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Comparing Local Models of Agrarian Transition in China

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中国农业转型中地方模式的比较研究

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Abstract
The development of markets and the penetration of capital into agriculture have started the agrarian transition in rural China, which is transforming smallholding, household-based agriculture into various forms of capitalistic production. This again raises in a new historical and social context the long-debated question in the agrarian transition literature: Can family farms survive the onslaught of capitalist agriculture based on wage labor and what shapes the confrontation between family farms and agro-capital? I argue that it is the local political economy—rather than some natural obstacles in agriculture to the penetration of capitalism—that shapes this confrontation and gives rise to a variety of local patterns in how family producers interact with agro-capital. Conceptually, the primary dimension in which local patterns diverge is how direct producers' transactions with the product market are mediated. Based on this distinction, I identify three distinct local paths of agrarian transition—agribusiness-led corporate production, independent household production, and cooperative production. I use data collected from fieldwork and secondary sources to show how, in each model, characteristics of the local pattern are shaped by the local political economy.

Keywords
agrarian transition, agribusiness, family farming, cooperatives, capitalism, China

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摘要
市场的发展与资本的进入引发了中国的农业转型，　将小规模的家庭农业转变成各种形式的资本化农业。这在一个新的历史与社会背景中重新提出了农业转型研究中一个长期辩论的课题：在资本化农业的冲击下，家庭农业能否继续生存？什么因素塑造家庭农场与农业资本之间的对抗？本文提出，是地方的政治经济，而不是农业生产中某些能阻止资本扩张的天然障碍，在塑造这种对抗，并产生出一系列家庭生产者与农业资本之间互动的模式。这些模式间的差异首先来自于直接生产者是如何与产品市场对接。我根据此区分出三种农业转型的地方性路径：企业带动的公司化生产、农户的独立生产、和合作化生产。我以实证资料来展示，在每个模式中，地方的政治经济如何塑造这一模式的特点。

关键词
农业转型，农业的公司化，家庭农业，公司化，资本主义，中国

Chinese agriculture is undergoing a fundamental change. In a sector that still employs around 280 million people—67.4 percent of the total rural labor force—this change will also transform economic livelihoods, the social structure, and political relations in rural China. Philip Huang has called this change "China's hidden agricultural revolution" (Huang, 2010a). It differs from the traditional agricultural revolutions that took place in other countries in both how it started and how it has unfolded: it is more "hidden." First, instead of being caused by the use of new technologies in the agricultural sector, it is primarily driven by external structural changes. More specifically, Philip Huang and Yusheng Peng (2007) identified three relevant macro-historical trends: the declining natural growth rate of the rural population, the rapid transfer of rural labor into non-farm jobs, and the country's changing food consumption patterns. Second, instead of creating a significant rise in crop yields, this new agricultural revolution mainly unfolds through a shift in agricultural production from staple grains to higher-value foods such as meat, poultry, vegetables, and dairy.

Much more than merely a change in crop choice, the shift from staple grains to higher-value foods changes the producers in many ways. For the smallholding, family-based agricultural producers who still dominate China's agricultural sector today, the shift to higher-value foods is simultaneously a shift from subsistence to commercial exchanges in their production orientation, from a reliance on the state's grain procurement system to an exposure to risky and unpredictable markets in their interactions with the external environment, and, in their behavioral patterns, from survival-first risk-aversion to specialization, competition, and risk-taking. Furthermore, besides presenting unprecedented opportunities for smallholding family farms to achieve full employment

and rising income, this agricultural revolution also introduces a new type of producer into rural China to compete with family farms: agribusiness companies. A series of changes in food consumption and agricultural production—including the growing consumption of higher-value and processed foods, the rising scale of food retailing, the increasing incidence of eating out, and the surging demand for industrial inputs in agricultural production—have made Chinese agriculture a new venue for profit making and capital accumulation. As a result, in the past decade, agribusiness has made a forceful entry into Chinese agriculture, altering the landscape of a sector that was once devoid of capitalized producers (Waldron, Brown, and Longworth, 2006; Zhang and Donaldson, 2008).

Both the transformation of family farms and the entry of corporate producers suggest that, together with the hidden revolution in agricultural production, a fundamental social change is also taking place to China's agricultural producers—one that I have called the rise of agrarian capitalism (Zhang and Donaldson, 2008). Chinese agriculture in the past was dominated by peasant producers—household-based agriculturalists who use family labor to produce staple grains mainly for subsistence and depend on non-commoditized relations for the household's reproduction (Friedmann, 1980). This pre-capitalist, peasant form of production can be transformed into capitalist agriculture through two processes. Either the organization of production goes beyond the household unit and begins to use non-family, wage labor; or, if households remain the units of production, the reproduction of these family farms becomes commoditized—i.e., through participation in land, labor, credit, and product markets (Zhang and Donaldson, 2010). These are precisely the two changes that have been triggered by the hidden agricultural revolution and mentioned above: the transformation of family farms as they shift to specialized, market-oriented production of higher-value products and the emergence of supra-family, labor-hiring corporate farms.

The entry of agro-capital and the transformation of smallholding family farms are not two independent processes, but are instead intertwined, and are competing with each other for market share, productive assets, and political influence. Even though the favorable macro-level economic and demographic contexts now provide family farms new opportunities to profit from commercial production of higher-value crops, as Huang and Peng (2007) suggest, these small producers may still lack the micro-level conditions—in terms of capital and skill endowments, market access, and local political support—to take advantage of these opportunities.

From the view of neo-institutional economics, for example, one can argue that small agriculturalists face inherent limitations—which range from information asymmetry, risk averseness, and high transaction costs—when making the shift from subsistence-oriented grain production to market-oriented production of higher-value, cash crops. In contrast, agribusiness companies, while also facing some inherent obstacles in entering agriculture and specific restrictions in rural China, which will be elaborated on later, are much better equipped with capital, technologies, organizational assets, and market access than small household farmers. This has led to them becoming a leading force in China's agrarian transition.

Agribusiness companies also enjoy greater support from the state. Since the mid-1990s, the central government has made it clear that it views the minuscule scale of the hundreds of millions of family farms in China as the main obstacle and that the "agricultural modernization" program it has designed for rural China will focus on raising the scale of production, capital investment, and market integration. The central government's preferred policy vehicle for promoting its agricultural modernization agenda is vertical integration of agriculture by the so-called "dragon-head" agribusiness enterprises, which not only bring capital investment, new technologies, and market access to agriculture, but can also organize rural households into larger-scale production.

Despite the advantages agribusiness may enjoy, China's small family farms have proven to be resilient in the face of mounting pressures from both a state that is committed to scaling up agricultural production and a market in which large firms are gaining dominance in downstream sectors (such as food processing, wholesaling, and retailing) and demanding consolidation in agricultural production. Philip Huang, Gao Yuan, and Peng Yusheng (2012), for example, find that hired year-workers account for only 3 percent of all labor input in Chinese agriculture today; they thus argue that the labor-hiring, capitalist agriculture by agribusiness only plays a minimal role in Chinese agriculture, and family farming still predominates.

