason for householders not participating in contract farming is the absence of opportunities, particularly for small size farms. Householders identify price stability and market access as the key motivations to participate in contract farming. Middleman and agribusiness firms were the most important organizations for householders to contract with.

Key Words: contract farming, China, smallholders

1. INTRODUCTION

As part of the on-going processes of “agri-industrialization”, the use of contracts is increasingly common across a range of agricultural commodities in both industrialized and developing countries. In addition to individual case studies, there have been cross country reviews (see e.g Dorward et al., 1998; Little & Watts, 1994) and formal analyses (e.g. Goodhue, 1999). From the producer’s perspective, the motivation to participate in contract production varies, for example, according to prevailing agrarian and market structures or policy frameworks. It may also be a response to imperfections in markets for credit, insurance, information, factors of production, and raw product, or imperfections in transaction costs associated with search, screening, transfer of goods, bargaining and enforcement (Key & Runsten, 1999; key, Sadoulet & De Janvry, 2000). Much of the literature assumes that producers predominantly contract to earn additional income. Although a subset of studies do acknowledge, or at least imply, that individual farmers may contract for differing reasons (e.g. Delgado, 1999). Some studies exploring the motivations for smallholders in developing countries to participate in contract farming vary even among producers in a relatively small geographical area. Further, these motivations reflect local economic, social, and institutional conditions and as a result, will vary from one

¹ Corresponding author. Center for Agricultural and Rural Development, Zhejiang University, China. Email: guohongdong@zju.edu.cn

² Professor, Department of Economics, Iowa State University, USA

context to another and over time in light of changing circumstances (Masakure & Henson, 2005).

The existing literature provides a rich and varied analysis of many salient issues relating to the motivations for small-scale producers to participate in contract production in different countries (Little and Watts, 1994; Key & Runsten, 1999; Singh, 2002; Masakure & Henson, 2005). But there are few papers about contract farming in China. It is necessary to research the smallholders' motivation to participate in contract farming in China.

This paper's main objective is to explore those motivations and factors, taken from a survey of small-scale producers in China, which influence smallholders in China to participate in contract farming. The paper is organized as follows: In Section 2, we examine the data by statistical analysis and discuss the results. In Section 3, we draw our conclusions.

2 STUDY AREA AND SURVEY DATA DESCRIPTION

2.1 The Study area

Over the past 25 years, the Chinese agricultural sector has undergone fundamental restructuring. Agricultural production and farm household income has grown rapidly, largely due to agrarian reforms undertaken by the government. Beginning in 1978, a series of institutional reforms significantly transformed a collectivized, planned agricultural sector into something resembling a capitalist structure. Crucial milestones have been the abolition of the communal property base, the introduction of the household contract responsibility and the price and market liberalization systems, respectively, the revision of the Land Administration Law in 1998, and, most recently, China's admission to the World Trade Organization (WTO). Correspondingly, the farm householder has become an active agent in the marketplace in contrast to the passive production unit of the planned economy. Farm householders at the village level have certain rights to decide, subject to some minimum production requirements from local government, what they wish to produce and how to market their products. However, Chinese farmers face a number of challenges – among them low agricultural prices due to large stocks of products, lagging incomes and excess labor in the agricultural sector. Externally, Chinese agriculture faces increasing competition from foreign products due to its recent entry into the WTO and the continuing globalization of agriculture. Domestically, as consequences of urbanization and rising incomes, Chinese agriculture has moved into a new developmental stage characterized by significant increases in production levels and shifts in food demand. Under these circumstances, millions of small-scale farm householders in China are unable to compete – to respond to changes in domestic demand and to withstand pressure from international markets. For many smallholders, market access has become

increasingly difficult and their incomes continue to lag behind the rest of the economy.

