

**Project-Based State Intervention and Agrarian Change in Contemporary China:  
The Case of Rice Production in Pingwan County, Hunan**

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**基于农业项目的国家干预与当代中国农业转型**

——以中国湖南水稻生产地区的实践为例

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**Abstract**

This article analyzes the role of the state in the development of capitalist agriculture in contemporary China by focusing on the implementation of the central-government-sponsored National Grain Security Project and Agricultural Industrialization Project in Pingwan county of Hunan province since 2009. It demonstrates that by providing significant (formal and

informal) subsidies and transferring large tracts of farmland to large farmers and agribusinesses, the Chinese government has made the capitalist transformation of rice production possible. We stress that in the absence of private property rights, the local governments' strong control over farmland transactions makes it relatively easy to transfer large tracts quickly, helping agribusinesses and large farmers avoid significant transaction costs they would otherwise have to face under a system of private landownership. The article also shows that existing policies support the transfer of farmland in regions with favorable geographic and climatic conditions over other regions and therefore lack the capacity to decrease regional inequalities.

### **Keywords**

agriculture, China, Hunan, capitalism, rice, state

### **摘要**

本文以 2009 年以来中央政府在湖南省平晚县实施的国家粮食安全项目和农业产业化项目为例，分析了国家在当代中国资本主义农业发展中的作用。研究表明，中国政府通过提供大量（正式和非正式）补贴，并通过土地流转把耕地转移给家庭农场和农业企业，使水稻生产的资本主义转型成为可能。我们强调，在缺乏私有产权的情况下，地方政府对农地流转的强有力控制使得快速转移大片土地相对容易，有助于农业企业和大户避免在私有土地制度下他们可能面临的重大交易成本。文章还表明，地方政府倾向于支持在地理和气候条件较好的耕地上开展耕地流转，因此使得不同地区农业转型的图景差异明显。

关键词：农业、中国、湖南、资本主义化、水稻生产、国家

In order to explain the capitalist transformation of Chinese agriculture in recent decades, scholars have identified several factors including the commercialization of agriculture, China's entry into the World Trade Organization in 2001 (which increased the export potential of some of the country's agricultural products, thereby encouraging the entry of national and foreign capital to the agricultural sector) (Hu, 2006; Kledal and Sulitang, 2007; Schneider, 2017: 11; Stringer, Sang, and Croppenstedt, 2009), the rise of agribusiness companies and capitalist farmers as new agricultural agents (Yan and Chen, 2015; Zhang et al., 2009; Zhang, 2012, 2013; Zhang and Donaldson, 2008, 2010; Zhang et al., 2015), and the increasing use of wage labor in farming (Xu, 2017). Scholars have also identified the different roles the Chinese government has played in this process. Central and local governments have actively shaped this transformation by changing the laws and regulations related to agricultural trade, investment, and land transactions and also by providing financial and logistical assistance to agribusinesses and capitalist farmers (Schneider, 2017; Yan and Chen, 2015; Zhang, 2012; Zhang and Donaldson, 2008).

Based on the qualitative and quantitative primary data that the first author collected during his fieldwork in Pingwan county (a major rice-producing region in Hunan province, in the middle Yangzi region),<sup>1</sup> involving farmers, village administrations, and provincial and county agricultural department officials for fifteen months spanning from 2011 to 2015, this article aims to contribute to the literature by describing the role of project-based state intervention in contemporary China's capitalist agrarian transformation. We argue that heavy

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<sup>1</sup> Pingwan is the pseudonym used for the county where the first author conducted fieldwork. The names of villages, townships, companies, and individuals are also pseudonyms.

subsidization and land transfers by the state during the implementation of agricultural development projects designed and funded by the central government have played a significant role in the development of capitalist rice farming in regions like Pingwan. Project-based state intervention helps to create a local class of capitalist agriculturalists that were previously either too weak or altogether absent in such regions.

In the section that follows, we turn to a general account of agrarian change in China since the de-collectivization of agriculture in the early 1980s. We then investigate the state's role in the development of capitalist agriculture in Pingwan county in recent years by analyzing the local implementation of two central-government-sponsored agricultural projects: the National Grain Security Project 国家粮食安全项目 (hereafter referred to as NGSP) and the Agricultural Industrialization Project 农业产业化项目 (hereafter referred to as AIP). We go on to examine the NGSP and AIP in detail and then explore the regional variation of agrarian change in Hunan.

### **State Intervention and Agrarian Change in China since Decollectivization**

The Chinese government de-collectivized agriculture between 1979 and 1983. Under the household responsibility system, rural households obtained the right to use small plots of land while ownership rights remained in the hands of the so-called village collectives, which were under strict control of the township and county governments. Following the establishment of the household responsibility system, restrictions on private entrepreneurship in the farming sector were gradually lifted. Big households, which organized farming and animal husbandry on relatively large areas of land by employing a small number of farm workers (Hinton, 1990: 80; Muldavin, 1997: 591; Prosterman, Hanstad, and Li, 1998: 92; Williams, 1996; Yan, 1992: 11–17), and pioneers of some of today's big agribusiness companies (Zuo, Lu, and Ou,

2008: 33) emerged in this period. However, since the government did not push for large-scale production, this development of capitalist agriculture *from below* was slow during the 1980s.

As agricultural growth entered a period of stagnation after 1984, up-scaling agricultural production was incorporated into the economic policy agenda. Especially since the mid-1990s, China's leadership has repeatedly stressed its commitment to the goal of developing large-scale and mechanized farming in order to increase agricultural productivity (Ye, 2015: 329–30; Zhang and Donaldson, 2008: 28). This, however, does not mean a return to collective agriculture of the pre-reform era. In a new context in which profit-oriented private enterprise gained considerable power within China's political economy, agricultural modernization has been conceived of as a goal that should be achieved on a capitalist basis. Hence, the Chinese government has supported the development of capitalist agents. Most agribusiness companies, which are labeled “dragon head enterprises” 龙头企业, have been formed through the entry of urban capital into the agricultural sector. The central government has increasingly supported the vertical reorganization of the agricultural sector through the establishment of these companies since the late 1990s (Schneider, 2017; Zhang and Donaldson, 2008). Capitalist farmers, to which concepts of “big households” 大户 and “capitalized family farms” 资本主义化的家庭农场 refer, represent another agent of capitalist transformation. As we will see below, government support of capitalist farmers is also substantial.