Will the penetration of agro-capital dissolve family farms, proletarianize the rural labor force, and transform the sector into one based on wage labor, hierarchical organizations, and capital-intensive production functions? Or, can family farms that mainly use family labor in small-scale, labor-intensive production remain viable in commoditized production and persist—albeit it in transformed ways? The debate about this battle between agribusiness and family farms in an agricultural sector undergoing a capitalist transition has energized rural studies for generations, starting with Lenin's (Lenin, 1956 [1908]) famous argument about the dissolution of family farms resulting from the penetration

of capitalist relations of production into agriculture. After more than a decade of heated debates in the 1970s and 1980s between two main camps—one following a more orthodox Marxist-Leninist developmental logic and emphasizing the transformative power of the logic of capital (De Janvry, 1981; Patnaik, 1979), and the other more inspired by Chayanov's view about the unique logic in household production and the resilience of family farms (Friedmann, 1978; Mann and Dickinson, 1978)—this literature has become largely dormant. This is partly because the concern about family farms has since subsided in Western countries where agricultural development has become characterized more by the rise of agricultural-industrial complexes and a global division of labor. But it is equally the result of the deductivist approach shared by both sides that has brought the debate to an impasse: on one hand, the teleological tendency in the Leninist tradition that presumes the end point of the dissolution of family farms by capitalist relations of production, and on the other, the essentialist tendency in the Chayanovian tradition that presumes the permanency of family farms on the basis of either a unique logic of household production or the natural features of agriculture (McMichael and Buttel, 1990). Both sides were particularly uneasy with variations across time and space in how the balance shifts between family farms and capitalist farms. Rather than being explained in specific social-historical contexts, such variations were either discounted as some transient stages in the progressive development of capitalist agriculture, or reified as the manifestations of unique natural features of agricultural production.

The long-delayed onset of capitalist transition in Chinese agriculture has pushed the agrarian question to the forefront of social change in rural China. It not only has elevated the practical significance of the research on agrarian transition, as it now relates to the fate of hundreds of millions of smallholding household producers, but it also has provided an opportunity to reinvigorate this literature in a unique social-historical context. What is particularly interesting and challenging to the existing literature is the great amount of variations one finds in China. In various parts of rural China, different local models of transition have emerged. Family farms are disintegrated, or subsumed, or reproduced, or transformed, while agro-capital, on the other hand, uses either arms-length markets, integrated firms, or neither-market-nor-firm contract arrangements to engage in agricultural production. Wage labor appears in different forms, offered by proletarianized or semi-proletarianized laborers and employed by family-based farms or agribusiness companies. Different forms of commoditized agricultural production can become dominant in even neighboring counties in the same agro-ecological region.

The very existence of a multiplicity of local patterns of the transformation of family farms and the interplay between family farms and agribusinesses in a similar broad national and historical context means that such variations cannot be explained away as different stages in the same developmental trajectory toward a uniform capitalist agriculture. Similarly, the adoption of different forms of production in areas that specialize in the same agricultural product suggests that the persistence of family farms in some areas but not others cannot be fully explained by resorting to the essential qualities of agriculture or of specific crops; characteristics of the local political economy must be considered. Therefore, I posit that it is more productive to focus on the specific relations that develop between small commodity producers, capital, and the state and examine how local political-economic conditions shape such relations and interactions. More specifically, in rural China today, what are the local political-economic conditions that lead a specific form of commoditized agriculture to dominance and, as a result, give rise to a distinct local model of agrarian transition? What local forces and institutions produce among family farmers in the area a similar set of responses to and interactions with agrocapital and markets?

In this article I draw from both firsthand fieldwork data and secondary sources to address these questions. My intention here is not to explain at the household level the economic choices made by farming families to respond to market opportunities in specific ways, but rather to examine on an aggregate level—the village-, township-, or county-level, in various cases—the local conditions that lead to the emergence of a certain aggregate pattern among local family farms in responding to opportunities of commoditized agriculture. Thus, I first conceptually identify key factors in shaping the distinctive patterns of agrarian transition at the local level, and then empirically compare the multiple local patterns observed in rural China. Two factors prove critical. First, the primary dimension in which local patterns of agrarian transition diverge is what mediates direct producers' transactions with markets—especially the product market. Based on this, I identify two paths of agrarian transition—agribusiness-led corporate production and independent household production. Second, the use of wage labor creates a second-order differentiation in each of the two models: contract farming and corporate farming in corporate production, and commercial farming and entrepreneurial farming in independent household production. These two dimensions produce a two-by-two typology of four conceptual models of agrarian transition. I use empirical evidence from representative localities in rural China to demonstrate how, in

each model, the characteristics of small household producers and agribusinesses and relations between the two are shaped by the local political economy. I also discuss an alternative model that may provide a third way between the dominance of labor-hiring capitalist farms and the persistence of smallholding family farms—cooperative production.

Conceptualizing Local Paths in China's Agrarian Transition

As mentioned earlier, smallholding family farms face obstacles when making the shift from subsistence-oriented grain production to market-oriented, specialized production of commodity crops. Compared to subsistence agriculture, commoditized agriculture imposes new requirements on producers that include, first internally, the skill, labor, and capital investments needed for the new production and, externally, access to product markets. Many commodity crops do not require significant new capital investment beyond what is already needed for traditional grain crops. Many subsistence producers also possess the skills of growing these crops from operating multi-cropping farms. Furthermore, despite commercialization in recent years, China's public agricultural extension system, which still employs a staff of 1.4 million in nearly 200,000 local-level service stations, remains the most developed among developing countries and the most effective in disseminating skills to rural producers (Hu et al., 2009). The increased demand for labor supply from shifting to commodity crops can also be met in most rural areas in China through either tapping into underemployed family labor or hiring temporary workers on local labor markets. Thus, in China's case at least, it is market access that poses the greater obstacle to family producers' shifting to commoditized agriculture. As a result, although the inability to meet the requirements of skill, labor, and capital has certainly forestalled the transition to commoditized agriculture in some rural areas, the ways through which direct producers gain market access are the main dimension that creates diverging local patterns of commoditized agriculture.

Market access can be further disaggregated into informational access (the knowledge of not only market demands but also basic rules of the market), relational access (contact with transactional partners), and physical access (the ability to transport the bulky products to the points of transaction). The critical importance of market access in agrarian transition is actually related to the natural characteristics of agriculture as a land-based enterprise. The

immovability of land restricts producers' spatial location and mobility. It also determines the spatial segregation of the land-based agricultural production from urban consumption, and thus, makes market information, market contact, and physical market access all difficult for agricultural producers to obtain.

