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Abstract: How does rural China's political economy determine the motivations and constraints that drive small farmers and agribusiness companies into contract farming and shape its practice and impact? This paper identifies three distinctive features of contract farming in China—varied impact on rural inequality, unstable contractual relations, and lack of competitiveness with other alternatives—and proposes tentative explanations with three features in rural China's political economy: strong collective institutions, active state support for agriculture, and strong domestic markets. The recent turn in China's agrarian transition toward vertical integration of agriculture with industries is, however, undermining these conditions and may move China toward more convergence with other countries. Studying contract farming in China's unique political economy context shows not only how variations in the political economy can alter its practice and impact, but also how it needs to be evaluated in comparison with competing alternatives.

Keywords: contract farming, agrarian transition, rural China, agribusiness, family farming

INTRODUCTION

Contract farming presents a middle path between the smallholding family farming that characterizes the peasant economies in many developing countries and corporate farming using wage labour. When agrarian transition starts in a country, contract farming emerges as a way of bringing capital and capitalist relations of production into agriculture and displacing peasant production. In the agrarian transition that has been unfolding in China for three decades, the expansion of agro-capital has also brought contract farming into a sector that had long been dominated by smallholding, independent family farms (Zhang and Donaldson 2010). A series of national surveys conducted by China's Ministry of Agriculture (MOA) found that the percentage of rural households engaged in market-oriented, commercial agriculture nationwide increased from 10 percent in 1996 to around 50 percent in 2005 (Niu 2006; Huang 2010a). Among the various organizations that intermediated commercial producers' transactions with markets, a majority used contract farming; nationwide, the number of organizations that engaged household farmers in contract farming rose from 8,377 in 1996 to 58,186 in 2002 (Niu 2006).

Compared with other forms of agricultural production, contract farming provides researchers unique opportunities to examine the direct interactions between agribusiness companies and small farmers. It has remained a salient issue in the study of agricultural development and rural changes in developing countries for several decades, and has been thoroughly studied in many different national political-economy contexts. Its rapid growth and rising importance in Chinese agriculture has prompted several recent studies in the English literature to document its various practices in China and assess its impact on rural development (e.g., Guo and Jolly 2008; Guo, Jolly, and Zhu 2007; Miyata, Minot, and Hu 2009; Zhang and Donaldson 2008, 2010).

Two issues, however, remain underexplored in these two sets of literatures. For the literature on contract farming in developing countries, a comparative analysis of its practice and impact in different national political-economy contexts is lacking, while for the study of contract farming in China, an examination of how rural China's political economy shapes the practice and impact of contract farming is needed. In the China literature, existing studies are limited to documenting the institutions and practices of contract farming (Zhang and Donaldson 2008), measuring its impact on farmers' income (Miyata et al. 2009), or analyzing the technical aspects of contract arrangements and enforcement (Guo and Jolly 2008; Guo et al. 2007).

This study intends to advance our knowledge on these two issues through an analysis of contract farming in China that focuses on how rural China's political economy shapes the interactions between agribusiness companies and small farmers, and compares the findings with experiences in other countries. I conduct two comparisons. First, I argue that we need to understand contract farming as an integral part of the broader process of agrarian transition in China and examine it in comparison with other competing forms of commoditized agriculture that have also emerged in this transition. The motivations and constraints that shape farmers' and agribusiness companies' participation in contract farming are influenced by the presence of alternative forms of production available to each. The existence and viability of these forms of production is, in turn, shaped by the political economy of rural China. Examining the competition between contract farming and other forms of agrarian transition leads to a fuller understanding of its dynamics and a more accurate assessment of its implications. Second, the political economy context in rural China, especially the strong collective institutions, active state support for agriculture, and strong domestic markets, contrasts sharply with the adoption of liberalization policies, declining government support for agriculture, and dominance of export-

oriented multinational corporations found in many African and Latin American countries, where most existing studies of contract farming in the developing world have been conducted. In this regard, China's distinctive political economic context and historical background provides the variation needed to explore the relationship between the practice and impact of contract farming and the political economic context.

The goal of this study is not to provide detailed empirical documentation of the institutions, transactions and relations in various types of contract farming that have emerged in China.[1] Instead, it intends to synthesize on a more aggregate level distinctive features of contract farming in China that stand out in a comparative perspective, and then explore a conceptual analysis of the relationship between these characteristics and the national political economy. Data for this synthesis and comparison come from both fieldwork and secondary sources in both Chinese and English-language literature. Primary data were collected as a part of a larger project studying China's agrarian transition in four field trips between 2007 and 2010. The data collection is case-based and qualitative in nature. Interviews with various agents in commoditized agriculture were conducted in five provinces in China, each representing an ecological region: Yunnan in the southwest, Fujian in the southeast, Shandong in the north, Heilongjiang in the northeast, and Henan in the central. The goal of the fieldwork is to identify emerging forms of commoditized agriculture and conceptually understand both the logic and practices of each form and the interactions among them. In this paper, I use cases to illustrate conceptual points, rather than provide systematic empirical documentation.[2]

[1] For that, see Guo et al. (2007), which reports findings from a multi-province survey, and Zhang and Donaldson (2008), which analyses cases to derive an overarching framework.

[2] All cases mentioned here, unless otherwise stated, come from the fieldwork.

Peasants, Farmers, and Agrarian Transition

I use "peasants" to refer to household-based agriculturalists who use family labour to produce staple grains mainly for subsistence and depend on non-commoditized relations for the household's reproduction—that is, a minimal participation in land, labour, credit and product markets (Friedmann 1980). In contrast, "farmers" refer to producers in both household and non-household units who engage in specialized production, usually of higher-value crops, for sale on nonlocal markets, and who depend on commodity relations—at least in product markets, but often also in labour, land, and credit markets—for their social reproduction. The type of agricultural production by peasants will be referred to as "subsistence agriculture" or "peasant production", whereas the type of production by "farmers" is referred to as "commoditized agriculture" or "commodity production." I use "producers" to refer loosely to all types of direct producers in agriculture.

This conceptualization of the peasant form of production distinguishes it from other commoditized forms (such as simple commodity production and capitalist production) through the combination of two characteristics: the use of households as units of production and the non-commoditized reproduction of the households. The latter, according to Friedmann (1980, 163), means that "access to land, labour, credit, and product markets is mediated through direct, non-monetary ties to other households or other classes, and … these ties are reproduced through institutionally stable reproductive mechanisms." Non-peasant forms of production can still be household-based, as long as the production is fully integrated into markets. For example, contract farming as a form of commodity production is usually household-based, but it differs from subsistence farming in that contract farmers enter into monetized relations with agribusiness

companies and specialize in commodity production for market transactions instead of self-consumption.

Actual cases, of course, do not always fit neatly into these two conceptual types of peasants and farmers.[3] But drawing this conceptual distinction provides an analytical tool for analyzing paths and processes of agrarian transition. The two-pronged conceptualization of peasants identifies the two directions of capitalist transformation of the peasant form of production, which are also the two central processes in China's recent agrarian transition: first, the commoditization of both agricultural production and the reproduction of farming households, and second, the organization of agricultural production beyond the household boundary (variously known as vertical integration, industrialization, and scaling-up) (Tong and Wen 2009, Zhang and Donaldson 2010). This conceptualization therefore helps identify forms of non-peasant production that emerge in China's agrarian transition. I draw from Zhang and Donaldson (2010) a typology of the various forms of commoditized agriculture in China, which differentiates contract farming from commercial farming (independent household commodity production without wage labour), entrepreneurial farming (household-organized commodity production with hired labour), and three variaties of corporate farming. This typology provides the frame of reference for the analysis of contract farming. Among various non-peasant forms,

[3] In China, where commercialized agriculture had long existed, some subsistence peasants also entered market exchanges in various degrees—for example, selling on local markets surplus grains or non-grain products from sideline production. But conceptually, it is still possible to draw the distinction: the social reproduction of these producers was only partially commoditized. Because they only sold the surplus portion of their production, they were not in competition with other specialized producers for their subsistence. Because their miniscule scale limited their sales to local markets, their interactions with markets were still mediated by local particularistic and reciprocal ties, rather than fully determined by impersonal market forces.

contract farming is the most revealing about the interactions between small farmers and capital and, therefore, the dynamics of China's agrarian transition. It engages agribusinesses and small producers in closer and more mutually dependent relations than the spot market transactions between independent commercial farmers and agribusinesses. On the other hand, contract farmers' relationship with agribusiness is less lopsided than wage-labour farm workers' subjugation and domination by capital in corporate farming.