Despite continuing rural outmigration, high population density and significant land fragmentation have continued to define Chinese agriculture. In 1996, 30 percent of China's farmers were farming less than 0.2 hectares and 50 percent of them were farming between 0.2 and 0.9 hectares (Zhan, 2017: 151). These smallholdings are generally divided into five to ten plots, which are often scattered around a large area (Ye, 2015: 320; Zhang and Donaldson, 2008: 28). For this reason, agrarian capital has faced significant problems in accessing land,

without which large-scale farming cannot be realized. As we will examine in detail below, state intervention has overcome this problem to a significant extent. Since the Chinese government has not privatized farmland and instead has chosen to retain significant control over land transactions (through county, township, and village administrations), it has played a key role in transferring farmland to capitalist agriculturalists. Although this has been the case for over two decades, following the Third Plenary Session of the Seventeenth Central Committee of the Chinese Communist Party in October 2008, which adopted the policy of land transfer 土地流转 to increase the scale of agricultural production, the magnitude of land transfers to agrarian capital has increased significantly.<sup>2</sup> The share of transferred land within the total amount of farmland under household responsibility increased from 5.2 percent in 2007 to 35.1 percent in 2016 (Tuli.com, 2018). Only 0.59 percent of all rural households were cultivating 20.7 percent of household arable land in China by 2012 (China Development Research Foundation, 2017: 120; also see Zhan, 2017: 159).

In addition to making land access easier, the Chinese government has also addressed the financial problems of agrarian capital. Big households and agribusiness companies have a significant need for low-interest credit and subsidies. Also, in order to attract capital investment from urban to rural areas, local governments have to develop agricultural infrastructure. However, the tax reform of 1994 (which diverted a large portion of local taxes from local governments to central government coffers) and, more importantly, the abolition of the agricultural tax (which began in the 1990s and was completed in 2006) has diminished

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<sup>2</sup> Although the exact translation of the Chinese term *tudi liuzhuan* 土地流转 is “land circulation,” the term actually refers to the transfer of land from smallholders to large producers through the mediation of local governments. We therefore prefer to use the term “land transfer” as a more accessible term in English throughout this article.

the financial capacity of the local governments significantly (He, 2013; Lin, 2011). Financing agrarian development has been increasingly challenging since then.

Project-based policy intervention has emerged in recent years as a new framework to address this long-term problem. Although the central government has made project-based interventions since the 1990s, it has become a key policy apparatus only in recent years. In 2014, the central government transferred 1.4 trillion yuan to local governments for agricultural development and the majority of this transfer was made through projects. Although the Chinese government has supported big farmers and agribusiness companies since decollectivization, its support for smallholders has not been negligible until recent times. However, recent project-based intervention clearly breaks from previous approaches by allocating most of the government's financial support to big farmers and agribusiness companies. On the other hand, the central government uses the policy framework to encourage agrarian capital to step up its total investment. In this new framework, the central government fulfils a leadership function by designing a series of national agricultural projects and allocating funds to local governments to implement them. By distributing these funds to local (mainly county) governments on a selective/competitive basis, the central government aims to encourage local governments to compete with each other to design better local projects compatible with the general project framework. Under local government leadership, public-private partnerships are formed to design and implement projects of various types and scales. The central government expects that this can create a type of synergy that encourages local governments and capitalist agents to invest resources exceeding the central government's own investments. For instance, the relative share of total investment for the Agricultural Industrialization Project in Pingwan county is based on a ratio of 1:2:3 for the central government, local governments, and agribusiness companies respectively. By

investing 10 million yuan in this project in Pingwan, the central government has targeted to raise an additional 50 million yuan from the local government and agribusiness capital.<sup>3</sup>

The central government has implemented two major projects in recent years. The initial National Grain Security Project (NGSP) comprises various schemes for increasing grain production such as the Super Grain-Producing Counties Project, the Major Rapeseed Oil-Producing Counties Project, and the High Yields Project. The NGSP provides financial assistance to eight hundred “big grain-producing counties” 产粮大县. The largest two hundred counties among them (in terms of the sown area, total output, and supply of grain to the market) are labeled as “super grain-producing counties” 超级产粮大县. Through the NGSP, the central government allocated these counties 17.5 million yuan in 2009, 21 million yuan in 2010, 23.6 million yuan in 2011, 28 million yuan in 2012, and 31.9 million yuan in 2013 (Ministry of Agriculture, 2013; Ministry of Finance, 2008, 2009, 2010, 2013; Central People’s Government, 2009, 2013). The central government’s second major project is the Agricultural Industrialization Project (AIP), which incorporates various schemes such as the Modern Agriculture Demonstration Area Project, Modern Agro-Industrial Park Project, and Agricultural Science and Technology Demonstration Park Project.<sup>4</sup> The central government transferred the responsibility for implementing these two projects to local governments.

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<sup>3</sup> In many cases, local governments circumvent these investment requirements by using various methods of false reporting (Gong, 2015). However, the central government has not changed its policy of requiring local governments to contribute funds that match the amount of central government funds.

<sup>4</sup> In order to supplement the NGSP and AIP, the central government has devised several schemes such as the Comprehensive National Land Management Project, the Comprehensive Agricultural Development Project, small-scale irrigation projects, agricultural technology subsidy projects, and agricultural extension projects. Due to space limitations we do not discuss these supplementary schemes.



## Local Implementation of the National Grain Security Project

The food security problem has attracted greater attention in China in recent decades. China's total population reached 1.36 billion in 2013 (National Bureau of Statistics of China, 2014) and urban expansion shrank arable land from 127.6 million hectares in 2001 to 121.7 million hectares in 2008 (Siegel, 2015: 104). The growing challenge of feeding the population with diminishing farmland has led the Chinese government to see food security as a key component of national security.<sup>5</sup> It has addressed the question of food supply through two spatial fixes. On the one hand, it adopted an "external fix" which includes increasing food imports and acquiring farmland abroad. As a result, China's grain self-sufficiency rate decreased from close to 100 percent in the early 2000s to 84 percent in 2015 (Zhan, 2017: 154; Zhan and Huang, 2017: 149).