In capitalist agriculture, commodity producers sell their products to the market and, through such commoditized exchange relations, socially reproduce themselves. Producers' transactions with the product market, however, can be mediated in different ways, depending on how market access is provided to the producers. Conceptually, we can identify three alternatives of mediating direct producers' transactions with the market: First, producers can directly transact in markets individually through gaining market information, knowing market contacts, and transporting products to market all on their own. Second, conversely, producers can have no direct transactions in the product market but rather sell their labor on the labor market to an external actor—an agribusiness company—and leave it entirely to the latter to gain the market information, contact, and physical access essential for selling on the product market. There is also a third possibility, in which producers' transactions in the product market are intermediated by, not an external actor, but a self-organized cooperative, which collectively gains market information, contacts, and physical access and makes them available to all individual members. These three alternatives through which small agricultural producers gain market access to shift into commoditized agriculture create three different models of agrarian transition, which I refer to as, respectively, *independent household production*, *corporate production*, and *cooperative production*. As I will show later, the three different ways of mediating direct producers' transactions with the market and providing market access to producers also shape relations of production and how labor is used in the production process.

The three competing models of agrarian transition identified here have been referred to in different terms in the literature, although not based on such a conceptual framework. For example, the official survey conducted by China's Ministry of Agriculture (MOA) uses three categories of "organizational forms of agricultural industrialization": those led by dragon-head enterprises, by intermediary organizations, and by specialized markets (Niu, 2002; 2006). Philip Huang (2010b) refers to these as three competing paths of vertical integration, but considers the specialized market-led integration an unstable and transitory path to the other two. Q. Forrest Zhang and John Donaldson (2010) identify six forms of non-peasant agricultural production, which can be grouped into

independent production and corporate production. They do not, however, single out cooperative production because their interest is mainly in distinctive types of relations of production, and cooperative farming has relations of production similar to those of independent household-based commercial farming.

Independent production and corporate production can be further differentiated. Although I do not see the use of wage labor as the exclusive indicator of the emergence of a capitalist agriculture, the replacement of nonwage family labor with wage labor remains a critical development that represents a further penetration of commodity relations into production units (households, for example) and creates new relations of production. Therefore, two variants emerge within each of the two transitional models depending on whether wage labor is used in the production units.

The use of wage labor depends on both the scale and labor-use intensity of agricultural production. The scale of production is constrained mainly by the availability of labor and land. In rural China, however, regional variations in the scale of production—and thus, the use of wage labor—depend less on the availability of commodified labor or the development of labor markets locally than on the availability of land. Given the miniscule scale of production and high labor-to-land ratio in most rural areas in China, local surplus labor or migrant labor is usually available to meet the demand for labor when it arises. The availability of land, on the other hand, poses the greater obstacle to both household and corporate producers who want to expand their production, because most of China's farmland is collectively owned and has been allocated to individual rural households via long-term leases.

Additional land for expanding the scale of production can only come from two sources: leasing unused land from the collective owners, or renting contracted farmland from individual households (or, sometimes, collectively from the village or villagers' group), both of which depend heavily on conditions in the local political economy. Furthermore, as already mentioned, the miniscule scale of agricultural production is also a crucial concern for the central government, which sees it as the main culprit for small farming households' lack of market integration, low productivity, and as a result, stagnating income. For these reasons, increasing the scale of production has been raised by the central government as a central goal in its plan for agricultural modernization. The scale of production—and related with this, the availability of land—are, therefore, an area where regional variations can be created by different policy interventions by local governments and can lead to varied patterns of wage labor use in commoditized agriculture.

Table 1 A Typology of Local Models of Agrarian Transition in Rural China

		Provision of market access	
		Independent production	*Corporate production*
Use of wage labor	*Present*	Entrepreneurial family-farming	Corporate farming
	Absent	Commercial family-farming	Contract farming

From the discussion above, I derive a two-by-two typology—based on the primary differentiation of modes of mediating direct producers' transactions with the product market and the secondary differentiation of wage labor use—that identifies four different local models in the two distinct paths of transition to commoditized agriculture. I will set cooperative production aside for a separate discussion.

Under independent production in which small commodity producers enjoy access to market information, market contacts, and physical access to the marketplace and sell their products on markets, the use of wage labor differentiates entrepreneurial farmers, whose family farms—still owned and operated by the family—have expanded in scale and employed wage labor, from commercial farmers, who rely on family nonwage labor. When agribusiness companies provide market access to direct producers and mediate producers' transactions with the product market, companies can organize production in two forms. In corporate farming, agribusiness companies directly set up corporate farms on leased land and employ wage labor in managed production. Producers, in this case, sell their labor to the company but have no transactions in the product market. In contract farming, direct producers maintain their control of land and do not enter into formal employment relations with companies; hence, wage labor is not present. However, companies directly control both the production process and the final products of these contract farmers. For the part of production that is under contract, contract farmers do not sell the products on the market, but rather deliver them to companies per the contract.[2] The

[2] In many cases, contract farmers receive all production inputs from companies and only contribute their land and family labor to the production process. The payment they receive for the delivered products is in essence a wage for their labor plus a rent for their land. Some argue that these contract farmers are merely "disguised laborers" (Clapp, 1994). This term further shows that, while contract farmers are not formally wage laborers, their participation in markets is mainly in the labor and land market, not in the product market.

next section provides details of specific cases of each model and discusses how the rise of a model is connected with local political-economic conditions.

The Political Economy of Local Models of Agrarian Transition

China's rural reform in the early 1980s dismantled collective farming and restored households as the unit of production. Agricultural land, although still collectively owned by rural villages, was allocated to rural households on long-term leases. After an initial increase in productivity resulting from the rising incentives created by this institutional change, China's household-based smallholding agriculture exhibited its inherent limitations. Central among these limitations is smallholding peasant households' inability to participate in commodity markets and to respond to market demand for higher-value crops, which, as discussed earlier, is rooted in the inherent difficulties small agriculturalists face in getting access to market information, contacts, and facilities. Faced with stagnating agricultural productivity and rural income on one hand, and rising urban demand for higher-value, non-grain foods on the other, the central government began to formulate and implement an agricultural modernization program in the mid-1990s. The central government's plan is centered on the concept of "vertical integration"—sometimes also referred to as "industrialization"—which aims at transforming China's small-scale, household-based, and often subsistence-oriented agriculture into a modernized agriculture, with emphasis on increased scale, specialized production of higher-value goods, and market-orientation. The MOA established a new bureaucracy, with branches at all provincial and some sub-provincial units, called the Office for Agricultural Industrialization 农业产业化办公室, to support this agenda of agricultural modernization (Huang, 2010b).

In terms of specific policies, the central government has made efforts in two areas. First, the main tool selected by the central government is the so-called "dragon-head agribusiness companies," which, by vertically integrating agricultural production with their processing and marketing operations, can help provide the much needed capital, skill, and market access to agriculture and organize household farmers 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 regarding capital, scale, use of technology, etc., and then qualify for government support that ranges from bank loans to tax deductions (Guo, Jolly, and Zhu, 2007; Waldron, Brown, and Longworth, 2006). From 2000 to 2005, according

to some estimates the central government had invested a total of 11.9 billion yuan to support national-level dragon-head companies (Huang, 2010b). Local governments have also followed the lead and have provided support for local-level dragon-head companies. Not surprisingly, the number of dragon-head companies engaged in integrated agriculture increased rapidly—nearly ten-fold, from 5,381 in 1996 to 61,268 in 2005 (Niu, 2006; Huang, 2010b).