CONTRACT FARMING IN DEVELOPING COUNTRIES: A REVIEW

A wide range of agents, such as wholesale and retail merchants, processors, and producer organizations, enter into a variety of contracts with agricultural producers. Market-specification contracts target the post-production disposal of harvest and establish future-purchase agreements between producers and the purchasing merchants or processors. Resource contracts, on the other hand, deal with the pre-production supply of inputs and connect producers with farm-inputs merchants or manufacturers. Most studies of contract farming, however, focus on *production contracts*—to use Roy's widely cited definition, "contractual arrangements between farmers and other firms, whether oral or written, specifying one or more conditions of production and marketing of an agricultural product (Roy 1972, 3)." This form of contracting, which determines, controls and supervises the production process in which labour and land is used, is the most theoretically interesting because it engages small commodity producers and agro-capital in social relations that can involve domination and subordination and become contentious (Watts 1992). Production contracting also represents an alternative between market and firm: it lies between spot market transactions and integrated productions within a firm.

Focusing on production contracts and understanding such contracting as a neither-market-nor-firm alternative highlights two key perspectives for studying contract farming. First, the assessment of contract farming's impact needs go beyond income generation, as it also involves social relationships in the labour process and often social conflicts over the final products. Second, the motivations and constraints that drive both farmers and agro-capital to enter a contract farming relationship and its implications need to be understood in comparison with other market-oriented independent production and company-integrated wage-labour production, and with reference to why these alternatives are either unavailable or unfavorable. The limitations of some existing studies become apparent in this light.

The Debate on Contract Farming

Studies of contract farming in developing countries have yielded conflicting empirical findings about its impact and offered diverging assessments of its role in agrarian change. Researchers who adopt a political economy view see contract farming essentially as a method for agribusiness companies to shift production risks to small farmers while gaining control over farmers' labour and land (Little and Watts 1994; Watts 1992; Wilson 1986; Raynolds 2000). These studies have compiled a long list of negative impacts of contract farming. It gives agribusiness companies the preponderance of power in their interactions with small farmers and allows companies to violate contracts in various ways, including delayed or denied payments and outright cheating (Glover and Kusterer 1990; Little and Watts 1994; Porter and Phillips-Howard 1997; Singh 2002). Even without violating contracts, companies can use contracts to establish exploitative and unequal relations with farmers through, for example, overpricing inputs and services provided by companies and shifting risks such as crop failure to producers (Singh 2002).

For farmers, the increased income from contract farming often proves to be fleeting, due to market fluctuations and agribusiness normalization (Little and Watts 1994; Wilson 1986). Contract farmers' loss in social standing and political power is even more severe, as the contracting relationship subjects their labour and land to the control by companies and turns them from independent producers into disguised proletarians (Clapp 1994; Watts 1994). Contract farming tends to rely on the exploitation of flexible and unpaid family labour of the farming households and intensifies labour use; it often increases self-exploitation by farming households and exacerbates intra-household conflicts (Baxter and Mann 1992; Porter and Phillips-Howard 1997). It can also create negative externalities to rural communities that range from increased differentiation and disintegration of the peasantry (Watts 1992), to rising inequality and landlessness (Singh 2002), and to overexploitation of ecological resources (Glover and Kusterer 1990; Siddiqui 1998). The expansion of contract farming led by multinational firms in developing countries also promotes export-oriented agriculture at the expense of subsistence agriculture and can harm food security (Little and Watts 1994; Shiva 1991).

Contract farming also has its proponents. Often adopting an institutional economics perspective, proponents argue that it can help to reduce market imperfections, decrease transaction costs, bring modern technologies and services to smallholding producers, raise producers' income and generate positive externalities for overall rural development (Grosh 1994; Key and Runsten 1999). These positive assessments of contract farming typically focus on its income-raising effects, but overlook the social and political costs paid by small farmers and rural communities, which other studies amply demonstrate. Furthermore, how beneficial the income-raising effect of contract farming is to small farmers needs to be evaluated in comparison with other alternative forms of production and forms of transacting with markets.

Contract Farming in the Context of Agrarian Transition

As proponents of contract farming correctly argue, small peasants face inherent limitations when making the shift to commodity production, including information asymmetry, risk-averseness, and high transaction costs (Grosh 1994). Therefore, small producers often depend on outside actors to bring them much needed skills, capital and market access. In contract farming, these are provided by agribusiness companies in exchange for access to household producers' land and control over the labour process and final products. Agro-capital also faces challenges when entering agriculture production—especially the supply of labour and land, which is often controlled in various degrees by small agricultural producers. With each facing limitations, small farmers and agribusiness companies may therefore choose contract farming to facilitate their entry into the profitable production of agricultural products. Contract farming, in this perspective, is but one of the possible ways through which peasant households can shift from subsistence agriculture to commoditized agriculture of higher-value products.

The emergence of contract farming thus depends on the endowments and limitations of both small farmers and agribusiness companies, which in turn are shaped by the local political economy. If small producers have accumulated enough capital and skills and gained market access, or if these are provided by public institutions and state actors, small producers can then start independent commercial farming without relying on agribusiness companies. They can also organize various forms of producer organizations, such as cooperatives, that supplant agribusiness companies in bridging markets and supplying inputs. On the other hand, if agribusiness companies have access to land, can hire labour cheaply, and can industrially organize agricultural production more efficiently than household production, they can then set up

corporate farms that rely on wage-labour rather than entering contract with independent farmers. For both parties, the entry into contract farming is an indication of the unavailability or undesirability of alternative forms of commodity production. The determinants and impact of contract farming therefore must be evaluated with reference to the presence and characteristics of alternatives forms. This comparative evaluation of contract farming, however, has not been effectively pursued in the literature, mainly because few viable alternatives besides subsistence farming existed in the developing countries where contract farming was studied. The agrarian transition in China simultaneously gave rise to multiple forms of commoditized agriculture and therefore provides an opportunity for such a comparative analysis.

CONTRACT FARMING IN CHINA

Historical Background and Recent Growth

China's agrarian transition started with the de-collectivization reform in the late 1970s, which devolved both use rights of farmland and some decision-making rights over the production process to rural households, and opened up markets for the sale of surplus grains and other crops. A precursor to contract farming emerged in 1985, when the state abolished the state-monopolized procurement and marketing of grains and replaced compulsory grain production quotas with grain purchasing contracts with rural households, signed prior to planting (Oi 1986).[4] The contracts only covered staple grains—rice, wheat and corn. While the terms of these contracts were similar to production contracts elsewhere—involving, for example, the seed

[4] The system of state monopoly in grain procurement and imposition of compulsory production quotas on peasants was first established in 1955. The de-collectivization reform initially only reformed it slightly by allowing peasants to sell over-quota surpluses on markets—but oftentimes still to the state procurement system, only at a higher price.

strain, the quality, quantity, price, and date and place of delivery—these arrangements with the state, however, cannot yet be properly considered to be contract farming for two reasons.