However, the Chinese government has been well aware of the potential danger of relying on an external solution for national security and therefore it has maintained the goal of producing most of its food supply within the country. In 1996, the central government announced that China would produce 95 percent of its grain consumption inside its borders

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<sup>5</sup> The Chinese government defines food security basically as "grain security" 粮食安全. The criterion of grain security is the production of 95 percent of the total national grain consumption within the country (Schneider, 2017: 623; Solot, 2006). In December 2013, the Chinese government dropped beans and tubers from the list of "strategic crops" that are subject to the 95 percent rule. Hence, the rule applies to rice, wheat, and corn. Due mainly to rising soy imports, China has been a net food importer since 2004. Chinese imports accounted for 9 percent of total agricultural imports in the world in 2010. The rapidly increasing share of meat in total food consumption in China in recent decades further complicates this issue. For example, corn is increasingly used as animal stock feed in China and growing meat consumption increases the need for corn imports. This makes the above-mentioned 95 percent baseline hard to maintain. Unsurprisingly, the Chinese government is currently considering removing corn from the list of strategic crops subject to the 95 percent baseline. It is therefore necessary to recognize the problematic nature of the official definition of food security in China and the increasing contradictions stemming from the greater consumption of soy and meat in the country (Schneider, 2014: 617–24; Schneider, 2017: 3).

(State Council of China, 1996). As China's rapidly industrializing and urbanizing areas (such as Beijing, Shanghai, Guangdong, Jiangsu, Zhejiang, and Hainan) increasingly depend on food from outside, the Chinese government adopted an "internal fix" of relocating grain production from the coastal and southern provinces to inland and northern provinces. Since the inland and northern provinces also have rapidly industrializing and urbanizing areas, the central government has pushed the local governments of the country's less developed areas to dramatically increase grain production by expanding the multi-cropped area (Ma and Lan, 2008: 38–50; Zhan, 2017: 156; Zhan and Huang, 2017: 143–46). For instance, the "Plan to Increase National Grain Production by 100 Billion Catties (2009–2020)," which was announced in 2008, aims to expand the multi-cropping of corn in the North China Plain and rice in the Middle Yangzi region (Central People's Government, 2009). In his report titled *Who Will Feed China?* published in 1995, Lester Brown estimated that if per capita consumption increases to 400 kg, China would have to import 369 million tons of grain (Brown, 1995: 97–99). Although its per capita consumption rose to 534 kg, China imported only 114.4 million tons of grain in 2015 (Zhan and Huang 2017, 140). Hence, the internal fix has so far helped China to avoid high foreign dependency for its grain supply.

Our investigation of state intervention to expand double-cropping of rice is based on fieldwork in Pingwan county in Hunan province, which is part of the Middle Yangzi region. The total population of the county is 1.2 million and about 80 percent of it is registered as rural residents. The county has about one million mu of farmland, of which about 90 percent is devoted to paddy rice. During fifteen months of fieldwork (spanning from 2011 to 2015), the first author interviewed over four hundred farmers, members of the staff of agribusiness companies, and (county, township, and village) officials in Pingwan. He also collected quantitative data about the local government's financial assistance and land transfers to big farmers and agribusiness companies, and the cost-profit levels of single- and double-cropping

of rice by small and large producers. Finally, during the final phase of fieldwork in summer 2015 he collected similar types of quantitative data about all prefecture-level cities of Hunan as well as additional qualitative data (such as application materials of farmers for receiving project-based government support) from various counties of the province. These materials make the analysis of the regional variation of agrarian change in Hunan possible.<sup>6</sup>

As in many other areas of the Middle Yangzi region, double-cropping of rice was very common in Pingwan prior to the agricultural tax reform. Relieved from its tax obligations following the abolition of the agricultural tax in the county in 2003, a large part of Pingwan's population gave up farming. A rapid switch from double- to single-cropping took place at the same time. Before 2009, small farmers dominated grain production. In 2008, the county's largest grain producer was Mr. Wang, who was single-cropping rice on 40 mu of land. We consider 2009 as the first year of the contemporary agrarian transformation in Pingwan because big capitalist grain-growing households emerged for the first time that year.

Since 2009, grain production in Pingwan has received financial assistance from the Major Grain-Producing Counties Support Project, which is a part of the NGSP's broader framework. Grain received the largest share (30 million yuan) of the central government's total financial assistance to the county's agriculture (45 million yuan) in 2009. This situation has not changed since then. The central government's financial assistance has encouraged local governments to increase the area sown in rice since it automatically increases the total

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<sup>6</sup> There are two published papers (one in Chinese and the other in English) that are based on the first author's fieldwork in Pingwan (Gong, 2015; Gong and Zhang, 2017). The present article provides previously unpublished data on land transfers and capitalist development in Pingwan and other parts of Hunan. None of the information in the tables and figures in this article has been published before. We refer to earlier published papers whenever necessary.

output. Given the limited availability of farmland, extending the double-cropped area is the only feasible way to achieve this objective. Shifting from single- to double-cropping has therefore been a major preoccupation of local officials. The success achieved on this front has led Pingwan to emerge as a successful case of agrarian development in recent years.

The project works in the following manner. The central government provides financial assistance to the county government and then supervises its performance through regular inspections. Since 2009, the central Ministry of Agriculture and the Hunan provincial government have cooperated to increase the effectiveness of supervision. Local governments are required to report the production figures to higher government branches and carry out on-the-spot inspections to minimize false reporting. Each year during harvest time, officials from the Ministry of Agriculture and the Department of Agriculture of the provincial government, the Pingwan county party secretary, the head of the county department of agriculture, and other related officials take a bus tour to check the condition of the rice harvest. Receiving a positive evaluation from their provincial superiors is the surest way for county officials to be promoted to higher office (Gong, 2015; Gong and Zhang, 2017). Local officials also have a financial stake in the projects. As Table 1 shows, the county government provides significant financial incentives to township and village officials to implement the NGSP effectively.