The second area of the central government's program is rural cooperatives. Here the program started later and has been less forceful than that for dragon-head companies. The central government's first serious effort at promoting rural cooperatives began in 1998 in a directive issued by the State Council that legitimated and encouraged the growth of spontaneously formed rural cooperatives (Deng et al., 2010). Later, the MOA began to select rural cooperatives across the country to which it provided support as pilot programs to demonstrate the effectiveness of cooperatives. In 2004, the MOA invested 20 million yuan to support a second round of 100 rural cooperatives (Deng et al., 2010). Then, in October 2006, the central government gave its strongest push for cooperative so far by passing the Rural Professional Cooperative Law, which establishes the legal status of rural cooperatives and urges all levels of government to support them. Compared to the support for dragon-head companies, however, the central government provided little substantive financial support to rural cooperatives. Instead, financial, technical, and physical support for cooperatives mainly comes from the local governments, which leads to regional variations in the growth of cooperative production. According to one national survey, by 2008, 68 percent of villages in China have received some form of government support for cooperatives and 30 percent have received financial support in the form of grants, subsidies, or tax exemptions (Deng et al., 2010).

Unlike both agribusiness-led vertical integration and rural cooperatives, which have received support from the central government, independent commercial and entrepreneurial family farms receive no direct central-level support. Their growth depends more on policy interventions by local governments, especially in the area of market building, such as building specialized trading centers in the local region that help to bring markets—both physically and relationally—within the reach of small independent producers. In the Chinese-language literature, this model is referred to as "specialized market-led vertical integration" (Niu, 2006; Huang, 2010b). In the past decade, "vertical integration" through all three channels has progressed extensively in Chinese agriculture. A report issued by the MOA estimates that, by 2005, half of the country's farmland and farming households were engaged in "vertically

integrated agriculture"—in other words, engaged in commodity agriculture through independent, cooperative, or corporate production (Huang, 2010b).

Independent Household Production

Because of the high costs of getting access to market information and market contacts, and especially, transporting goods to the physical marketplaces where transactions with processors, consumers, or merchants are conducted, small family producers can only start independent, household-based commodity agriculture when the physical marketplaces are easily accessible. In rural China, this condition is usually met in two ways: first, a rural area that has geographical proximity to urban consumers, and second, an area where some external actor—mainly the local state—has helped to create a stable marketplace locally.

The peri-urban regions of most Chinese cities have a tradition of producing vegetables and animal products commercially to meet the urban consumption demand, thanks to their easy access to the urban market (Skinner, 1978). In these peri-urban rural areas, urban traders penetrate extensively; local wholesale or retail marketplaces that directly supply vegetables and other products to urban consumers are easily accessible to producers by motorized vehicles or even by traditional unmotorized tricycles. Today, independent household-based commodity agriculture remains active and the dominant type of agricultural activity in these areas. A study of horticultural production (including vegetables, fruits, and nuts) in the greater Beijing metropolitan area, for example, finds that an overwhelming majority (87 percent) of horticultural products produced in this peri-urban region is procured through traditional supply channels, such as by itinerant small traders or in local periodic markets (Wang et al., 2009). This study's survey of 50 villages in this area further shows that "households sold almost all of their output to small traders—either in the village or in local wholesale markets" (Wang et al., 2009: 1796). Clearly, the market is easily accessible to small producers in these areas.

Geographic proximity to urban markets plays a crucial role in fostering independent commodity production. The aforementioned Beijing study (Wang et al., 2009) finds that a greater distance from Beijing's urban center significantly decreases the amount of land households devote to specialized horticultural production. It is only in the peri-urban rural areas, where the low cost of transportation has made access to itinerant small traders and local whole-

sale markets easy, that household producers with the needed capital, skill, and labor can fairly easily make the transition into independent, specialized commodity production. In fact, in 2004, a greater share of the horticultural production in Beijing's peri-urban areas came from low-income villages and households than from high-income villages and households, which shows that, on one hand, wealthier villages and households have shifted to other more profitable employment activities and, on the other, independent household-based commodity agriculture has a relatively low threshold of entry and high viability.

I observed a similar pattern in the peri-urban regions around the cities of Zhangzhou 漳州 and Xiamen 厦门 in Fujian province. In Shan'ge 山格 town in Pinghe 平和 county, which is about 30 kilometers from Zhangzhou City, for example, many local households are specializing in the commercial production of vegetables and fruits (mainly jujubes and pomelos). Along the thoroughfare that connects the town center to the cities of Zhangzhou and Xiamen, many traders—some of whom are former local farmers—have set up shops. Farmers ride on their motorcycles to deliver sacks of fruits to these shops regularly during the harvest season and get their crops weighed and are paid in cash on the spot. The fruits are then cleaned, sorted, packaged in cardboard boxes that bear a brand name and the place of origin, and stored in the shops' storage. Trucks sent in by contracted transporters arrive periodically to load up the fruits and ship them to urban wholesale markets.

In peri-urban areas like these, the geographic proximity to urban markets makes the spontaneous market-building process by small private actors possible. Active involvement by the local state, although certainly helpful, is not a necessary condition. For rural areas that are not close to urban markets, however, local government becomes the most important actor in providing the market access needed for the risk-averse and information-deficient small household producers to shift to independent commodity production.

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, widely studied, and replicated—and probably most successful—example of this kind is the Shouguang Vegetable Wholesale Market built in Shouguang county 寿光, Shandong province, the largest in the country. The market started in 1984 with just an old-style small vegetable market on 0.6 hectares of land allocated by the county government. Over the next two decades, the county government invested a total of 40 million yuan and expanded the

market nine times to its current scale: six specialized market centers covering 40 hectares of land, and annual sales of two million metric tons of vegetables of over 300 varieties. The market has brought in vegetable traders from all over the country. They have opened up operations in Shouguang to purchase products directly from small farmers and then integrate them into large volumes, before shipping them out to every corner of the country and foreign markets.

For such markets to be functional, of course, local agricultural producers need to be able to produce products that meet the market demand. State and local public officials in Shouguang also spearheaded the development and promotion of agricultural technologies that are required in commercial vegetable production. The party secretary of Sanyuanzhu 三元株 village, Mr. Wang Leyi 王乐义, has been widely credited with developing the technology of temperature-controlled greenhouses for year-round vegetable production. The county government then organized study trips to Sanyuanzhu village and sent technicians out to all over the county to help disseminate the technology to farmers free of charge.

The easy access to the market and the dissemination of greenhouse vegetable production technology have made commercial vegetable farming a safe and profitable pursuit for small farmers in Shouguang: now over 80 percent of family 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, 2010b).