Since 1990, contract farming has been supported by the Chinese government for the sake of making agricultural production more profitable and competitive. Thus, contract farming in China has made considerable progress in the past ten years. Four characteristics can be safely generalized from its growth so far. First of all, the number of agricultural commodities produced under contract has increased steadily. Agricultural products produced or marketed under contract have grown from small-quantity, locally-specialized products, such as food oil and vegetables, to bulk commodities such as corn, beans, rice and wheat. Second, the geographic distribution of contract farming has also expanded significantly. Initially, contract farming developed in the economically-advanced coastal provinces. Now contract farming is spreading rapidly into the underdeveloped areas of central and western China. Most firms sign contracts not only with local farmers, but also with farmers in other provinces. Third, the scale of products produced under contract – the planted areas, volume of cash receipts and number of farmers – has also increased. According to the Chinese Department of Agriculture, the planted area involved in all types of contracts reached 18.6 million hectares in 2001, which is approximately 40% higher than in 2000. Finally, the number of smallholders and firms involved has also increased. According to the most recent survey from the Chinese Department of Agriculture, the number of smallholders who signed contracts with firms increased twofold over the same period. Correspondingly, the proportion of smallholders involved in contract farming went up from 10 percent to 25 percent (Niu, 2002).

2.2 Data

Smallholder data were obtained through a survey conducted by more than 60 rural-area undergraduate students from Zhejiang University when they returned to their home villages during winter break, February 2004. The survey contained questions on the farm householder, farm production status and involvement in contract farming. Student survey enumerators were carefully trained before they returned home. Each student randomly selected 30 householders in their home village to survey. The students returned 1,820 surveys, of which 1,036 were complete and usable. Because many of the student volunteers came from the Zhejiang, Jiangxi and Shangdong provinces, more data were collected from these three provinces. In total, the farmer householders included in the survey represent over 13 provinces and 47 counties. The descriptive statistics of surveyed householders are described in Table 1.

Table 1: Descriptive statistics of surveyed householders

Householder	Minimum	Maximum	Mean	Std. Deviation
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characteristics				
Land operated (hectares)	0.00	30.00	0.53	1.40
Family members	1	15	4.29	1.41
Commercial rate (%)	0.00	100	65	33

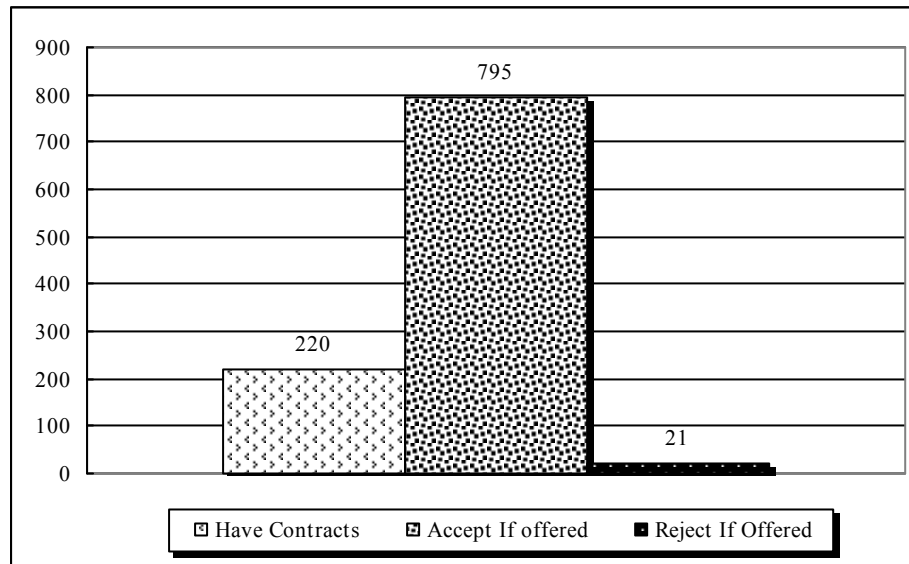
Source: primary survey

3 RESULTS AND DISCUSSION

3.1 Overall Situation

Out of 1,036 farmer householders included in the survey, only 220 householders, or 21.2 percent, ever participated in contract farming. However, when householders without contracts are asked whether they would be willing to engage in contract farming, 97.9 percent answered positively. Only the remaining 2.1 percent indicated they would not consider a contract if offered (Figure 1). The results suggest that most householders have a favorable view toward contract production and would choose to be involved in if they were offered the opportunity.