Table 1. Distribution of the National Grain Security Project Funds in Pingwan County, 2009 and 2012 (million yuan)

Type of investment	2009	2012
Incentives provided to township and village officials	1.045	5.8
Village subsidies	0.55	1.2
Incentives to big cultivating households	0.98	1.5
Incentives to contributing personnel	—	0.1

Production incentives	0.85	3.4
Supervision and management funds	0.3	0.3
Total	3.725	12.3

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Source: Pingwan county government, “Summary of the implementation of the Grain Production Plan, 2009–2012” (Internal document shared with the first author) .

On the other hand, local officials cannot expand a double-cropped area without convincing farmers that this will generate greater profits to the extent that it justifies their greater effort. Economic incentives seem especially important given the significant overlap between local officials and big farmers in Pingwan county, as in many regions of rural China. The economic incentive problem has underlined the significance of state intervention for changing the local agrarian structure from small- to larger-scale farming. Since the 1990s, the production level of hybrid rice has remained high, reducing the rice yield gap between single- and double-cropping. The output of single-cropped rice has recently reached 1,200 catties/mu and double-cropping increases this figure to 1,900 catties/mu. Hence, although double-cropping requires the use of twice the amount of labor, inputs, and technology than that of single-cropping, it increases the total output by less than 60 percent. More importantly, in 2013 double-cropping generated an average net profit of 467 yuan/mu, 11.8 percent less than what single-cropping generated (530 yuan/mu). Therefore, the marginality of double-cropping prior to the central government’s recent project-based intervention (the share of double-cropped area within all crop area was less than 5 percent until 2006) is hardly surprising. Today double-cropping still does not make economic sense for smallholders. However, the heavy subsidization of large producers (farming over 50 mu) by generous central government funds has expanded the scope of double-cropping since 2009. Hence, in

contrast to small-scale farming, double-cropping makes economic sense for larger producers as long as the current level of government subsidization is maintained.<sup>7</sup>

The level of capitalization (in the form of machinery ownership) appears to be the most important factor in enabling big farmers and agribusiness companies agents to assist the Chinese government in its nationwide effort to increase the multiple cropping of rice. The high costs involved in double-cropping make up-scaling production a formidable challenge for small farmers. Risks related to weather and market fluctuations can push small farmers to default in a single year. Hence, no social class other than wealthy and well-connected households is able to shift to large-scale double-cropping of rice. Aside from the influential effect of these material concerns, county government officials also support large-scale producers to promote their own political prospects and economic interests.

State intervention for transforming the local agriculture has so far taken two main forms. Firstly, county and township officials transfer relatively large tracts of farmland to large producers. Before 2009, Pingwan county did not have any farmers cultivating more than 50 mu. Rural outmigration was the main source of land exchanges in villages. At that time, many of the peasants who found jobs outside the village were unable to cultivate their

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<sup>7</sup> For a detailed discussion of the advantages and disadvantages of double-cropping in Pingwan and the important role played by government subsidies, see Gong and Zhang, 2017. It is important to note that after controlling the multiple cropping index, big farmers on average use fewer fertilizers and pesticides than small-scale farmers for two main reasons. Firstly, big farmers receive more technical training and guidance from local agricultural officers about the efficient use of these inputs. Secondly, since big farmers have higher absolute costs of inputs than small farmers, they are usually more careful and prudent in using them. Furthermore, big farmers are generally more profitable than small farmers in the single-cropping of rice for two main reasons. Firstly, their financial power enables them to use their own machinery instead of having to rent it. Secondly, they are financially capable of using higher-quality inputs, which helps them to produce higher-quality rice having a higher market price. Nevertheless, big farmers still do not possess any comparable advantage in the double-cropping of rice, which makes them depend on the financial support of the government.

land by themselves and therefore they rented it to relatives and friends. Besides preventing the waste of farmland, this type of land transfer enabled the migrating peasants to cover a portion of their food (and to a lesser extent cash) requirements by themselves outside the market. In many cases, the main motivation was to keep land under cultivation and rents in cash were not paid. In short, small-scale land exchanges (usually between 10 to 20 mu) embedded firmly in social networks were very common (He, 2013). This situation has changed significantly since 2009. Various subsidies of households cultivating rice on a scale larger than 50 mu entirely cover the cost of rent. This has increased the size of farmland rented by big households. Small farmers who leave farming are also willing to rent their land to big households to generate additional income.

Secondly, non-agricultural government contracts are used as an *informal* form of government support of agrarian capital. Big farmer Mr. Wang's shift to double-cropping on 100 mu of land that was originally unsuitable for double-cropping is an example of this phenomenon. In order to double-crop this area, local governments covered Wang's losses in two different ways. First, the county government provided Wang a formal, on-the-book subsidy of 200 yuan/mu. However, this was not enough to cover his total loss. Therefore, the township government subcontracted him the job of constructing a middle-school garden. Although subcontracting is by itself a formal procedure, in this particular case its real purpose (agricultural subsidization) is *not* formally announced. As a result, although Wang lost money in farming, he compensated for it and even earned a profit due to this informal subsidy. Several other well-connected individuals who lost money in farming also received road construction and maintenance contracts from the local government. Overall, the combination of formal and informal subsidies enables the loss-making (or insufficiently profitable) large producers to continue double-cropping.

Mr. Liu's story exemplifies the fusion of agrarian capital and political power on the ground. Cultivating 2,500 mu of rice by 2013, Liu is Pingwan's largest grain-producing household. Liu was a small merchant before 2009. He had a leather shoe store in Guangdong, which generated an annual income of about 300,000 yuan. In 2008 he finally realized that increasing the scale and profit level of his business was very difficult. Reading the document on agriculture adopted by the Third Plenary Session of the Seventeenth Congress of the CCP in October 2008 convinced him that scaling up agricultural production through land transfer had become a significant business opportunity. Despite his family members' opposition to giving up his business in Guangdong, Liu returned to his village and was elected village chief. In 2009, by using his savings accumulated over previous years, Liu invested 600,000 yuan to start up an agricultural service cooperative and purchased several plowing and harvesting machines. His business activity raised the attention of county officials. Searching for capable farmers to double-crop rice, in 2010 county officials proposed that Liu work with them. Officials then arranged the transfer of 1,000 mu to Liu. Due to bad weather and his lack of experience with large-scale farming, Liu lost about 400,000 yuan in 2010. The government subsidy for big households was 200 yuan/mu and Liu therefore received a total subsidy of 200,000 yuan, compensating for only half of his total loss.