Similar market-building efforts by local governments—although not always as successful—are found all over the country. In Chenggong county 呈贡, Yunnan, the county government built a fresh-flower trading center with hundreds of stalls for small farmers and a state-of-the-art auction center equipped with computerized trading systems. It has now grown into the largest of its kind in all of Asia. 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 this kind of state support for market-building, virtually all local farmers entered into independent commercial flower production (some in vegetable production to supply the nearby urban market). In other cases, although local governments stopped short of building new marketplaces, through disseminating technologies, providing material and financial support, and organizing a large number of farmers—especially cadre families—to pioneer the specialized

production of a new crop, they created a large enough production base in the region to attract outside merchants and processors to bring in market access (Chen, 2012).

Non-state actors can also become the main force in building market facilities and promoting market access. The multinational company Nestlé Foods, for example, has played such a role and facilitated the transition into independent commodity production of many local farmers in Pu'er prefecture 普洱 in Yunnan. Nearly two decades ago, Nestlé selected several areas in Yunnan, including Baoshan 保山 and Pu'er, as potential areas to procure coffee beans. Although Yunnan has the natural conditions for coffee production, local farmers had no tradition or knowledge of coffee production. Thus, Nestlé essentially did what the local government did in Shouguang: it provided training and technical services for coffee-growing free of charge to any interested farmers and at the same time, set up many purchasing stations throughout the region. Nestlé, by establishing a long-term presence and procuring coffee beans here for its instant-coffee production in Guangdong province, has brought once remote market opportunities directly into the reach of small producers. The presence of Nestlé also encouraged other actors—for example, local township and village enterprises—to also enter the coffee market, further increasing market opportunities for producers. As a result, even though Pu'er is geographically remote and has negligible local demand for coffee-based products, many poor farming households in the area shifted into specialized coffee production and sell to Nestlé on the spot market.

In both the peri-urban areas where market access has grown spontaneously and in areas where local state or non-state actors have actively engaged in building market facilities and disseminating market accesses that are openly accessible to small producers, market opportunities have been mostly provided by either small traders or local wholesale markets and usually are open to producers of all scales. Rural China's legacy of collectivized agriculture, relatively equal allocation of land among village members, strong public agricultural extension services, and the strong regulation of family reproductive behavior by the state have also limited the disparities among household producers in the same area in terms of skill, capital, and labor endowments. As a result, in these areas, the transition from subsistence peasant agriculture to independent, household-based commodity agriculture is usually something in which a large portion of the local agricultural population participates. Such massive participation in independent commodity agriculture in an area creates a pattern of regional specialization in selected commodity products, which results in an increased scale—on a regional level—of such production and subsequently

attracts even more market opportunities to the region, which helps to further fuel the growth of local independent commodity production and regional specialization. In the peri-urban regions surrounding the cities of Xiamen, Zhangzhou, and Quanzhou in southern Fujian, for example, neighboring villages in the same town each specialize in a different commodity, ranging from mushrooms, loquats, and bananas, to tea. In areas where the transition to specialized commodity production is facilitated by local governments, because households' specialization is determined by the specialized trading centers built by local governments, spatial specialization tends to happen at a more aggregate level—the county level, for example, in vegetable production in Shouguang and fresh flower production in Chenggong—rather than at the township or village level.

This type of massive participation in independent commodity production also means that most local households are using their allocated farmland productively, which severely restricts the availability of land on the local rental market in these densely populated areas already facing land scarcity. In many of these relatively developed peri-urban areas, rural industries are also competing for the precious land, further reducing its availability to agricultural producers who want to expand their scale of production. As a result, expansion of production through acquiring more land on the rental market becomes very difficult, if not impossible, and wage labor is usually only needed during peak seasons; commercial farming households that rely on family nonwage labor become the dominant type of agricultural producers in these areas.

The emergence of labor-hiring entrepreneurial family farms in rural China depends primarily on the availability of land for the expansion of the scale of production.[3] Land becomes available mainly in two situations. The first is in regions where there is a natural availability of land that allows for expanded-scale production. In Heilongjiang province, for example, the large-scale state farms have in recent years decollectivized. They allocated state-owned farmland to employee households on long-term leases just like rural villages did with collectively owned farmland. They also encouraged employees to reclaim new land, which employees then have long-term use rights to. As a result, former state-farm employees now have farms on a scale unheard of in more densely

[3] Strictly speaking, these farms that employ nonfamily wage labor are no longer family farms. They, however, share more similarities with family farms using nonwage labor than with the corporate farms discussed later. In these entrepreneurial farms, the farmer family usually remains the unit owning assets and organizing production. Their scale of labor hiring and land renting is usually quite small, employment relations remain informal, and no staff is employed.

populated parts of the country: the largest farm in Jiansanjiang State Farm 建三江农场 is over 10,000 hectares, while the average size of family farms in many parts of China is below one hectare. Not surprisingly, these large-scale family-controlled farms rely on hired migrant wage labor for their specialized production, mainly rice, soybeans, and corn.

The other situation in which entrepreneurial farmers can emerge is when endowments of capital, skill, or land are more unevenly distributed within the local agricultural population. Under such conditions, a proportion of the population, due to their lack of skill, capital, or land, is excluded from profitable commodity agriculture. Their land is therefore not productively used, and the opportunity cost for them to rent out their land decreases, leading more of them to rent out their land to other commodity producers. Typically, such a process starts with the unequal allocation of collectively owned nonarable land—such as mountain slopes, wasteland, marshes, and forestland. In this unequal distribution, it is families that either have or are connected to local leaders that usually benefit. Allocation of village-controlled nonarable land is much less constrained by the egalitarian principles that apply to basic farmland. Once gaining control of such land, these entrepreneurial families can expand the scale of production and hire wage labor.

In An'ning county 安宁 in Yunnan, for example, an urban businessman, whose father-in-law happened to be a village party chief, managed to rent hundreds of mu of mountain slopes in that village, which had previously been classified as wasteland, and built a commercial orchard, hiring migrant laborers to do the farming. In another case, in Shan'ge town in Pinghe county in Fujian, where we find wide participation of small family farms in commercial production of fruits and vegetables using their allocated farmland, a small number of families are also growing eucalyptus trees—to supply to a local paper mill—on a large scale on collectively owned forestland. Other farming families are excluded from this because only these families—mostly village cadres and their relatives—had both the foresight and the capital to contract from the villages or rent from other households all the forestland. Chen's (Chen, 2012) study of navel orange production in a county in southern Jiangxi reveals the same pattern of differentiation among farming households, whose access to forestland varies greatly. Some, deterred by the high risks in this new market endeavor, rented out all their forestland to pursue nonfarm wage work, while others—in this case, cadre families under the prodding of the county government, which spearheaded the introduction of this new crop—rented in forestland and became labor-hiring large producers. In other cases, scare skills, such as those needed in growing certain high-value vegetables, can also

exclude some households and lead them to pursue nonfarm jobs while renting out their land to those who have such skills.