Figure 1: Householders having contracts and those willing-to-accept



From Table 2 we can see that the primary reason for householders not participating in contract farming is the absence of opportunities. An absence of perceived benefit, presumably due to small-scale production and contractors showing no interest, account for other reasons. This implies that the existence of many small-scale operations influences the growth of contract farming in China.

Table 2: Reasons why householders do not participate in contract farming

A variety of reasons	No opportunities	No obvious benefits	Process too complicated	Owing to small scale	Total
No. of householders	426	169	21	200	816
Percent	52.2	20.7	2.6	24.5	100

Source: primary survey

3.2 Motivations for participating in contract farming

Table 3 illustrates several potential incentives identified by current contract producers that would encourage them to engage in contract farming. Farmers strongly identify price stability and market access as the key motivations to participate in contract farming. However, credit and technology provided by contracting firms were also identified by some householders.

Table 3: Motivations to participate in contract farming

Motivations to participate in	Market access	Price stability	Credit support	Technology support	Total
No. of householders	124	73	17	6	220
Percent	56.4	33.2	7.7	2.7	100

Source: primary survey

3.3 Organizational types of contracting farming

In Table 4 we present information on householders' existing organization types and willingness to accept organization types. Agri-businesses firms, cooperatives and middlemen use contracts with farmers, with middleman and agribusiness firms being the most important organizations for householders to contract with. Nearly 70 percent of householders contract with middlemen or agribusiness firms, and only 0.5 percent of householders contract with farmer cooperatives. Since cooperatives are not well developed in China, householders have fewer opportunities to contract with them, but about 18.7 percent of householders would like to contact with farmer cooperatives. The apparent preference of Chinese householders for cooperatives deserves further investigation.

Table 4: Actual organization types and householders' willingness to accept organization types

Organizational types	Middle men	Agri-business firms	Village community	Farmer cooperative	Local government	Others	Total
Real situation	34.1%	34.1%	12.7%	0.5%	5.9%	12.7%	100%

Willingness to accept	18.0%	32.7%	8.8%	18.7%	14.4%	7.5%	100%
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Source: primary survey

3.4 Types of Contracts

From Table 5, we can easily see that marketing and product contracts are the dominant types in China (a sample contract is provided in Appendix A). Marketing contracts have been used widely in fruit, vegetables and so on. Negotiated before delivery or production, contracts typically specify grade and price (or formula for price)[♦]. Commodity ownership usually remains with the producer until the product is delivered to the buyer. Product contracts have been widely used in livestock, e.g. broilers and hogs, in recently years. Arrangements differ widely, but the contracts typically furnish baby pigs or chicks, feed, veterinary supplies, and organizational management, e.g. appropriate practices, and number and timing of placements. The grower or producer does not own the animals but supplies equipment, building, labor, and day-to-day management for a fee per animal and an incentive bonus or penalty.

Table 5: Types of contract

Types of contract	Marketing contract	Product contract	Others	Total
No. of householders	149	61	10	220
Percent	67.7	27.7	4.6	100

Source: primary survey

3.5 Forms of Contracts

Approximately 51 percent of all contracts are written, with the rest being oral contracts between agents. But the choice of contract form is highly correlated with contractor type. Oral contracts are used primarily by middlemen, and written contracts are used by firms. The underlying reason for this comes from the reputation and familiarity associated with middlemen who are from the same village as the contracting farmers. Social norms make oral contracts perform very well. But outside firms would prefer written contracts that clearly specify rights and responsibilities for both parties.

Table 6: Forms of contracts

[♦] For example, the formula may be based on the future market or on a specific premium above the spot or cash market; alternatively, well in advance of product delivery to market, a price may be negotiated by buyers and sellers.