In order to help him continue farming, county officials provided Liu various types of additional assistance. Firstly, they helped Liu become selected as a "national model worker" 全国劳动模范, which entitled him to financial support from the central government for his post-retirement years. Secondly, county officials helped Liu receive the title of "national-level big grain-producing household" 全国粮种大户 from the Ministry of Agriculture, which entitled him to an award of 50,000 yuan. Thirdly, Liu has received preferential treatment from county officials on many occasions. For instance, when he wants to meet the county party secretary, he does not need to make an appointment or wait. In 2010, the county



government provided him with space in the county administrative district to help him build an office for his agricultural machinery service cooperative. As a result of this generous government support, Liu's scale of production reached 2,500 mu in 2013. Based on the information he gave us, we estimate Liu's annual income as above half million yuan. After accumulating capital for a few more years, he plans to start a rice-processing business and thereby link farming and industry in a single chain of production under his control.

The cases of Liu and Wang illustrate the general situation of the state-directed agrarian transformation in Pingwan. There are now over three hundred big households each cultivating over 50 mu in Pingwan. Big households and agribusiness companies produce rice on about 300,000 mu in Pingwan today and about two-thirds of it is double-cropped. These large farms produce about a third of the county's total rice output.

The centrality of heavy subsidization and land transfer for the survival of double-cropping of rice by big farmers and agribusiness companies is evident. During the development of large-scale double-cropping of rice in contemporary Hunan, capitalist development started *after*—and in fact, *due to*—state intervention. In its quest to maintain national grain security through the expansion of the double-cropping of rice, the Chinese central government has viewed capitalists as the necessary agents. Since the double-cropping of rice is not profitable enough for big farmers and agribusinesses under normal circumstances, achieving this goal is impossible without heavy subsidization. Moreover, increasing the scale of rice production was extremely difficult to achieve in the face of significant land fragmentation. In fact, as the cases above demonstrate, large-scale capitalist farming was nearly absent in rice production prior to state intervention. In response, the Chinese state has *created* the class of capitalist rice farmers through heavy subsidization and land transfer since 2009. Unsurprisingly, this process has benefited the networks of local officials. We found that about half of the beneficiaries of land transfers in Pingwan (made as

part of the local implementation of the NGSP) are village party secretaries 村庄书记, village chiefs 村主任, and their close relatives.

### **Local Implementation of the Agricultural Industrialization Project**

Like the NGSP, the AIP is also based on the expectation that following the initial impetus provided by central government funds, agrarian capital and local governments will increase their direct investment. The AIP's broad framework includes several minor schemes. One of them is the Modern Agro-Industrial Park Project. During its implementation in 2014, the central government allocated 10 million yuan to each agro-industrial park. These funds were used for the construction of roads for tractors and hydraulic infrastructure, expanding agricultural technology, and disseminating high-quality farm inputs. Project funds were also used for the construction of processing facilities and warehouses. In addition to providing tax rebates and low interest credit, county governments also transferred land from small farmers to agribusiness companies in relatively large and consolidated tracts, which enabled them to establish farms and factories.

The development of capitalist agriculture has taken numerous forms in different times and places. Large-scale production by employing wage labor and the contract farming relationship between agribusiness companies and farmers (of various types and scales, from small to big farmers) are two of its frequently observed forms. Both forms involve an increase in the scale of production. While the former is based directly on increasing the farm size, the latter increases the production scale by combining the products of separate farms through purchase contracts *without* necessarily increasing the size of the farms supplying products to the purchasing company. Although contract farming has expanded in China in recent years, it remains an inherently unstable production relation due to class contradictions between agrarian capital and small farmers. It is a well-established fact that farmers prefer to

comply with their contracts when the market price is lower than the price set by their contracts. However, they tend to breach their contracts when the market price is higher than the price set by the contracts (Zhang, 2012; Zhang and Donaldson, 2008). For this reason, companies, including the ones engaging with contract farming, strongly prefer to have their own farms in order to secure a certain amount of output regardless of market price fluctuations. In other words, capitalist farming with wage labor and contract farming develop side by side and even by the same companies. Because of this choice, accessing large tracts of land continues to be vital for the development of agribusiness.

Like agribusiness companies, big households also seek to increase their scale of production by accessing more land. However, increasing the scale of production does not necessarily lead to an increase in the employment of wage labor. Households can increase their production scale without hiring labor (or hiring a few workers seasonally) until they reach a threshold after which they have to hire labor for longer periods and in greater numbers. In Pingwan county, very small rice farms (less than 10 mu) do not need to hire labor. Farms of 50 mu or less can also be cultivated mainly by households with the help of a few seasonal workers. The need to hire workers increases after passing the 50 mu threshold. The large-scale production of rice on farms of over 100 mu (there are many local cases in which farmers cultivate several hundred mu) increases the labor required for tasks such as transplanting seedlings, applying pesticides and fertilizers, controlling irrigation, arranging paths between fields, and harvesting. Farm mechanization has not eliminated this need. Hence, there is a close relationship between increases in the scale of production and increases in hiring labor.<sup>8</sup> This makes land transfer a good proxy of the development of capitalist relations of agricultural production in rice-producing regions like Pingwan. For this reason,

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<sup>8</sup> Chen's study (2013) on Pingwan also confirms this relationship.

below we provide quantitative data on land transfers in order to portray the development of capitalist agriculture in Pingwan.

Table 2 illustrates the significant expansion of land transfers in two townships of Pingwan during the implementation of agricultural projects in recent years. As with the land transfers to big households during the implementation of the NGSP, land transfers to agribusiness companies by local governments under the AIP appear to be a key factor supporting the capitalist transformation of local agriculture.