First, rural households only contracted with the state to sell their surplus grain after self-consumption needs were met. Given the miniscule size of household farms in most places in rural China and the absence of land rental markets, this meant that while most grain producers in rural China participated in grain contracting, only a small portion of their production was under contract. In fact, the state's goal of replacing compulsory quota with contracts was to limit its obligation to purchase all surplus grain from peasants at guaranteed prices. The contracting system only required the state to purchase a limited amount and allowed peasants to sell the rest of the surplus grain on open markets (Oi 1986). In many localities, households that either had other uses of grain or were unable to produce any surplus grain were given smaller contract sizes or excluded from contracting altogether. Second, even for those who signed grain contracts, this contracting of surplus grain was not a process of commoditization. Rural households' entry into grain contracting was far from voluntary. Contract arrangements were made more through planning by local cadres than negotiation with individual households. Cadres at various levels passed down proposed targets of procurement and allocated opportunities for contracts to each village, each production group, and finally, each household (Oi 1986). This was not a commoditized relationship formed through market transactions, but a political one formed through administrative commands, a fundamentally different arrangement from that between contract farmers and agribusiness companies.[5]

[5] In fact, after the initial implementation of the grain contracting system in 1985 led to a sharp decline in grain output, the state slowed down the grain marketing reform and re-emphasized the compulsory nature of grain contracts. In 1990, the contracting system was renamed "the state purchase system" in recognition of this. Afterwards, the reform of the grain procurement system oscillated between liberalization and reinstatement of

The rise of the proper form of contract farming in China, in which agribusiness companies, be they state, collective or private, organize farming households into specialized production and mediate their interactions with markets, is a more recent development. While it is not possible to pinpoint a specific date, the rapid growth of contract farming began in the mid-1990s (Niu 2002). In the decade that followed, it expanded from a few agricultural commodities to a wide range of products, and spread from the more developed coastal provinces to all over the country. Coastal provinces, especially Shandong, still lead the country. In 2001, 1.4 million hectares of cultivated land—about 20 percent of Shandong's total arable land—was devoted to contract farming, and 15 million rural households participated in contract farming (Zhou, Chen, and Jiang 2002). In Shandong's Zhucheng County, for example, 95 percent of rural households participated in various forms of commodity agriculture, 74 percent of which in contract farming (Niu 2002; Zhou et al. 2002).

The growth of contract farming is a part of China's "hidden agricultural revolution," driven by structural changes in the society (Huang 2010b). For smallholding producers, both the growing demand for higher-value food products by urban consumers and the rising land-to-labor ratio created by a declining rural birth rate and massive labour migration encourage them to shift from grain production to specialized production of high-value commodities (Huang and Peng 2007). For agribusiness companies, the growing consumption of high-value and processed foods, rising scale of food retailing, increasing incidences of eating out, and surging demand for

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compulsory quota. Only in 2004 was the grain procurement system finally fully marketized. Non-state actors now compete with state granaries in buying grains, and both can use contracts to secure supplies. State granaries remain the largest purchaser and provide protective floor prices. For a review of changes in China's grain marketing system, see Chen and Findlay (2004).

industrial inputs in farming, also make agriculture a new venue for capital accumulation and attract them into agriculture.

The growth of contract farming in China was also fueled by the central government's plan for agricultural modernization and industrialization. China's household-based smallholding agriculture, created by the de-collectivization reform, has inherent limitations. Chief among these are the high costs and risks in gaining the capital, skills, but especially market access needed for commoditized agriculture, which deterred many small agriculturalists from making the transition. The central government began to formulate and implement its agricultural modernization program in the mid-1990s, which aimed to transform China's small-scale, household-based agriculture into a modernized agriculture, with the emphasis on increased scale, specialized production of higher-value goods, and market-orientation. The main tool selected by the central government to implement its ambitious plan was the so-called "dragon-head agribusiness companies," which, by vertically integrating agricultural production with their processing and marketing operations, could provide capital, skills and market access to household farmers and organize them into larger-scale production. Agribusiness companies, domestic and foreign alike, can acquire the "dragon-head" designation from various levels of government by meeting certain requirements on capital, scale, and use of technology, and then qualify for government support that includes bank loans and tax deductions (Guo et al. 2007; Waldron, Brown, and Longworth 2006). The number of dragon-head companies engaged in integrated agriculture soon increased nearly tenfold from 5,381 in 1996 to 61,268 in 2005 and the great majority of them adopted contract farming (Niu 2006; Huang 2010a).

Contract Farming Practices in China

Agribusiness companies engaged in contract farming in China vary widely, including both domestic and foreign, big and small, processors and retailers, exporters and domestic suppliers, as well as public and private. When entering agriculture in China, these firms face a unique constraint: virtually all arable land is collectively owned and has been already allocated to rural households on long terms. While there are ways through which companies can gain access to land to set up corporate farms, for example, opening up new land through reclamation or renting land from rural villages, for most companies, contract farming is an important way of accessing land and entering agricultural production.

Agribusiness companies set up contract farming arrangements with household farmers in one of the following three patterns. First, in what is called the "company + household" model, companies directly contract with rural households and set up terms of production and purchasing. In the second, "company + base + household" model, besides contracting with rural households, companies also set up their own production bases—corporate farms using wage labour—on land that they directly control, usually in the same geographic areas. For example, Xinchang Foods, a poultry meat processing company in Shandong, receives 40 percent of the poultry that it processes for multinational fast-food chains from about 10,000 farmer households in Changyi and neighboring counties, which produce for the company on contract. However, the company simultaneously runs a base farm on land leased from villages that provides another 40 to 50 percent of its poultry supply. In the third model, "company + intermediary + household", companies establish contract arrangements with intermediary agents, who represent individual farmers in their dealing with companies. While the most typical intermediary agents are producer cooperatives formed by rural households, village authorities and even local governments sometimes act as the intermediary, signing contracts with companies and coordinating rural

households' production. A contract relationship may also involve more than one intermediary. For example, in a contract production of bee honey, six of the 54 beekeeping cooperatives in Zhejiang Province's Jiangshan city—all formed by beekeeping households—entered contract arrangements with a Shanghai-based health-product company. The city's Association of Beekeepers was also involved in mediating and monitoring the contract fulfillment by both parties (Guo and Jiang 2007).[6]

These three models resemble the three organizational forms widely observed in other developing countries, as summarized in Watts (1992), but with important distinctions. China's "company + base + household" model is similar to the nucleus-estate and outgrowers scheme in other countries, and the "company + household" model is also a widely found practice elsewhere. In other countries, a variation of China's "company + intermediary + household" model emerges from the role played by large, capitalist growers acting as intermediaries who sub-contract to smaller farmers. In China, however, due to the egalitarian distribution of land and absence of large land owners, no incidence of such sub-contracting has been reported. Furthermore, in the second and third models, the presence of company-owned base farms and the involvement of farmer-formed intermediaries in the contract arrangements, as we shall see later, change the power balance between farmers and companies, creating distinctive dynamics.

The specific terms of contract arrangements in China, like elsewhere, vary greatly. But in general, contracts specify the quality, quantity, price, and delivery time of certain products (Guo

[6] Guo et al. (2007) identify six types of agents that establish contract arrangements with household farmers in rural China. At least two such types—village authorities and cooperatives—are acting as intermediaries in the "company + intermediary + household" model. Other agents, such as middlemen, most likely only have marketing contracts with farmers. In fact, most of the contract arrangements in their surveyed sample—68 percent—are marketing contracts, while only 28 percent are production contracts.

et al. 2007). By setting these requirements, agribusiness companies aim to gain control over the production process and the use of labour and land owned by farmer households. Companies often also explicitly regulate the purchase and use of inputs, such as seeds, feeds, fertilizers, pesticides, medicines for livestock, and equipments, usually provided by the companies themselves, and set specific production procedures for farmers to follow. For example, in the case of Xinchang Foods mentioned above, the company provides farmers baby chickens and ducklings two to three days from hatching, as well as animal feed, basic feeding equipments, vaccines and medicines, and management advice.

Agribusiness companies' adoption of contract farming in China largely follows the same logic as elsewhere. Contract farming provides companies several advantages. First, it allows companies to control the labour process and agricultural products without directly engaging in farming and managing labour. Agriculture presents some inherent obstacles to the entry of capital (Mann and Dickinson 1978). In China, companies also face additional difficulties in obtaining land to set up corporate farms. Contract farming helps them to overcome these problems. Second, contract farming provides a range of operational benefits. It helps companies to secure specific products that may otherwise be unavailable on open markets, shifts production risks to small farmers, and allows companies to take advantage of the self-exploitation of unpaid family labour of household farmers. Finally, it also allows agro-capital to push forth the process of appropriationism, which replaces producer-supplied inputs in agricultural production with industrial inputs supplied by agribusiness companies (Goodman, Sorj, and Wilkinson 1987). Apart from these commonalities, however, contract farming in China also shows some distinctive patterns that can best be explained in the context of rural China's political economy.