Corporate Production

The penetration of agribusiness into agricultural production in China takes two forms: directly employing wage labor and managing agricultural production in corporate farms (corporate farming), and organizing multiple household producers into coordinated production through contract arrangements (contract farming). In both forms of corporate production, the direct producers—whether wage labor in corporate farms or nonwage family labor in contract farming households—no longer directly transact in the product market, but neither are they independent producers. Instead, they depend on agribusiness companies to both provide inputs and productive assets that enable but also control the production process and mediate their transactions with markets.

In the literature, the choice for agribusiness companies between contract farming and corporate farming is mainly seen as determined by the technical aspects of agriculture as a natural production process (Mann and Dickinson, 1978). When capital is not able to industrially organize an agricultural production more productively than small farmers (in other words, achieving economy of scale), it then chooses to settle off-farm or near-farm on the agricultural commodity chain and specializes in producing farm inputs and processing farm outputs, while leaving the natural process of agricultural production—the most risky part in the commodity chain—to small family farms through contract arrangements. This also allows companies to take advantage of the self-exploitation by small family farms of unpaid and flexible family labor. In other cases, when capital manages to industrialize agricultural production and attain higher productivity than small farms, it then chooses to directly organize agricultural production and employ wage labor to capture the surplus generated in that process. Although such an efficiency-driven consideration by agribusiness companies can certainly be relevant, this argument overlooks the often more important constraints and incentives in the local political economy that determine companies' choice of specific forms of production, as the case of rural China shows.

The kind of agribusiness companies doing contract farming in China runs the whole gamut: domestic and foreign, big and small, processors and retailers, exporters and domestic suppliers, 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 a long-term basis. There are ways through which companies can gain access to land to set up corporate farms—for example, leasing unused land from villages and then reclaiming it, or renting land allocated to farmers from individual farmers or villages; but for most companies, contract farming becomes an important way of getting land and entering agriculture.

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, agribusiness 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, agribusiness companies also set up their own production bases—corporate farms using wage labor—on land they have gained direct control of, usually in the same geographic areas. In the third model, "company + intermediary + household," companies establish contract arrangements with intermediary agents, who represent individual farmers in their dealings with companies. The most typical intermediary agents are producers' cooperatives formed by rural households, but village authorities and even local governments may also act as the intermediary to sign contracts with companies and organize rural households' production.

Contract farming faces an inherent risk of defaulting. When agribusiness companies and household producers enter pre-production, pre-marketing contracts that require the delivery of a product at a specified price, quantity, and quality, there is almost always a loser: when the market price rises above the contracted price, farmers have an incentive to sell to open markets; when the opposite happens, companies have an incentive to buy from open markets—unless there is no alternative market outside the contract. Contract arrangements, therefore, are most stable when agribusiness companies have market monopsony and farmers are deprived of the opportunity of side-selling. Because farmers are intrinsically motivated to violate contract terms and legal enforcement is usually unpractical, for agribusiness companies, market monopsony is their best protection and, as a result, is a widely pursued strategy. The viability and stability of contract farming depends not on the essential nature of agriculture or of a certain crop, but on how successful companies are in creating and maintaining market monopsony and how effective farmers can break it—both are determined by the constraints and motivations presented to them by the local political economy.

From this perspective, the incompatibility between contract farming and independent household production becomes obvious: contract farming

requires market monopsony, which means that the agribusiness company is the sole conduit between producers and the product market and therefore monopolizes access to markets. Independent household production, on the other hand, requires the easy and open access by small household producers to market opportunities. The presence of independent production of a given product in a local area, therefore, greatly threatens the stability of the contract farming of that product. Even if there are some households in the area that, for various reasons, cannot produce independently and are willing to enter contract farming, the presence of non-contract producers and thus other purchasers would effectively break the market monopsony that agribusiness companies need to suppress contract farmers' side-selling and maintain stable contract relations.[4] Not surprisingly, in both the secondary literature and the primary fieldwork, contract farming is virtually never found in the same area where independent household-based commodity production thrives. For example, a survey of 201 villages in the Beijing metropolitan region, where commercial vegetable production dominates, found no incidence of contract farming (Wang et al., 2009). In a statistical analysis of multi-province survey data, Guo Hongdong, Robert Jolly, and Zhu Jianhua (2007) found that proximity to markets strongly and significantly reduces farmers' likelihood of joining contract farming.

Agribusiness companies in China have adopted various approaches to form de facto market monopsony. One fruit juice company in Yunnan's Xishuangbanna 西双版纳 prefecture, when facing high rates of farmers' defaults in its initial peri-urban site of contract farming, where independent production also existed, shifted to a remote mountainous area to continue contract farming of tropical fruits so that farmers there were geographically locked into the company's monopsony. Another widely used approach is only selecting for contract farming products that have no local market and can only reach the export market through the company. For example, the four companies Sachiko Miyata, Nicholas Minot, and Hu Dinghuan (2009) studied all sell above 90 percent of their products to either export markets or domestic supermarket chains, which also tend to require differentiated products. Even for these companies that control restricted access to distant markets, however, their monopsony is constantly threatened by merchants or processors who follow them into the area

[4] The only possibility for contract farming in the presence of independent production is to produce a differentiated product. But even in this situation, it is difficult for companies to prevent the diffusion of technologies and the adoption of that differentiated product by non-contract producers.

to get a share of the supply, bringing with them alternative access to markets. Take Nestlé's operation in Yunnan for example. When Nestlé brought coffee cultivation into Yunnan, it initially started with contract farming. It, however, had to abandon contract farming later due to the rampant side-selling by coffee farmers to local processors and merchants who have followed Nestlé into this lucrative market. Nowadays, Nestlé simply maintains purchasing stations in production areas and buys coffee beans from commercial farmers on spot markets.

The problem of side-selling by contract farmers threatens agribusiness companies' ability to secure stable procurement of products and thus motivates companies in rural China to gain greater control over the production process by entering corporate farming. Many agribusiness companies in China adopt the "company + base + household" model, in which they engage in two forms of production simultaneously—wage-labor production in the corporate base farm and contract farming with household producers using nonwage labor. This practice is economically puzzling: if one form is more efficient, there is no need to adopt the other. This has to be explained by the unique political economy in rural China: companies on one hand are pushed by contract producers' side-selling to enter corporate farming, but on the other, are constrained by the scarcity of land and unable to meet all procurement needs from corporate farms alone. Apart from ensuring at least a partial supply of products, having corporate farms has another advantage: by controlling a substantial share of the local market in their own base farms, companies not only can drive down the market price but also reduce the opportunity for open spot transactions, both of which limit farmers' ability of side-selling. Therefore, agribusiness companies in rural China use contract farming to supplement corporate farming and use corporate farming to stabilize contract farming. For example, Xinchang 新昌 Foods, a poultry meat processing company in Shandong province, receives 40 percent of the poultry that it processes for multinational fast-food chains from about 10,000 farmer households in Changyi 昌邑 and neighboring counties, who produce for the company on contract. But the company also runs a base farm on land leased from villages that provides another 40 to 50 percent of its poultry supply. Similarly, all four companies studied in Miyata, Minot, and Hu (2009) have base farms, including one that only provides 5 percent of one company's procurement.