Table 2. Project-Based Land Transfers in Xi and Tai Townships of Pingwan County, 2009–2013

Township	Village	Land transfer (mu)	
		Land transfers by the NGSP from	Land transfers by the AIP in 2013
		2009 to the end of 2011	
Xi	Qing	780	20
	Mei	950	250
	Dou	510	290
	Ai	—	750
	Tong	340	320
Tai	Long	544.15	105.85
	Chang	817.7	487.3
	Jiu	443	1,169
	Tai	180	1,420
	Wen	50	1,220
	Aimin	148	132
	Yuan	144	356
	Pi	33.16	366.84
	Dong	570	280

Total	5,510	7,167
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Source: Pingwan county government, “Regarding the implementation of the Land Transfer Pilot Project in Pingwan county, 2009–2012” (Internal document shared with the first author) .

The case of the Ace (Annong) Company illustrates several important aspects of this process.<sup>9</sup> Ace is a local private dragon head enterprise. Since its boss is a member of the National People’s Congress (China’s national legislature), Ace has been one of the primary receivers of central government funds distributed through the AIP. Ace was originally engaged in the manufacturing and marketing of agricultural inputs and then began grain production in 2009. Between 2009 and 2013, it accessed about 30,000 mu of land from six townships through land transfer contracts. What is noteworthy here is that it is very difficult, if not altogether impossible, for a private company to obtain such a large area from hundreds of scattered small households within a system of completely private landownership. Under the semi-private/semi-public landownership system of contemporary China, however, local governments continue to have considerable control over farmland transactions, which enables companies like Ace to get access to large tracts relatively easily, through a few deals with local governments rather than dealing with hundreds of title-holding households.<sup>10</sup>

After gaining accessing to this large area, Ace established a production base and adopted the “company + base + worker” model, which lies somewhere between typical wage labor and contract farming models. In the typical wage labor model, companies own all the

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<sup>9</sup> The case of the Ace Company is very briefly discussed in Gong and Zhang, 2017; Yan and Chen, 2015.

<sup>10</sup> For an excellent empirical study of the advantages of the government’s remaining control over farmland for the development of capitalist agriculture in contemporary China, see Trappel, 2016.

means of production and hire farm workers for a wage. Under the typical contract farming model, companies provide farmers various inputs and services listed in the contracts, farmers grow crops on their own land, and then sell them to companies with prices set by the contracts. Ace Company's "company + base + worker" combines these two processes in a specific way. It can be described as "contract farming on a company farm." Ace controls all means of production including land. However, instead of giving wages to its employees, it signs production contracts with them that are very similar to the usual contract farming agreements. Ace provides its employees with inputs like seeds, fertilizers, and pesticides, and offers them mechanical services such as transplanting, plowing, and harvesting. In return, workers are responsible for weeding, irrigation, harvesting and delivering their crop to the company. After deducting the costs of agricultural inputs and services from the value of the total output (calculated by the unit price of rice multiplied by the total delivered product), the company pays the employees.

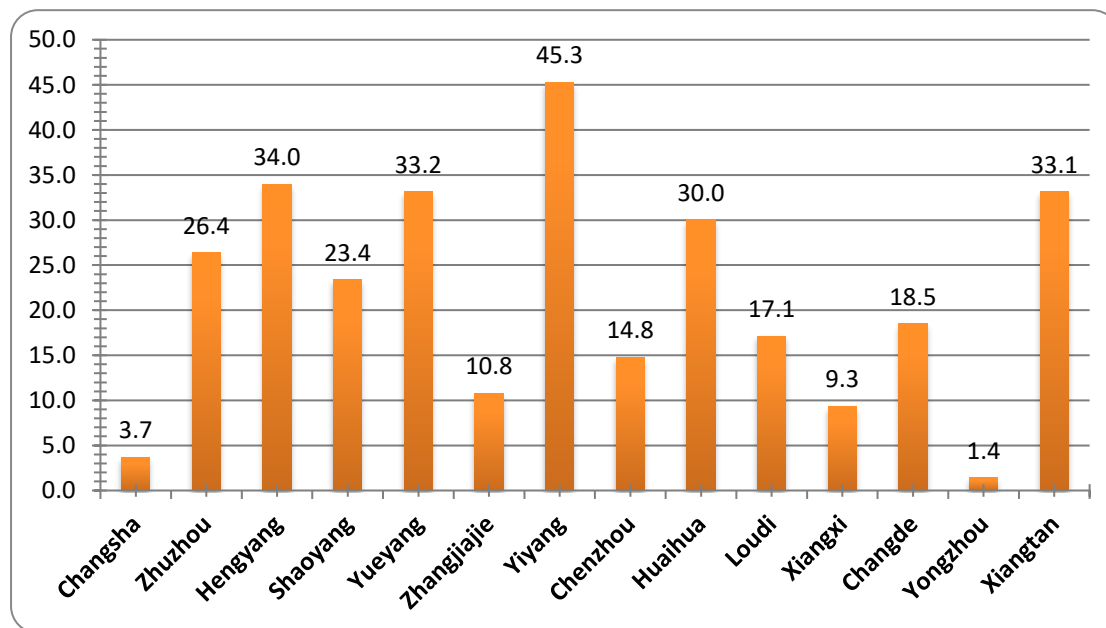
We observed that the terms of contracts significantly favor Ace. For instance, the contract requires households to use inputs and mechanized services from the company, despite the fact that big households have their own machinery. This appears as a type of transfer from small-scale to large-scale capital. The total cost of these inputs and services in the early rice season was 553 yuan/mu and the company earned a minimum profit of 100 yuan/mu from these services. This situation has created some resentment among households producing for the Ace Company.