EXPLAINING CHINESE CHARACTERISTICS IN CONTRACT FARMING

Contract farming in China differs from that in many other developing countries in three important aspects. First, China seems to have avoided some of its common pitfalls: specifically, contract farming in China has not been found to privilege large farmers, disadvantage or even exclude small farmers, or increase land dispossession. Its impact on rural inequality appears to be more varied. Second, ironically, despite its more positive impact, contract farming in China is more unstable and a less prevalent form of commodity production, and its growth has halted in recent years. Finally, it competes unfavorably with other forms of commoditized agriculture. Through an exploratory analysis in this section, I propose that three aspects in rural China's political economy—strong collective institutions, state support for agriculture, and strong domestic market—are the main causes that gave rise to these "Chinese characteristics".

Contract Farming and Rural Inequality

Contract farming in developing countries has been widely found to favor large farmers, accelerate land dispossession of small farmers through debt accumulation, and increase disparities between large and small farmers, the landed and the landless, and rural social differentiation in general (Singh 2002; Korovkin 1992; Little and Watts 1994). Contracting with larger-scale farmers reduces the number of farmers a company deals with and lowers costs in negotiation, supervision, coordination and transportation. The larger-scale of a producer is commonly linked with greater asset endowments, which help increase productivity. Companies commonly set land and other asset requirements to select larger farmers into contract farming, or give more favorable contracts to bigger farmers while more stringent ones to smaller farmers (Grosh 1994; Singh 2002). In comparison, the impact of contract farming in rural China appears

markedly different: while all three possible scenarios—having an insignificant impact, narrowing, or increasing inequality—exist, the last one is the least prevalent.

In a regression analysis of farmers' participation in contract farming in Shandong Province, Miyata et al. (2009) found that household asset endowments—including farm size, labour force size, and access to irrigation—had no significant effect in increasing a household's likelihood of participating in contract farming. In another statistical analysis using survey data from a wider regional representation, Guo et al. (2007) also found that a farmer's education and attitude toward risk had no significant impact on participating in contract farming. Other case studies have also noted that small farmers participated actively in contract farming (Zhang and Donaldson 2008; Zhou et al. 2002).

Agribusiness companies in China, like their counterparts elsewhere, prefer contracting with larger farmers. In their survey of vegetable processing companies in one county in Shandong, Stringer, Sang, and Croppenstedt (2009) found that these companies ranked contracting farmers' larger production size at the top of their preference list regarding supply chain characteristics. What restricted their ability in selectively contracting with larger farmers was mainly the low level of differentiation among agricultural producers in rural China, a legacy of the strong collective institutions, especially the collective land ownership.

Rural collectivization in China in the 1950s put most agricultural means of production including land under the control of collective communes and brigades. Today, the ownership of rural land still rests with the collective villages—the successor to communes and brigades. The de-collectivization reform devolved land use rights to households—gradually from income-claiming right to decision-making right, and more recently, to partial disposal right through land rental. This allocation was highly egalitarian, mainly based on household labour endowment. In

fact, rural residents' preferences for equitable distribution of collective land was so strong that in most villages, the 15-year tenure of land lease mandated by the central government was frequently violated so that village land could be reallocated to reduce land inequality resulted from demographic changes (Kung 1995). The collective land ownership ensures that rural residents' access to land is based on their membership in the villages—which is given almost exclusively by birth or marriage and regulated by a rigid system of household registration—and is thus a political entitlement unrelated with economic conditions and inalienable through economic means. This entitlement blocks the main mechanism through which land dispossession happens in rural areas—namely, distress selling of land following crop failure or indebtedness. Farmers' secure and equitable access to land means that their accumulation of farming skills and implements is also relatively equitable. As a result, land holding and agricultural incomes in rural China have been highly equitable compared with those in other countries, and the primary source of rural inequality is access to non-farm incomes (Khan and Riskin 2005).

Disparities in other assets are more pronounced in rural China. Two conditions, however, may still dissuade agribusiness companies from selectively contracting with richer farmers only. First, the collective ownership and allocation of farmland creates shortage of arable land for the companies newly entering agriculture. Faced with few options of obtaining land, companies are forced to contract with as many farmers as possible, instead of selecting by asset endowment. Second, not only is farmers' lack of assets rarely a hindrance to contract production, it may even be an advantage to companies. To both ensure quality and consistence of the products and generate profit from selling industrial inputs, companies usually provide inputs, equipments, and technical training to farmers and then deduct the costs from the purchasing price paid to farmers. Farmers' lack of assets, therefore, usually does not preclude them from entering into contracts.

Furthermore, poorer farmers—because of their greater dependency on company-supplied capital, inputs, and market access—are easier to control and exploit.

A case of contract production of Japanese horseradish—the crop that produces *wasabi*—in Yunnan's Zhaotong Municipality can illustrate these two aspects.[7] A former-local-official-turned-entrepreneur found that this poor area had the perfect conditions for growing Japanese horseradish, a novel crop useless to local peasants. Using his connections, he secured loans and other supports from the local government to start up the production. This mountainous area already faced severe land shortage. The only possibility to get land for growing horseradish was through contracting with local peasants. Local peasants had no experience with growing this new crop; many were also too poor to afford the investment needed to set up the production.[8] To reach the desired scale of production, the entrepreneur signed contracts with all households in several villages in one township, and provided training, technical services, and all necessary inputs to the peasants-turned-contract-farmers. He also built a plant to preliminary process the products before exporting to Japan. In this case, the entrepreneur's demand for land and his supply of inputs allowed even poor peasants in this nationally designated poverty region to join the contract farming of a new and expensive crop. Once the production started, however, the entrepreneur began to exploit farmers' dependence on the market opportunities and inputs he provided, and violated contract terms in various ways, including delayed payments, inflation of input prices, and manipulative grading of products.

[7] I am indebted to my collaborator, John A. Donaldson, who studied this case, for sharing details with me and allowing me to use them here.

[8] The crop has an 80-day gestation period, during which the seedlings need to be shielded from direct sunlight. Rolls of black burlap were used to cover the entire field to provide shade.

Although smaller and poorer farmers participated actively in contract farming, it is possible that richer farmers, because of their lesser dependence on company-supplied capital and inputs and their economy of scale, could financially benefit more. So far, there is no direct evidence yet from either secondary sources or my fieldwork to show that. No study in rural China has reported the use of differentiated contracts for farmers with different asset endowments. In cases like the above, at least the field was not so tilted against smaller farmers that it subjected them to exploitation by larger farmers as in a sub-contracting arrangement.

In some scenarios, contract farming can even reduce inequality in an area. Surprisingly, this often happens because of increased disparities in land holdings. The development of rural land rental markets in recent years has made it possible for farmers to increase their land holdings and scale of production. The increased differentiation among agricultural producers then allows agribusiness companies to selectively contract with larger farmers. The impact of this on income inequality, however, is more complex. A farmer can only increase land holding when some other households are renting out their land; in rural China, the main cause of that is the transfer of household labour from farming to more profitable non-farm jobs (Zhang, Ma, and Xu 2004). Land rental is therefore more active in areas where non-farm jobs are plentiful. In these areas, households with higher education and more entrepreneurial and managerial experiences would rent out land to pursue non-farm jobs. Although their farming operations are smaller, they have higher incomes than the larger farmers, who face fewer alternatives outside farming. Thus, even if larger farmers are more active in entering contract farming, this advantage they gain vis-à-vis those smaller farming households who have shifted labour to higher-paying non-farm jobs would actually help narrow the gaps between them and reduce rural inequality

(Zhang 2008).[9] Furthermore, after increasing their scales, larger farmers often face better options than contract farming. In fact, all the cases of increased scales of production through land rental I observed in fieldwork are labour-hiring entrepreneurial farmers in independent production. For those households lacking the endowments to enter commodity production independently, contract farming helps them shift into commodity production and narrow their gaps with the independent commercial farmers.