Not surprisingly, in rural China, sole reliance on corporate farming by an agribusiness company is mostly seen in areas where the availability of land can meet the scale requirement of the corporate farms. Land for corporate farms can come from two sources, as mentioned earlier: leasing unused land from

villages, or renting allocated land from a large number of individual households, which is mostly brokered by the village authorities. This means that large, stand-alone corporate farms are found in three types of areas: first, areas that are geographically remote and sparsely populated; second, areas where households are willing to rent out their land and work as employees in corporate farms that provide higher incomes; and third, areas where even though households can independently engage in commodity production, companies nevertheless are able to use strong support from and connections with local governments and village authorities to either strong-arm households into renting out their land or buy-off farmers. Therefore, just like contract farming, corporate farming faces competition from independent production, as these forms of production increase the value of rural households' farmland and make them less likely to rent out land to companies.

Availability of wage labor, on the other hand, is usually not a constraint that limits the emergence of corporate farms. Even if we assume that corporate farms have a similar level of productivity as family farms and thus are not able to pay high enough wages to attract local labor from family farming into wage work, migrant labor from poorer parts of the country is usually available to meet companies' labor needs. In Dahongpo 大红坡 coffee plantation in Baoshan, Yunnan, the hundreds of wage workers mostly hailed from Zhaotong 昭通 prefecture, one of the poorest areas in the province. In other corporate farms in Fujian and Shandong, migrant workers from Yunnan and Guizhou formed the main workforce.

Among the provinces I study, Yunnan is the one where large, stand-alone corporate farms are the most prevalent, for all the above reasons. Even in places where local households are engaged in independent production, like commercial coffee farmers in Pu'er, the availability of unused land and supply of migrant labor still allow corporate farms to emerge, right adjacent to small family farms. In contrast, in southern Fujian, where population density is high and independent production highly developed, I found no presence of stand-alone corporate farms. Similarly, in the more densely populated peri-urban areas of Yunnan, such as Chenggong county, where thriving independent production by rural households restricts land supply to corporate farms, no presence of large-scale corporate farming is found. In Shandong, thanks to strong support from local governments, agribusiness companies grew rapidly; the limited availability of land, however, still restricted their scale of production. Most corporate farms here are, as mentioned above, supplemented by contract farming. Furthermore, in areas where independent production is more developed, such as Shouguang, the presence of corporate farms is much

more limited compared to areas where independent production is less developed, such as Anqiu 安丘 and Changyi, both in Weifang City 潍坊.

Cooperative Production: A Third Way?

Cooperative production usually emerges in three types of situations. First, when a substantial number of family farms in an area are already doing independent commercial production, they may find it more beneficial—actually in almost all cases, this should be true—if they join forces in their dealings on markets or even coordinate their otherwise independent production. The benefits of joining forces to form producer cooperatives are obvious: the cooperatives can buy inputs at bulk and discounted prices, raise productivity and product quality through disseminating information and providing technical services, standardize production, secure finances, shield farmers from risks by pooling resources, and even gain forward linkage into the more profitable downstream segments through marketing and processing the products.[5]

A second type of situation in which cooperatives can emerge is when small household producers face difficulties in gaining either productive assets such as skill and capital or market accesses to enter commoditized agriculture, yet neither the local government nor outside market actors are providing these. Outside purchasers will not come in unless there is a sufficient scale of production of a product that is not easily available—at least at a comparable price—on the existing market; and it is impossible for individual households to either reach that scale or venture out to find markets for the products on their own. In the absence of local government support, cooperatives, which organize a sufficient number of households into specialized production to reach a marketable scale and thus bring in outside market actors, are the only alternative that can possibly bridge this gap between distant markets and small and isolated household producers. Cooperatives of course are also crucial in providing productive assets such as skills and capital to small producers to assist their transition into specialized commercial production.

Clearly, in both situations, but especially the latter, it is crucial to have a local social infrastructure—for example, a source of leadership, a relatively high level of trust, and the absence of severe socioeconomic differentiation

[5] The benefits of rural cooperatives to farmers are widely known in the development literature. For a general review, see Staatz, 1987.

among households—to overcome obstacles to collective action. In rural China, collective authorities or individual village leaders often have become the leading force in organizing rural households to form cooperative organizations. In Yinzhaozhai 阴赵砦 village, Xingyang county 荥阳, Henan, for example, the village's successful wheat breeding cooperative is the brainchild of the village party secretary, Mr. Yin. He conceived the cooperative ten years ago as the only way for this farming village to raise its income, and persuaded villagers to join. Similar cases can be found in the Chinese-language literature, for example, Han Shuming (2007) and Zhou Yanping, Chen Huiying, and Jiang Aiping (2002). But the difficulties faced by these bottom-up, spontaneous cooperatives are illustrated in the widely publicized case of Nanmazhuang 南马庄 village, in Henan's Lankao county 兰考. Despite the successful internal mobilization to form a cooperative within the village, led by the able village leader, the main product—organic rice—still faced a cold reaction on the market, not surprising given the cooperative's inability to either publicize it or place it with major retail chains. The venture was only salvaged after a professor from Beijing, who was seconded to the county government and attached to this village, took some rice to sell in Beijing and caught the attention of the media—a form of outside intervention that is surely irreplicable elsewhere.

Then, there is also a third type of situation where cooperatives can more easily form, but not necessarily in a healthy way. Instead of being formed bottom-up and spontaneously by household producers, cooperatives can also be formed in a top-down manner by more powerful local actors, including local governments (especially agriculture-related agencies), agribusiness companies, and large entrepreneurial producers. In keeping with the local corporatism model that had fueled the growth of township and village enterprises, the state has resorted to the same approach to mobilize grassroots governments to lead the development of rural cooperatives. Studies have found that increasing support from local governments is strongly associated with growth in rural cooperatives (Deng et al., 2010). One study found that, in Weifang City in Shandong, an area where rural cooperatives have seen rapid growth in recent years thanks to the local government's strong support since 2004, the number of cooperatives had increased to 2,324 by 2006 (92.2 percent of which are producer cooperatives), with a total of 460,000 members—about 45 percent of the county's agricultural labor force (Han, 2007).

The high growth rate in recent years, and especially the strong hand of local governments in pushing this growth, however, is a mixed blessing at best. Experiences in other countries have shown that excessive government interference has been the leading cause of politicization and inefficiency in cooperatives

and of their decline and even eventual dissolution (Baviskar and Attwood, 1995). Similar experiences are also found in China (Lu, Deng, and Li, 2011).