Organization	Forms of contract		Total
	Oral contract	Written contract	
Middleman	64.0%	36.0%	100%
Agribusiness firms	14.7%	85.3%	100%
Village community	75.0%	25.0%	100%
Local government	61.5%	38.5%	100%
Total percent	49.1%	50.9%	100%

Source: primary survey

3.6 Contract Specifications

Householders with contracts were asked to provide information on contract specification: long-term contracts, i.e., more than one year, account only for 17.7 percent, while the remaining 82.3 percent were short-term contracts, i.e., less than one year.

Approximately 44 percent of the actual contracts reported in Table 7 specified a flexible delivery price that fluctuated with the local market. The second most common provision, at 27.3 percent, is specified as floor price. When householders were asked about preferred pricing mechanisms, 68.6 percent of farmers selected a floor price and only 20.9 percent would shift to a flexible delivery price. Since price specification is usually provided by contractors, we can see that its use does not fully reflect farmers' preference.

Table 7: Price specification and householders' willingness-to-accept

Price specification	Flexible price	Floor price	Fixed price	Others	Total
Real situation	44.1%	27.3%	22.7%	5.9%	100%
Willingness-to-accept	20.9%	68.6%	9.1%	1.4%	100%

Source: primary survey

The delivery payment method is another critical contract specification that directly affects farmers' intent to engage in contract farming. Table 8 showed that cash payment at delivery was used in half of all real transactions. Payment after delivery accounts for another 22.3 percent. Most farmers would prefer immediate cash payment.

Table 8: Payment method and contracts

Payment method Select	Cash payment	Advanced payment	Pay after delivery	Total
Real situation	50.0%	27.7%	22.3%	100%
Willingness-to-accept	66.4%	27.3%	6.3%	100%

Source: primary survey

3.7 Enforcement and Violation of Contracts

Information presented in Table 9 indicates 60 percent of farmers with contracts did not have a conflict with the other party. About 35.9 percent of farmers reported infrequent conflict, and 4.1 percent often had a problem with their contractor. The overall enforcement of contracts is relatively high.

Table 9: Contract performance

Do conflicts happen a lot?	Never	Seldom	Often	Total
No. of householders	132	79	9	220
Percent	60.0	35.9	4.1	100

Source: primary survey

As shown in Table 10, 86.4 percent of farmers think the main reason for conflicts is price. In addition, householders reported that most of the conflicts were resolved by negotiation between householders and contractors, and only 2.3 percent were resolved in court.

Table 10: Main reasons that contract conflict happen

Reasons	Price term	Quality term	Quantity term	Delivery time
No. of householders	76	64	6	16
Percent	86.4	72.7	6.8	18.2

Source: primary survey.

3.8 Benefits for participating in Householders

Householders with contracts were asked to rank, using a Likert scale, a number of potential benefits. From Table 11, we can see that 38.6 percent of participating householders believed that contract farming had played an important role in stabilizing the sale price, while 31.4 percent thought contract farming had played an important role in improving product quality. However, householders did not perceive any benefits in reducing production costs and increasing sale price.

Table 11: Benefits for participating householders

Benefits	No	A little	Normal	A lot	Greater	Total
Reducing Production Cost	31.8%	30.0%	24.1%	13.6%	0.5%	100%
Improving Production Quality	7.3%	15.5%	43.2%	31.4%	2.6%	100%

Improving Sale Price	22.3%	36.8%	28.6%	11.8%	0.5%	100%
Stabilizing Sale price	10.5%	15.0%	30.9%	38.6%	5.0%	100%
Reducing Marketing Cost	21.3%	25%	19.1%	27.3%	7.3%	100%

Source: primary survey.