Contract farming in China can also lead to increasing inequality, as it does elsewhere, when the production of a crop requires more capital and skills, and agribusiness companies leverage on existing disparities in asset endowment among producers and selectively contract with richer or larger ones. In rural China, this type of selective contracting is likely to be restricted to products that require limited use of land, such as pigs, which richer farmers can raise more efficiently in better equipped pig sheds built on their residential plots.[10]

In other developing countries, contract farming often favors large farmers, discriminates small farmers, and increases land dispossession, exacerbating existing economic disparities and social differentiation in rural societies. In China, on a national level, the rise of contract farming and other forms of commoditized agriculture leads to increased differentiation of the peasantry and stratification of a previously de-stratified rural society. In any given area, however, contract farming is usually open to all local households, helping entire villages to shift from subsistence to commodity production. It can even help those excluded from either non-farm employment or independent commercial production to offset their disadvantages.

[9] In contrast, in areas where non-farm jobs are scarce, land rental is suppressed. The presence of contract farming opportunities, which often do not have high entry barriers and tend to increase farming income, gives people more incentives to stay in farming and further dampens rental activities.

[10] I am indebted to a reviewer for pointing out this scenario.

Getting out of Contract

Beneath the surface of the rapid expansion of contract farming in rural China and its benign impact on rural inequality is quite a different picture. Contract farming relations in China appear highly unstable and fraught with tensions. Almost all studies of contract farming in China note the problem of rampant defaulting by both parties (Guo and Jolly 2008; Niu 2006; Zhang and Donaldson 2008; Zhou et al. 2002). One report finds that, within the area studied, some 80 percent of the contracts were breached (Liu 2003). In fact, the Chinese-language literature on contract farming is almost exclusively concerned with the issue of contract fulfillment and defaulting.[11] The severity of this problem has caused the stagnation or even decline of contract farming, or deterred companies from entering it. A notable example is the multinational firm, Nestle Foods, which brought coffee cultivation into Yunnan Province and started with contract farming. It had to abandon it later due to rampant side-selling by farmers to local processors and merchants who had followed Nestle into this lucrative market. Nowadays, Nestle simply maintains purchasing stations in production areas and buys coffee beans from farmers on spot markets. Nationwide, the proportion of organizations engaging in commoditized agriculture that used contract farming declined from 71 percent in 1996, steadily to 56 percent in 1998, and then to 49 percent in 2000, while the proportion of producer cooperatives and producer shareholding companies increased from 20 percent in 1998 to 27 percent in 2000 (Niu 2002).

[11] This literature is too large to summarize here. Most studies use institutional economics and game theory to analyze and propose solutions to this issue. For representative examples, see Zhou et al. (2002) and Liu (2003). In the English-language literature, see Guo and Jolly (2008).

Violation of contracts by agribusiness companies is a familiar problem widely reported in other countries (Little and Watts 1994), but what sets China apart is the high rate of defaulting by farmers.[12] The most frequent form of defaulting by farmers is side-selling: instead of delivering their products as required by contracts to the contacting companies, who typically have invested in the production, farmers sell to a third party, who, without bearing any production cost, can offer higher prices. In Yunnan Province for example, company managers consistently complained about the poaching of their contracted harvest by itinerant middlemen, who simply roamed around in pick-up trucks to buy from farmers.

The prevalence of defaulting may initially appear to be a result of weak legal institutions in rural China. Several factors, however, suggest that imperfection in the legal environment is at most a minor cause. First, weak legal institutions are a common problem in rural areas of most developing countries, yet, farmers' defaulting can vary greatly. Second, even when legal institutions are strong and effective, the economic, political and social costs to companies to sue small farmers can still be prohibitive. Companies usually rely more on non-legal means to discipline farmers. Third, legal means are available in China, and have been used by both parties to settle contract disputes (Zhou et al. 2002).

Risks of defaulting are inherent in contract farming. When parties enter the pre-production, pre-marketing contracts to seek protection from the risk of price change, there is almost always a loser in such an arrangement. When market price rises above contracted price, farmers have incentives to sell to open markets; when the opposite happens, companies have

[12] Contract violation by farmers is also reported in other countries (Echanove and Steffen 2005; Clapp 1994), and it is not possible to quantitatively compare whether it is more prevalent in China. But it suffices to say that farmers' violation of contract presents the greatest challenge to contract farming in China.

incentives to buy from open markets—unless there is no alternative market outside the contract. Therefore, contract arrangements are the most stable when companies have market monopsony and farmers are deprived of the opportunity of side-selling, their most effective mechanism of resistance (Clapp 1994). Because farmers have motivations to violate contracts and legal enforcement is usually unpractical, for companies, market monopsony is their best protection, and as a result, a widely pursued strategy.

Agribusiness companies in China used various approaches to form de facto market monopsony. One fruit juice company in Yunnan's Xishuangbanna region, plagued by high rates of farmers' defaults in its initial operation in a peri-urban area, moved its contract farming of tropical fruits to a remote mountainous area where farmers were geographically locked into the company's monopsony. Another widely used approach in both China and elsewhere is selecting for contract farming only products that have no local market. In rural China, export-oriented companies that use contract farming to produce specialized products for foreign markets enjoy more stable relations with farmers. For example, the four companies Miyata et al. (2009) studied all sold above 90 percent of their products to either export markets or domestic supermarket chains, which also required specialized products. In other countries, however, this approach is more practical and successful than in China, where companies' monopsony can be more easily breached by competitors. In the case of the export-oriented production of Japanese horseradish mentioned earlier, local middlemen soon found merchants in Chongqing, a large city hundreds of kilometers away from the area, who could also export to Japan, and started to buy from contract farmers behind the entrepreneur's back.

The stability of contract farming, which depends on how successful companies are in creating and maintaining market monopsony and how effectively farmers can break it, reflects

the balance of power between agro-capital and farmers. Contract farming in China emerged from a different historical background than in other developing countries, where it has two main origins (Watts 1992). First, it rose to replace existing estate and plantation agriculture based on wage labour, when foreign capital, under nationalist pressures and new economic conditions, shifted plantation agriculture to contract farming. Another way that it grew was in new settlement schemes, where farmers were relocated and integrated into production complexes to produce under contract agricultural commodities for export. In both cases, contract farming is oriented towards foreign markets and associated with the classical export commodities such as sugar, palm oil, coffee, tea, and cocoa. Agribusiness companies' market monopsony is guaranteed by both the relative geographic isolation of these large plantations and new settlements and the absence of domestic demand for the products. Moreover, most contract farmers in these cases came from a background of wage labour and had not had the chance to accumulate either extensive farming skills or capital.

In China, in contrast, contract farming is dominated by small domestic firms. One national survey in 2000 found that only four percent of the dragon-head companies in contract farming had annual sales revenue over 100 million yuan, while most were small firms (Niu 2002). A common background of many agribusiness companies in China is the collectively owned township-and-village enterprises (TVEs). On the other hand, contract farmers in China come from a background of independent family farming, are equipped with secure land rights, and are mostly located in densely populated areas. The balance of power between companies and farmers in rural China is much more favorable to farmers than elsewhere, and market monopsony is much more elusive to companies.

The widespread side-selling by contract farmers threatens agribusiness companies' ability to secure stable procurement of products to such an extent that most companies in China have to adopt the "company + base + household" model. Like Xinchang Foods, all four companies studied in Miyata et al. (2009) had base farms, including one that provided 70 percent of one company's procurement. For companies to keep two forms of production simultaneously—wage-labour production in the corporate base farm and contract farming—is economically puzzling: if one form is more efficient, there is no need to adopt the other. The difficulties in getting land in rural China is one cause that may drive companies to adopt contract farming. But another rationale also motivates this: companies keep corporate base farms to both ensure at least partial supply of products and undercut farmers' position in the market. By controlling a substantial share of the local market in their own base farms, companies can not only drive down the market price but also reduce opportunities for open spot transactions, both of which limit farmers' scope for side-selling.