The word "cooperative" has become to mean many things in rural China. From visiting cooperatives during fieldwork and reading media reports of cooperatives that are lauded as success stories, I find that it is not unusual that some cooperatives are neither producer cooperatives nor producer shareholding companies, and have little to do with organizing households into coordinated commodity production. Some exist in name only and were set up by village authorities or local officials to answer to upper-level pressure about promoting cooperatives. Others are professional associations that mainly provide members supplementary pre- or post-production services in information sharing and product promotion but are not involved in the production process. Even worse, local elites can also strategically use cooperatives for their own interests.

Unlike small-scale commercial farmers, labor-hiring entrepreneurial farmers, who have already shifted to commodity production on their own—and quite successfully so, otherwise they wouldn't have expanded their production by hiring labor and renting more land—have much less incentive to join a producer cooperative. Thus, the cooperatives they form typically take the form of professional associations, and are mainly for the purpose of disseminating market information, sharing skills, and coordinating market strategies.

Besides that, large labor-hiring entrepreneurial farmers can also be a force that inhibits the healthy development of cooperatives. In some cases, large entrepreneurial farmers have formed cooperatives to capture both state subsidies for rural cooperatives and the reduced transaction costs in dealing with suppliers or purchasers. A few small farmers have been included in these cooperatives, but big farmers have taken 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 the wholesale price given to the cooperatives and the 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 (Tong and Wen, 2009). One study finds that among the 136 cooperatives in a particular city, 125 were formed by big, entrepreneurial farmers, four by government agencies, five by dragon-head firms, and only two by villagers (Zhang Xiaoshan, 2005).

Reliable data that allow for a more rigorous analysis of local conditions that influence the growth of cooperative production in an area are not yet available. But the discussion above suggests two hypotheses. First, there appears to

be a competitive relationship between entrepreneurial farmers and agribusiness on one side and producer cooperatives on the other. In an area where entrepreneurial farmers or agribusinesses have gained dominance, the growth of producer cooperatives for smaller commercial households will likely be stunted. Second, when a strong social infrastructure for collective action is present, there are higher chances of cooperatives being successful. Having some external impetus—such as a company searching for producers to meet its demand for differentiated products or a local government actively supporting cooperatives—will further enhance the chances of cooperatives being successful; but if the two internal conditions are absent, the external impetus may only result in the short-lived or nonfunctioning cooperatives we see widely in today's rural China.

Conclusions and Discussion

A comparison of the competing models of agrarian transition in rural China shows that variations are primarily created by different conditions in the local political economy. When markets are openly and easily accessible to small family producers—due to either the local government's effort in market building or the spontaneous spreading of market access in peri-urban areas by market actors—independent household production becomes the dominant form of commoditized agriculture. In areas where opportunities for independent production are lacking, family farms can still enter commodity production—without being dissolved into individual wage workers employed by agribusiness companies—through forming producer cooperatives and collectively gaining market accesses. The ability of local households to enter cooperative production, however, depends on both external conditions—such as the presence of unmet market demand for differentiated products and support from local governments—and internal conditions—strong collective leadership that helps to organize collective action and the relative weakness of entrepreneurial farmers and agribusiness. For agribusiness companies in China, the greater challenge they face in entering agricultural production is not some natural obstacles rooted in the biological and land-based nature of agriculture, but rather competition from independent household production. Therefore, corporate production—in the form of either contract farming or corporate farming—only thrives in places where the local political economy is unfavorable to independent production: for contract farming, the lack of locally accessible market opportunities, which allow companies to have market

monopsony; and for corporate farming, the availability of land, which is often made possible with the help of local government or village authorities.

These findings here are just hypotheses awaiting further confirmation. One theoretical insight from these findings is that the divergence between family farming and corporate agriculture is not so much determined in the production realm, but more in the circulation realm—especially in how producers interface with the product market. Both the orthodox Marxist-Leninist approach and the Chayanovian approach focus primarily on the production process and try to determine either the superiority of capitalist farms or resilience of family farms on the basis of some advantages in the production process—for example, the former's economy of scale, and the latter's insensitivity to declining marginal labor productivity and the ability of self-exploitation. The famous and long-standing debate on the inverse relationship between farm size and productivity is an illustration of this (Bramall, 2004; Patnaik, 1979; Sen, 1962). What this study suggests, however, is that the importance of these differences in the production process in determining which form of production gains dominance is overestimated. In fact, neither form has an intrinsic advantage in the production process that cannot be offset by changes in the production function—i.e., how various productive assets are combined and utilized.

This leads to two tentative propositions. First, external conditions in the local political economy—rather than some essential, intrinsic qualities—are more decisive in determining how productive and competitive a particular form of production is. If the confrontation between family farms and agro-capital were determined by the natural characteristics of agriculture rather than local political-economic conditions, then we would never see the kind of coexistence of independent, household-based commercial coffee farmers, large corporate coffee plantations relying solely on wage labor, and household farmers producing coffee under contract for local processors in the same area—such as the case in Pu'er, Yunnan. The same form of production can also have widely different results in different locations. For example, the large-scale coffee plantation I studied in Yunnan is quite successful, thanks to the availability of migrant labor; yet an experiment with large-scale, labor-hiring rice farming in Anhui failed because of stringent labor supply in a local economy where nonfarm job opportunities existed (Wang and Gui, 2011).

Second, advantages in markets are equally if not more important than those in the production process in determining the strength of various forms of production. The resilience of family farms in the face of the penetration of capital into agriculture is based less on natural obstacles in agricultural production,

than on their ability to independently access market opportunities. Only when they have such access can the natural obstacles help sustain them in competition with corporate production using wage labor. Conversely, the success of agro-capital in taking control over land and proletarianizing labor from family farms also depends more on how successful they are in restricting family producers' access to markets.

This view also suggests that if we narrowly focus on the production sphere, we may mistakenly conclude that the persisting dominance of family farms in today's Chinese agriculture evidences the lack of penetration by capital or the suppression of the logic of capital. But if we abandon the sectoral and reified conception of agriculture, and instead see it as an ongoing trans-sectoral organization of natural processes, embedded in the larger circulation of capital in agro-industrial complexes, we may in fact find that it is more advantageous for capital to settle in the circulation processes where it can more effectively appropriate the surplus from direct producers by virtue of its greater power in markets. Recent studies have shown that, in various places, commercial capital is gaining oligopolistic and even monopolistic control in every step along the circulation process that brings agricultural products to consumers—from rural procurement to urban wholesale and retail (Wu, 2012; Zhang and Pan, 2013; Zhong and Kong, 2010). By doing so, it pockets a greater surplus for itself and drives down the profit margins of direct producers. For family producers in today's China, their relationship with commercial capital, which determines their positions on markets, may have become more crucial than those with capital in the production process (Huang, 2012). In this sense, the more important transformation that capital can bring to Chinese agriculture is not the dissolution of family farms or the proletarianization of the rural labor force, but rather the integration of agricultural production into the trans-sectoral circulation of capital, which then subjects family producers to the surplus transfer in market processes.

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