### **Regional Variation of Agrarian Change in Hunan**

Class differentiation (between small producers, wage labor, small-scale and large-scale capital) examined above represents only one dimension of the general inequality of capitalist development in Chinese agriculture. Regional inequality is another important aspect of this

process. As Zhan and Huang (2017) demonstrate, the Chinese government’s “internal fix” for the grain question includes the allocation of financial support to less-industrialized regions within selected provinces. This may potentially decrease regional inequalities within each province to a certain extent. However, since the regions having suitable climatic and soil conditions receive the bulk of agricultural subsidies, the equalizing impact of the internal fix should not be exaggerated. In Hunan, while capitalist agriculture has developed rapidly in the fertile areas located around the Xiang and Yuan river basins, in the hilly areas, which are much less suitable for farming, its development has been quite limited.

Figure 1. Land transfer ratios (%) in different prefecture-level cities of Hunan, 2011–2015

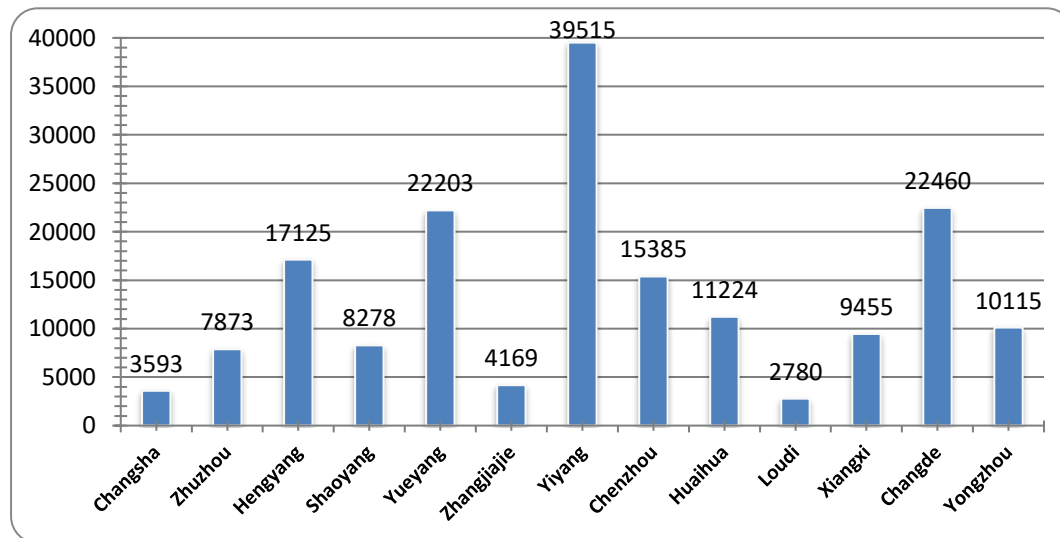


Source: Department of Agriculture of Hunan Provincial Government, 2015 (Internal document shared with the first author).

Figure 1 shows the land transfer ratio (the share of transferred farmland within total cultivated land) for the prefectural-level cities of Hunan. It demonstrates that the most

dynamic regions of Hunan in terms of land transfers are the Xiang and Yuan river basins, covering areas such as Hengyang, Huaihua, Shaoyang, Xiangtan, Yiyang, and Yueyang. These regions produce most of the marketed grain in the province. Land transfers have increased rapidly there since 2009. By 2014, the great majority of the counties in the Xiang and Yuan basins had a land transfer scale over 100,000 mu. Moreover, several counties have transferred more than 200,000 mu of land to companies and big farmers. In contrast, the pace of land transfers has been slower in the hilly areas such as Chenzhou, Loudi, Yongzhou and Zhangjiajie that are not favorable for rice production. Therefore, these regions have received a very small part of the central government's project funds. Hence, land transfers have been limited in these areas. As Figures 2, 3, and 4 clearly show, big households and dragon head enterprises are also concentrated around the Xiang and Yuan basins.

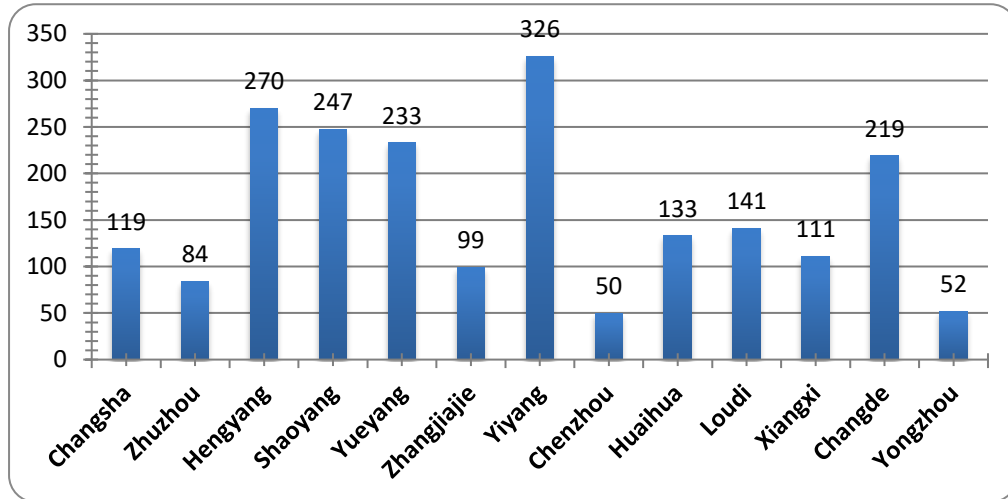
Figure 2. The number of big households engaging in crop cultivation and animal husbandry in different prefectural-level cities of Hunan, 2011–2015



Source: Department of Agriculture of Hunan provincial government, 2015 (Internal document shared with the first author).