Interestingly, Key and Runsten (1999) find that in Latin America, larger outgrowers, who had stronger negotiating power with the firms, did more side-selling, which forced companies later to change to contracting with smaller growers. The prevalence of farmers' resistance—in the form of side-selling and other contract violations—reflects the power balance between farmers and agribusiness companies. The instability of contract farming in rural China attests to the stronger political and economic statuses of Chinese rural households.

Contract Farming and its Alternatives?

Quantitative analyses of survey data show that in China, participating in contract farming raises farmers' incomes, even after other household traits connected with income generation

were controlled (Miyata et al. 2009; Guo et al. 2007). When a producer shifts from subsistence-oriented grain production to the contract farming of higher-value crops, the introduction of modern technology, use of industrial inputs, and intensification of labour increases productivity. It is not surprising that contract farming has income-raising effects compared to grain-based subsistence farming. But to infer that contract farming is pro-poor, as Miyata et al. (2009) did, may be premature. Two other questions need to be examined as well. First, when agro-capital is the agent that provides farmers the skills, capital and market access to enter commodity production, are there other costs to be paid? And second, how does contract farming compare with alternative paths of shifting into commodity agriculture in its economical and social impact on farmers?

The social and political costs of contract farmers' subjecting their land and labour to domination by agro-capital has been well documented in the developing world (Little and Watts 1994) and in China (Zhang and Donaldson 2010), and will not be further elaborated here. China's agrarian transition presents a unique opportunity to examine the second question. In many debt-ridden developing countries, the growth of contract farming was driven by the adoption of structural adjustment policies that channeled resources to private sector actors, imposed by international agencies as prerequisites for debt renegotiation (Raynolds 2000; Little and Watts 1994). Fiscal crises in these countries also led to the collapse of state support for farm extension services, agricultural credit, and market assistance. As a result, agribusiness companies—usually multinational corporations—became the only agent that could provide the capital, skills and market access for producers to shift into commodity production, making contract farming the only game in town. In China, in contrast, strong state support for agriculture and for market development has created competing paths of agrarian transition based on

independent household commodity production, which offer small farmers viable and potentially better alternatives.

Independent commodity production: the role of cooperatives Small producers can shift into commodity production with help from cooperative organizations such as producer cooperatives and producer shareholding companies. Cooperatives can play much of the same role as agribusiness companies in contract farming, but more to small farmers' benefit: buying inputs at bulk and discounted prices, raising productivity and product quality through providing information and technical services, standardizing production, securing finances, marketing and processing products, and shielding farmers from risks by pooling resources.[13] Cooperatives often also sign production contracts with member producers. Such contractual relationship, however, is essentially a self-regulation of the production process by cooperative members, and is more equitable than that between small farmers and agribusiness companies. Contracts used by cooperatives usually include either dividend payments based on members' shareholding or profit sharing, giving farmers better returns than contract farming (Huang 2010a; Niu 2002). Cooperatives can also sign contracts with agribusiness companies, as the aforementioned "company + intermediary + household" model illustrates; but forming a cooperative strengthens small farmers' bargaining power. Overall, compared to contracting with agribusiness companies, joining cooperatives as members or shareholders is both socially more equitable and economically more rewarding to small farmers.

[13] There is a large literature on the benefits of rural cooperatives to farmers. For a review, see Staatz (1987). Many Chinese publications also documented the benefits of cooperatives in rural China; see, for example, Zhao (2009). Rural cooperatives, of course, can also go wrong and become politicized and inefficient, often as a result of excessive government interference (Baviskar and Attwood 1995).

The formation of rural cooperatives requires strong leadership to overcome collective action problems. In rural China, the collective authorities in villages and local government agencies often play the leading role in organizing rural households to form cooperatives (Han 2007), continuing the local corporatist approach that fueled the growth of TVEs during China's rural industrialization. In Yinzhaozhai village in Henan Province's Xingyang County, for example, the village's successful wheat breeding cooperative is the brainchild of the village Party Secretary, Mr. Yin, who conceived the idea of this cooperative ten years ago and persuaded villagers to join.[14]

The central government also supported rural cooperatives. It passed the Rural Professional Cooperative Law in October 2006, clarifying the legal status of rural cooperatives, and urged government at all levels to support rural cooperatives. Deng et al. (2010) find that, by 2008, 68 percent of villages received some form of government support for cooperatives and 30 percent received financial support through grants, subsidies, or tax exemptions.

By all accounts, rural cooperatives have been growing rapidly in China—more so than contract farming in recent years. Nationwide, according to MOA's surveys, from 2000 to 2005, the percentage of cooperatives in all organizations involved in integrated agricultural production had risen from 14 percent to 36 percent, and increased five-fold in number (from 9,552 to 48,473) (Huang 2010a). In a study of a nationally representative sample of 380 villages, Deng et al. (2010) find that the percentage of villages that had at least one cooperative increased from 6.7 percent in 2006—before the passage of the Cooperative Law—to 20.8 percent in 2008, and

[14] Similar cases are widely found in Chinese literature. See, for example, Han (2007) and Zhou et al. (2002).

government policy support was the primary cause of this growth.[15] In Shandong's Weifang Municipality, the once national leader in contract farming, for example, since the local government shifted its support from contract farming to cooperatives in 2004, the number of cooperatives had increased to 2,324 by 2006, with a total of 460,000 members—about 45 percent of the county's agricultural labour force (Han 2007).

Independent commodity production with state support With support from the state in providing capital, skills and market access, small producers can also shift into independent commodity production individually without the aid of cooperatives. During both the socialist and reform periods, the Chinese government made massive production-enhancing investments in areas that ranged from agricultural research and development, irrigation, farmland improvement, rural education, infrastructure, to poverty alleviation, making it stand out among developing countries. For example, the irrigated portion of cultivated land in China is among the highest in the world (Huang et al. 2006). China's agricultural research system is one of the largest of its kind in the world (Fan, Zhang and Zhang 2002). China also has the most developed public agricultural extension system (PAES) among developing countries: it employs a staff of 1.4 million in nearly 200,000 local-level PAES stations, with the majority of them working below the county level (Hu et al. 2009).[16] In 1994, the Chinese government instituted one of the most ambitious poverty alleviation programs of any developing countries. Known as the 8-7 Plan, this seven-year program intended to lift the majority of China's 80 million poor out of poverty through targeted public investments, such as subsidized loans for the poor and food-for-work

[15] With the policy support, also came government interference, which, as discussed later, can distort the nature and functions of cooperatives and create phony cooperatives.

[16] Locally, the county PAES centers work with the local agricultural vocational school, research institutes, and a series of specialized sub-stations at the township and village levels to provide extension services to rural producers.

schemes (Wang, Li and Ren 2004). By most accounts, these public investments have resulted in widespread productivity growth that is beneficial to even the poorer segments of the rural population.[17] These public investments have laid a foundation for rural households to make the transition to commercial farming by helping them raising agricultural productivity, accumulating capital, gaining new skills, and obtaining physical access to markets.

For the transition to commercial farming, the most direct form of state support is building market access—bridging the big gap between risk-averse and information-deficient small producers and distant and risky large-scale markets. Local governments in rural China often promote market access by literally "bringing markets to farmers"—i.e., building specialized trading centers in rural areas so that retailers, processors, and transporters will come in to buy the products that local commercial farmers specialize in producing. The most famous and probably most successful example of this kind, widely studied and replicated, is the Shouguang Vegetable Wholesale Market in Shandong Province's Shouguang County, the largest of its kind in the country. The market started in 1984 with just an old-style small vegetable market on 0.6 hectare of land allocated by the county government. Over the next two decades, the county government invested 40 million yuan and expanded the market nine times to its current scale: six specialized market centers covering 40 hectares of land, with annual sales of two million metric tons of vegetable in over 300 varieties. The market has brought in vegetable traders from all over the country. They set up shops in Shouguang to purchase products directly from small farmers, and then aggregate them into large volumes before shipping to every corner of the country and

[17] See Fan et al. (2002) for a summary of the vast literature that evaluates the effects of public investments on agricultural productivity and poverty reduction in China. These investments, however, are eroding in recent years. More details will be given in the next section.

foreign markets. The easy access to market and the dissemination of greenhouse vegetable production technology[18] have made commercial vegetable farming a safe and profitable pursuit for small farmers in Shouguang. Now over 80 percent of household farms in the county specialize in commercial vegetable farming, using 300,000 temperature-controlled greenhouses covering 53,000 hectares of land; 60 percent of rural household income in the county now comes from commercial vegetable farming (Huang 2010a; Niu 2002).