4 CONCLUSION AND POLICY IMPLICATIONS

This study examined the current status of contract farming from the perspective of Chinese householders. The survey indicates that the actual proportion of householders engaged in contract farming is relatively low and significantly less than the proportion of householders willing to produce under contract. A lack of contract opportunities is the primary reason, particularly for small-sized farms. Householders identify price stability and market access as the key as the key motivations to participate in contract farming.. Middleman and agri-business firms were the most important organizations for householders to contract with. Although householder cooperatives are not well developed in China, most householders are willing to have contact with farmer cooperatives. Marketing contracts are more common than production contracts, with oral contracts being most widely used by middlemen due to the strong social capital and networks in rural areas. The floor price provision is favored by most householders due to its lower risk and cash payment on delivery is the preferred payment method. In China, most contracts can be carried out. The most important role contract farming can play for householders is to stabilize sale prices.

Our results also showed that the degree of commercialization is associated with a higher likelihood of contract farming. Public policies that encourage the adjustment of agricultural structure so as to improve farmers' specialization and commercialization should be made right now. Developing farmer cooperatives is another critical public policy consideration. Firms have to incur increased contracting monitoring costs when confronted with a fragmented farm structure. Bargaining associations or other types of cooperatives might reduce transaction costs and generate better performance.

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REFERENCE :

- Delgado, C. L..(1999). Sources of growth in smallholder agriculture in Sub-Saharan Africa: the role of vertical integration of smallholder farmers with processors and marketers of high –value added items. *Agrekon*, 38, pp. 165-189
- Dowward, A., Kydd, J., & Poulton, C. (Eds). (1998). *Smallholder cash crop production under market liberalization: A New institutional economics perspective*. Wallingford: CABI International.
- Goodhue,R.E.(1999).Input control in agricultural production contracts. *American Journal of Agricultural Economics*,81,pp616-620
- Key, N., & Runsten, D. (1999). Farming, Smallholders and rural development in Latin American: contract the organization of aro-processing firms and the scale of outgrower production. *World Development*, 27 (2), pp.381-401
- Key, N., Sadoulet, E., &De Janvry, A. (2000). Transaction Costs and Agricultural household response, *American Journal of Agricultural Economics*,82,pp.245-259
- Little, P., & Watts, M (Eds.).(1994). *Living under contract: Contract farming and agrarian transformation in sub-Saharan African*. Madison: University of Wisconsin Press.
- Masakure, Oliver & Henson, Spencer.(2005). Why do Small-scale producers choose to produce under contract? Lessons from Non traditional Vegetable exports form Zimbabwe. *World Development*. Vol.4, No.4, pp. 1-13
- Niu, ruofeng. (2002). Features of development of agricultural integration in China and the direction in the future. *Chinese Rural Economy*, 2, pp.4-9
- Singh, S. (2002). Contract out solutions: political economy of contract farming in the Indian Punjab, *World development*, Vol.30,No.9:pp.1621-1638

Appendix:**AGREEMENT ON PLANTING WATER RADISH**

CONTRACTOR: ZHONGSU LIMITED COMPANY, CITY OF LANXI
CONTRACTEE: THE GOVERNMENT OF YONGCHANG TOWN

In order to encourage farmers to develop contract farming and optimize agricultural structure, and thus ensure that they receive substantial economic benefits, both contractor and contractee, through friendly consultation, have reached the following agreement on the water-radish planting acreage of the farmers and the purchase of the yields:

1. Contractor will entrust contractee with the responsibility of planting techniques and acreage in some villages. Contractee will provide the planting families and the planting acreage, which should be over 3,000 mu.
2. Contractee should be in charge of examining and supervising the farmers and for marketing to the contractor the entire planted radish crop.
3. The quality standard of the water radish sold by the farmers should meet the demands determined by the contractor.
4. Contractor offers a favorable price for the delivered goods: higher, by 3 percent, than the local market price at delivery time.
5. Upon expiration of the contract, contractor takes priority of renewing it if desired.
6. This agreement will be valid for 2 years.
7. This agreement is a duplicate and each side has one copy, which becomes effective on the date of signing.