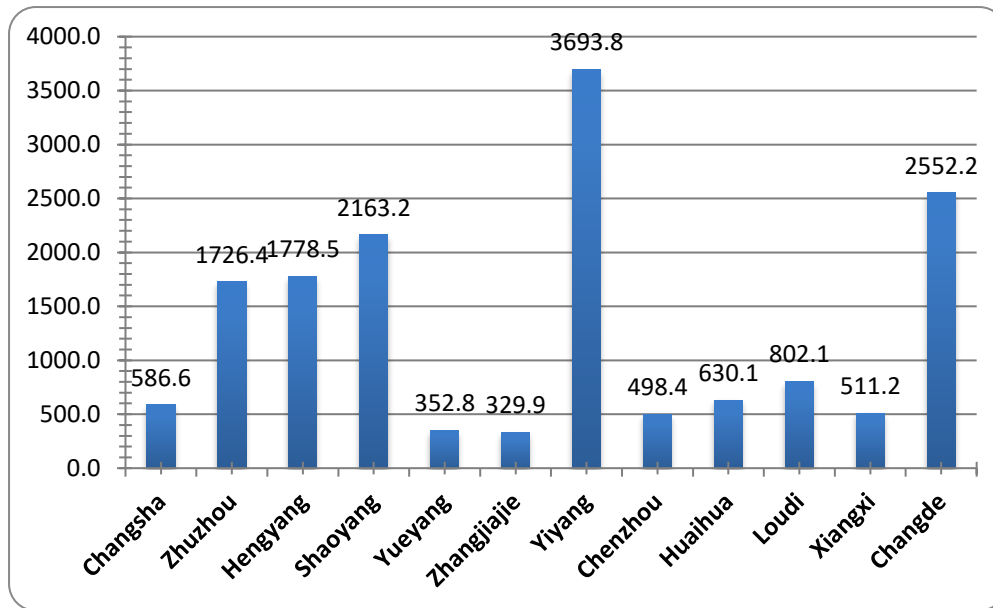


Figure 3. The number of dragon head enterprises at or above the prefectural-level cities of Hunan, 2011–2015



Source: Department of Agriculture of Hunan provincial government, 2015 (Internal document shared with the first author).

Figure 4. Total sales revenues of dragon head enterprises in different prefectural-level cities of Hunan, 2011–2015 (10,000 yuan)



Source: Department of Agriculture of Hunan provincial government, 2015 (Internal document shared with the first author).

In short, the development of capitalist agriculture has significantly varied among different regions of Hunan. By focusing on fertile areas rather than less fertile ones, project-based state intervention has not done much to reduce the existing regional inequalities.

## Conclusion

This article contributes to the literature on the development of capitalist agriculture in contemporary China by analyzing the case of rice production in Pingwan county, Hunan. The main arguments can be summarized as follows. First, the central government has designed national agricultural projects as a new policy tool to overcome the financial constraints on mechanized and larger-scale double-cropping of rice (the key component of the goal of maintaining national grain security) imposed by the tax reform of 1994 and the final abolition of agricultural tax in 2006. By providing project-based financial support to local governments

and capital-state partnerships on a selective basis, the central government has attempted to raise greater investment resources from these actors, whose degree of success will be seen in the coming years.

Second, this article demonstrates the centrality of project-based state intervention in the development of capitalist agriculture in rice-producing regions of China such as Pingwan. This intervention has two main components. On the one hand, it attempts to solve agrarian capital's problem of scaling up through land transfers. Given China's very high population density and significant land fragmentation, capitalist farmers and companies depend on government support for gaining access to relatively large and consolidated tracts of land. The Chinese government's land transfer policy (which was announced in 2008) and national projects such as the National Grain Security Project and Agricultural Industrialization Project (which have been implemented since 2009) aim to ease this constraint. Based on their significant control over farmland (due to the absence of land privatization), local governments have transferred an increasing amount of land from smallholders to agrarian capital, which has helped the latter avoid otherwise significant transaction costs involved in bargaining with each and every smallholder.

On the other hand, project-based state intervention attempts to make double-cropping of rice, which is unprofitable under normal circumstances, profitable through heavy subsidization. In its quest to maintain national grain security, the Chinese central government has helped establish large-scale producers capable of expanding the double-cropping of rice in a region that was previously characterized by small-scale farming. The central government has *created* capitalist farmers and *established* capitalist rice farming through heavy subsidization via agricultural projects since 2009. Local officials and their networks have become the main beneficiaries of this state-led class formation process by using their political power to transform themselves into capitalist farmers.

Finally, confirming both national and global trends, capitalist development in Chinese agriculture has been regionally uneven. The central government's agricultural projects focus on the regions that are geographically favorable for large-scale rice production. As a result, while the domination of small-scale rice production has not changed in hilly regions, agribusiness companies and big farmers have made considerable progress in organizing larger-scale rice production in relatively flat and more fertile areas around the river basins. In short, the current mode of state intervention lacks the capacity to reduce regional inequalities.

These findings enable us to critically assess some of the problematic assumptions of the recent scholarship on agrarian change in China. Some scholars assume that "since farm size in Chinese agriculture is extremely small and individual land ownership rights are absent, farm size expansion may not take place sufficiently fast" (Otsuka, Liu, and Yamauchi, 2016: 458). As the experience of South Asia (Heston and Kumar, 1983: 215–18) and some of the Eastern European and former Soviet republics that privatized farmland in the early 1990s (Hartvigsen, 2013) show, private landownership often aggravates the problem of land fragmentation and thereby puts formidable obstacles to the establishment of large-scale capitalist agriculture. Our analysis shows that strong government control over land transactions (Huang, 2011: 575) has enabled rapid land transfers from smallholders to agrarian capital in contemporary China. Hence, we disagree with Zhang and Donaldson's (2013: 256–57) claim that "allowing the sale (as opposed to the rental) of land use rights, or moves to otherwise privatize China's land ownership, would likely return China to days of concentrated land ownership." As noted before, fewer than one percent of rural households are currently cultivating 20 percent of China's farmland, showing that land concentration has taken place without land privatization.

Another problematic assumption in the literature is that the absence of private landownership is a barrier to the development of capitalist farming in China. According to

Samir Amin (2011: 79), the absence of private landownership “constitutes the major obstacle to a devastating expansion of agrarian capitalism” in China. Similarly, Charles Post (2008: 323–24) claims that “the Chinese countryside is decidedly non-capitalist” because “village authorities still have control over land use.” On the contrary, in line with some of the recent scholarship (Luo and Andreas, 2018; Trappel, 2016; Xu and Fuller, 2018) our study shows that continuing strong government control over land transactions at the village level and above has been the key factor enabling the transfer of large tracts of farmland to medium- and large-scale agrarian capital in contemporary China.

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