Similar market-building efforts by local governments are found all over the country, although not always as successful. In Yunnan Province's Chenggong County, the county government built a fresh flower trading center, which has now grown into the largest of its kind in Asia. Besides building the physical market place with hundreds of stalls for small farmers and a state-of-the-art auction center equipped with computerized trading systems, the local government also worked together with higher levels of government to designate special "green express lanes" on the highway connecting the county to the international airport in the nearby provincial capital of Kunming to speed up transportation. Local agricultural extension stations also helped with technical training and information dissemination. With these state supports in market-building, virtually all local farmers entered independent commercial flower production without ever needing to get into contract farming with agribusiness companies. Agribusiness production does exist in this area—also to take advantage of the presence of the trading center—

[18] Not surprisingly, the development and promotion of the technology was also spearheaded by local governments and village leaders. The Party Secretary of Sanyuanzhu village, Mr. Wang Leyi, was widely credited for developing the technology of temperature-controlled greenhouses for year-round vegetable production. The county government then organized study trips to Sanyuanzhu and sent out technicians to all over the county to disseminate the technology to farmers free of charge.

but in the form of a high-tech corporate farm that hires migrant wage labourers to breed and cultivate orchids, a production only possible in tightly controlled laboratory settings.

In rural China, when public actors such as local governments and village collective authorities step in to aid rural producers in their transition to commoditized agriculture, contracting with agribusiness companies becomes a less attractive alternative. The presence of commercial farmers' independent production of a given product in a local area also makes contract farming of that product nearly unfeasible for companies. Even if there are some households who, for various reasons, cannot join a cooperative or produce independently and are willing to enter contract farming, the presence of noncontract producers—and thus other purchasers—would break the market monopsony that companies need to suppress contract farmers' side-selling and maintain stable contract relations.[19] As a result, in both the secondary literature and primary fieldwork, contract farming is virtually never found in the same area where independent household-based commercial production thrives. For example, in their survey of 201 villages in the Beijing metropolitan region, where commercial vegetable production dominated, Wang et al. (2009) found no incidence of contract farming. In a statistical analysis of multi-province survey data, Guo et al. (2007) found that proximity to markets strongly and significantly reduced farmers' likelihood of joining contract farming. In the five provinces I collected data, the emergence and spread of the various forms of commoditized agriculture showed clear regional patterns. In coastal areas of Fujian Province, where markets were well developed and level of urbanization was high, and in places like Shouguang and Chenggong,

[19] The only possibilities for contract farming in the presence of independent production are: first, contracting with cooperatives, and second, to produce a differentiated product. But even in the second situation, it is difficult for companies to stop the diffusion of technologies and adoption of the differentiated product by non-contract producers.

where local governments invested in market-building, most producers were independent commercial and entrepreneurial farmers, while no incidence of contract farming was found. In contrast, in the more remote areas of Yunnan and Heilongjiang, where capital, skills and market access for commodity production had to be brought in by agribusiness companies, and in some areas in Shandong, where local governments tilted their support to agribusiness companies, especially foreign-invested, export-oriented companies, contract farming and corporate farming—a type not discussed here—became the dominant form.

In sum, although contract farming can raise farmers' income by shifting them from subsistence-oriented grain production to commodity production of higher-value crops, its inability to survive in the presence of alternative forms of commodity production and its relative decline compared to the growth of independent commercial farming both show that it is only a last resort for the landed small producers in China's agrarian transition when alternative forms of commoditized agriculture—which depend on the support by public actors—are absent. In other developing countries, in contrast, it is precisely the absence of government support for agriculture and collective actors capable of organizing cooperatives that provides a fertile ground for large agribusiness companies to expand contract farming.

THE NEW POLITICAL ECONOMY OF AGRARIAN TRANSITION

The characteristics of contract farming in China discussed above are mainly shaped by conditions laid during the socialist and the early reform periods, including collective land ownership, state provision of agricultural extension services, strong foundations of local industries and entrepreneurship through the development of TVEs, and local government's leadership in economic development. The agrarian transition that has accelerated in recent years,

however, has brought changes to the political economy and can alter the practice and impact of contract farming in China.

As mentioned earlier, agrarian transition in China started with the commoditization of both agricultural production and the reproduction of farming households. It unfolded first through the diversification of household labour into non-farm jobs and specialization of agricultural labour; the specialization then spurred the rise of markets for agricultural products, farm implements, labour, and finally, land rights, gradually commoditizing the production process and farmers' reproduction (Tong and Wen 2009). For this first stage of agrarian transition, the state adopted a series of supportive policies to promote the transition, including relaxing migration control, supporting rural industries, liberalizing the grain procurement system,[20] opening up of land markets, and preserving the collective land ownership. These policies have been greatly beneficial to small farmers.

The commoditization process, although raising farmers' income, also exposed them to many perils of the market. Small commercial farmers were excluded from the more profitable processing and marketing parts of agricultural commodity chains. In the production process, the profit margin was squeezed from both ends as farmers became, on one hand, increasingly dependent on expensive industrial inputs and, on the other, ever weaker in their dealings with agribusiness companies doing the processing, distribution and marketing of foods. The inherent difficulties faced by small farmers in producing for distant markets also hindered further progress of commoditization. Motivated by the need to both raise farmers' income and further

[20] One of the state's goals in adopting the grain contracting system in 1985 to replace compulsory grain quotas was to cut off the safety net for peasants based on guaranteed state purchase of all surplus grains and push them toward commercial production of cash crops (Oi 1986).

promote commoditized agriculture to meet growing urban demands, the state started to push for the second stage of the agrarian transition in the 1990s: organizing agricultural production beyond household boundaries and vertically integrating production with processing and marketing (henceforth referred to as vertical integration).

State policies intended to promote vertical integration are now re-shaping the political economy of rural China, and tilting the balance between small farmers, local elites, and various forms of agro-capital in favor of the latter two. As early as 1988, the central government began reforming the country's massive public agricultural extension system (PAES) with the goal of shifting the PAES from total dependency on state funding to greater financial self-sufficiency (Hu et al. 2009). Local stations were encouraged to earn their income through commercialized services. The PAES reform gained greater momentum in the 1990s. The fiscal reform of 1994 decentralized fiscal responsibilities to local governments on a massive scale and forced many to cut funding for the PAES. The central government classified PAES agencies into three categories by their source of funding and formally took many self-funded agencies off the government payroll (Hu et al. 2009). In some ways, the changes happened to the PAES in China in the 1990s resembled those in other developing countries under neoliberal, structural-adjustment policies, which similarly cut government funding and channeled resources to the private sector.

The PAES reform was motivated by two goals: first, to put it financially on a self-sustaining ground and reduce governments' budgetary burden; and second, to turn the PAES into a force that can promote vertical integration in agriculture (Tong and Wen 2009). Both have been accomplished; but the commercialization of the PAES determined that the role of local PAES agencies in promoting vertical integration was primarily serving their own interests of profit-seeking and often detrimental to small farmers. Local PAES agencies reduced their scope of

services to the more profitable ones; services used to be provided free of charge are now on a fee-for-service basis. Local agencies sometimes even used their monopoly position—for example, as the sole distributor of certain seeds and fertilizers—to charge exorbitant fees. Some public assets within the PAES were also privatized. All these changes not only raised farmers' costs, but also denied poorer farmers access to the skills and inputs that they needed to start independent commercial farming. In a sense, local PAES and other formerly public agencies have become a form of "bureaucratic capital" (Tong and Wen 2009), competing with other forms of agro-capital for a share of the profit in agricultural commodity chains.[21]

In the late 1990s, the central government selected a new scheme to more forcefully promote vertical integration: supporting the so-called "dragon-head enterprises", many of which were founded by private urban capital. During 2000 to 2005 alone, the central government invested 12 billion yuan to support national-level dragon-head enterprises (Huang 2010a). Local governments followed the lead with similar efforts to support local-level "dragon heads." In contrast, government support for rural cooperatives came much later and was much weaker. The Ministry of Agriculture started only in early 2000s with a pilot program that selected rural cooperatives to provide support (Deng et al. 2010). Even after the passage of the Rural Professional Cooperatives Law in 2006, substantive financial support for rural cooperatives still fell far behind that for dragon heads (Deng et al. 2010).

These state policies can also be distorted to further harm small farmers' interests by local elites, including both village leaders and private entrepreneurs, who, in rural China's context, can

[21] The commercialization reform was not confined to the PAES. Other agriculture-related government or publicly-funded agencies, such as the local science and technology bureaus, the Rural Supply and Sales Cooperatives, and the Rural Credit Cooperatives, went through similar reforms and became primarily profit-seeking actors.

often be the same. This problem is particularly salient in the development of rural cooperatives. Many cooperatives were formed by big, entrepreneurial farmers to capture both state subsidies for rural cooperatives and the reduced transaction costs in dealing with suppliers or purchasers. A few small farmers were included in these cooperatives, but big farmers took the lion's share of the benefits. Even worse, by forming these cooperatives, big farmers can act as the middleman and profit from the difference between wholesale price given to the cooperatives and price offered to smaller members of the cooperative. Agribusiness companies and commercialized government agencies are equally enthusiastic in forming cooperatives by simply re-branding themselves to get a share of state subsidies. One study found that among the 136 cooperatives in a city, 125 were formed by big, entrepreneurial farmers, four by government agencies, five by dragon-head firms, and only two by villagers (Zhang 2005).[22]

The state's policy in recent years of further devolving to individuals the use rights of a variety of collective properties—forests, waste land, and irrigation facilities, to name a few—has also exacerbated inequality between small and big farmers. Because the allocation of these properties—unlike that of basic land—was much less constrained by the egalitarian norms and often conducted through competitive bidding, local elites ended up taking the lion's share of these assets and further increasing their scale of production, while denying smaller farmers access to previously collectively owned productive assets. In one case in Fujian, a village Party Secretary has gained control over large tracts of forest land and hires workers to grow eucalyptus trees to supply pulp to paper mills. In another case in Heilongjiang, local cadres and managers in state farms operate privatized rice farms that exceed 10,000 hectares—an astronomical size in China's context.

[22] I thank a reviewer for alerting me to these phony cooperatives.

These three more recent developments in the second stage of China's agrarian transition—commercialization of government agricultural service agencies, tilted state support for agribusiness companies, and the growing power of local elites—are undermining the foundations laid during the socialist and early reform periods. These changes may push the practice and impact of contract farming in rural China toward a convergence with those in other developing countries. The commercialization of government service functions is denying poor peasants the opportunity to gain the skills, capital and technical support needed for starting independent household-based commercial production, driving them to contracting with both agribusiness companies and the commercialized agencies themselves. The tilted state support for dragon-head firms can help these companies to drive out smaller competitors, gain market monopsony, and deprive contract farmers of the opportunities to side-sell. The growing power of local elites can also threaten the viability of the alternatives to contract farming. When local elites take the lion's share during the privatization of public and collective resources, smaller households have fewer opportunities to branch out into commercial farming. Big entrepreneurial farmers can also hijack cooperatives and turn them into a tool for both capturing state subsidies and exploiting smaller members. These distorted cooperatives, instead of providing a more favorable alternative to contract farming, may in fact drive more farmers into contract farming.

CONCLUSION

The argument here is that contract farming in China differs significantly from other developing countries' experiences in its high degree of instability, varied impact on rural inequality, and relative undesirability compared with alternative forms of production. All three

findings have been previously reported separately in the literature; but their significance only became clear when compared with other countries' experiences.

These characteristics are closely connected with unique features in rural China's political economy. Strong collective institutions in rural China, especially the collective ownership of agricultural land and active role of collective authorities in promoting rural growth, empowered farmers in their formation of cooperatives, transactions with markets, and their negotiation and interaction with agribusiness companies. Strong domestic demands for high-value agricultural products provided opportunities for both the growth of a large number of small domestic agribusiness firms and the relatively easier access by individual farmers to market opportunities. A large portion of agribusiness companies engaging in contract farming in China are small-size domestic firms producing for domestic markets, many of which sprang from the collective TVEs. In comparison, contract farming in other developing countries is usually dominated by big multinational or parastatal firms that produce export commodities for global markets. The smaller size of agribusiness firms in China strengthened farmers' relative bargaining position. Strong domestic demand also prompted other actors, including urban merchants and local governments, to enter rural areas to procure agricultural products for urban markets, bringing the market access that small farmers needed to shift to independent commercial farming. Local governments' strong support for agriculture, in extension services and, more importantly, in market-building, also eased small farmers' entry into independent commercial farming. As a result, in rural China, agribusiness-led agriculture such as contract farming face competition from independent commercial farming, which, facilitated by either state-supported specialized markets or cooperatives, is an equally viable option that can provide more benefits to farmers.

The recent turn in China's agrarian transition toward vertical integration of agricultural production with the industrial manufacturing of inputs, food processing, and marketing is bringing new changes to rural China's political economy. Impacts on contract farming of the three new developments discussed earlier are beginning to appear in specific cases. On an aggregate level, while these changes have undermined some existing practices, they have not resulted in a reversal of the patterns observed in this study. But if they continue, the Chinese characteristics of contract farming discussed here may not be long lasting. This again highlights the importance of examining the dynamic relationship between contract farming and the political economy context.

The contributions of this study are mainly conceptual and the arguments preliminary. This examination of contract farming in a different political economy context than that in most developing countries contributes to our understanding of contract farming and agrarian change in at least two ways. First, the logic and impact of contract farming is highly dependent on the political economy context. Although this argument has been made in previous studies, it is strengthened here by showing how the unique political economy of rural China gave rise to a set of distinctive patterns in contract farming. Second, the unique experience of China's agrarian transition, where multiple forms of commoditized agriculture coexist and compete, helps us to more accurately assess the impact of contract farming, which needs to be examined in comparison with competing forms of commodity production. Facing new economic opportunities brought by broader social change in China, agribusiness companies and small household producers both search for ways to capture profits created by these opportunities and compete for them. The multiple forms of production—including contract farming—that emerged in this transition reflect not only the relative strengths of agribusiness and small farmers, but also

constraints imposed by rural political economy and intervention by state actors. Contract farming grows when public actors' support for agriculture declines and farmers are deprived of alternative ways of entering commoditized agriculture. When alternatives are present, contract farming proves less desirable to farmers, but rather represents the victory of agro-capital in securing capital accumulation in agriculture.

This analysis that focuses on the political economy context also reveals a shortcoming in the existing literature. Quantitative analyses of determinants of contract farming only focus on household-level characteristics. But as I argue here, a household's participation in contract farming is determined not only by household characteristics, but also by whether and what other alternatives are available, which in turn is shaped by the local political economy. Thus, a valid statistical analysis of participation in contract farming needs to employ multilevel models and account for village or regional level variations in political economy.

This research also has policy implications, which become especially relevant in the current context of pro-capital policies in rural China. A narrowly focused analysis of the income-raising effect of contract farming can lead to an oversimplified understanding of contract farming as "pro-poor" and to misinformed policy suggestions (Miyata et al. 2009). But when situated in a context of competing models of agrarian transition and compared with independent commercial farming, contract farming loses much of its luster. It in fact is more likely a last resort for China's small landed farmers when independent commercial farming is not possible. On the other hand, agribusiness companies have inherent interests in contract farming and need no government support to enter it. They can even hijack government support for its competitors, as in the cases of companies rebranding as "cooperatives." In fact, in most developing countries, it is the decline of government support for agriculture that led to the growth of contract farming.

Therefore, selective policy support for agribusiness and contract farming—instead of authentic, bottom-up cooperatives or independent family farming—primarily serves the interests of agro-capital and can hardly be considered pro-poor.

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